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June 27, 2019

Delivered via FedEx Overnight

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

Subject: **2019 Annual Monitoring Report (April 2018 through March 2019)**
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), enclosed is the 2019 Annual Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between April 1, 2018, and March 31, 2019. If you have any questions or concerns, please call me at 919.859.5789 or Mr. Jerry Aycock/Plantation at 770.751.4165.

Regards,

William M. Waldron, P.E.
Program Manager

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File

Enclosure: 2019 Annual Monitoring Report (April 2018 through March 2019)

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

2019 Annual Monitoring Report (April 2018 through March 2019)

Final

June 27, 2019

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Project No:	D3161400
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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.

June 27, 2019

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

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
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CCPZ	Cupboard Creek Protection Zone
CH2M	CH2M HILL Engineers, Inc. (now Jacobs)
COC	chain-of-custody
DHEC	South Carolina Department of Health and Environmental Control
DO	dissolved oxygen
DOT	Department of Transportation
EPA	U.S. Environmental Protection Agency
ID	identification
Jacobs	Jacobs Engineering Group Inc.
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
RBSL	risk-based screening level
SBZ	shallow bedrock zone
scfm	standard cubic feet per minute
scfm/ft	standard cubic feet per minute per foot
TSL	Target Screening Level
UIC	Underground Injection Control
UST	underground storage tank

1. Introduction

On behalf of Plantation Pipe Line Company (Plantation), Jacobs Engineering Group Inc. (Jacobs) is submitting this 2019 Annual Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between April 1, 2018, and March 31, 2019.

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 a sleeve on Plantation's 26-inch product pipeline near Lewis Drive, 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, vertical air sparging [VAS] wells, and horizontal air sparging [HAS] wells) are shown on Figure 1.

This site has been designated by the South Carolina Department of Health and Environmental Control (DHEC) as Site Number 18693 "Kinder Morgan Belton Pipeline Release." This Annual Monitoring Report was prepared in accordance with the *Corrective Action Plan* (CAP) *Addendum, Revision 2* (CH2M[1], 2017a), *Free-Product Recovery Plan – Revision 4* (CH2M-Jacobs, 2018a), and *Quality Assurance Project Plan* (QAPP)*, Revision 4* (CH2M, 2018b). Key correspondence from Plantation during this reporting period is summarized below.

- April 18, 2018 – Plantation submitted the *March 2018 Monthly Status Update, Plantation Pipe Line Company, Lewis Drive Remediation, Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (CH2M-Jacobs, 2018c).
- April 27, 2018 – Plantation submitted the *Request to Pump Select Monitoring Wells* (CH2M-Jacobs, 2018d).
- May 4, 2018 – Plantation submitted the *Request for Well Permit to Install Additional Vertical Sparging Wells for Biosparging System Expansion* (CH2M-Jacobs, 2018e).
- May 16, 2018 – Plantation submitted the *Underground Injection Control (UIC) Permit Revision for Expansion of Biosparging Remediation System* (CH2M-Jacobs, 2018f).
- May 29, 2018 – Plantation submitted the *Lewis Drive – April 2018 Monthly Status Update, Plantation Pipe Line Company, Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (CH2M-Jacobs, 2018g).
- June 6, 2018 – Plantation submitted the Response to Comments in DHEC's Letter titled "Reviews of Misc. Reports, Response to Comments Document, Free-Product Recovery Plan, Product Recovery Skimmer Results and Request for Well Permit" dated May 8, 2018 (CH2M-Jacobs, 2018h).
- June 27, 2018 – Plantation submitted the *Lewis Drive – May 2018 Monthly Status Update, Plantation Pipe Line Company, Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (CH2M-Jacobs, 2018i).
- June 27, 2018 – Plantation submitted the *2018 Annual 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).
- July 24, 2018 – Plantation submitted its Response to Comments in DHEC's Letter titled "Reviews of Requests for Injection Wells, Pumping of Monitoring Wells and Monthly Status Reports" dated June 26, 2018 (CH2M-Jacobs, 2018k).

[1] CH2M is now Jacobs. On December 15, 2017, CH2M HILL Companies Ltd., including CH2M HILL Engineers, Inc., became part of Jacobs. CH2M is now a wholly owned direct subsidiary of Jacobs.

- July 27, 2018 – Plantation submitted the *Lewis Drive – June 2018 Monthly Status Update, Plantation Pipe Line Company, Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (CH2M-Jacobs, 2018l).
- September 26, 2018 – Plantation submitted the *Second Quarter 2018 Monitoring Report, Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (CH2M-Jacobs, 2018m).
- October 5, 2018 – Plantation submitted its Response to DHEC Request for Revised 1903 Water Well Record Forms in DHEC's Letter titled "Completed Well Forms Request" dated September 26, 2018 (CH2M-Jacobs, 2018n).
- November 28, 2018 – Plantation submitted a letter to DHEC titled "Request for Well Permit to Install Additional Monitoring Wells, Advance a Soil Boring, and Abandon Select Product Recovery Features" dated November 28, 2018 (CH2M-Jacobs, 2018o).
- January 16, 2019 – Plantation submitted its Response to Comments in DHEC's Letter titled "Reviews of Misc. Reports, Annual Report, and Response to Comments" dated December 11, 2018 (Jacobs, 2019a).
- January 21, 2019 – Plantation submitted the *Third Quarter 2018 Monitoring Report, Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (Jacobs, 2019b).
- February 20, 2019 – Plantation submitted its Response to Comments in DHEC's Letter titled "Response to Request for Well Permit to Install Additional Monitoring Wells, Advance a Soil Boring, and Abandon Select Product Recovery Features Document" dated January 22, 2019 (Jacobs, 2019c).
- March 7, 2019 – Plantation submitted the *Fourth Quarter 2018 Supplemental Data Transmittal, Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (Jacobs, 2019d).
- March 26, 2019 – Plantation submitted a letter to DHEC Bureau of Water titled "Request to Update Existing UIC Permit-to-Construct To Permit-to-Operate" dated March 26, 2019 (Jacobs, 2019e).
- March 29, 2019 – Plantation submitted the *Fourth Quarter 2018 Monitoring Report, Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (Jacobs, 2019f).

2. Work Activities

The following remediation-related activities were performed during this annual reporting period in accordance with the CAP Addendum, Revision 2 (CH2M, 2017a), *Free-Product Recovery Plan – Revision 4* (CH2M-Jacobs, 2018a), and 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 and the volume of product collected from each well was recorded. During the monthly product recovery, absorbent socks were replaced as needed depending on visual inspection by the field team. Product recovered from the absorbent socks was determined by weighing the absorbent socks before and after placement in each well.
- Conducted 11 groundwater sampling events and 10 surface water sampling events.
- Recorded changes in groundwater levels and barometric pressures using In Situ Rugged Troll 100 water level 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 VAS wells in the areas of Brown's Creek and Cupboard Creek (Figure 1).
- Operated stream aerators in Brown's Creek, except during collection of surface water samples.
- Operated three HAS wells in the Hayfield Zone (Figure 1).
- Performed routine operation and maintenance (O&M) events on the air sparging system.
- Relocated a product skimmer from RW-08 to RW-10.
- Removed product canisters from monitoring wells MW-08, MW-11, MW-15, and MW-20 per DHEC's directive on May 8, 2018 (DHEC, 2018a).
- Installed residuum monitoring wells MW-51, MW-52, MW-53, and MW-54 in August/September 2018, and MW-55, MW-56, and MW-57 in March 2019.
- Abandoned 22 1-inch-diameter wells (piezometers) and 1 recovery well (RW-13) at the end of August 2018, because these wells no longer provided useful information.
- Installed 13 additional VAS wells between August 14 and September 7, 2018, including 5 VAS wells south and southwest of MW-17/17B to address impacts to the north of the Cupboard Creek air sparging curtain, and 8 VAS wells southwest to northeast of MW-11 (Figure 1) (CH2M-Jacobs, 2018e) to address impacts in the shallow bedrock zone (SBZ) just upgradient of the Brown's Creek air sparging curtain.
- Conducted and completed construction of the air sparging system expansion between November 2018 and January 2019, including wellhead completion of the 13 new VAS wells, along with the respective trenching and piping necessary to connect the new wells to the existing system.
- Transported and disposed of soil cuttings generated during the air sparging system expansion activities.
- Discontinued sampling from surface water locations: SW-06, FP-01, FP-02, and FP-03 in Brown's Creek in accordance with DHEC's approval letter dated December 11, 2018 (DHEC, 2018b).
- Performed routine inspections of surface water features at Brown's Creek and Cupboard Creek.
- Met with DHEC on November 1, 2018, to discuss remediation progress and focus of remediation activities.
- Notified DHEC prior to conducting any environmental work.

3. Work Procedures

3.1 Gauging Events

Select monitoring wells, surface water locations, and recovery features were gauged monthly until February 2019, when the frequency was changed to every 6 weeks based on correspondence with DHEC (Jacobs, 2019a). Product recovery features (recovery sumps, trenches, and wells) were gauged monthly and sitewide gauging was conducted quarterly. Gauging sheets for this reporting period are provided in Appendix A. Observations made during this reporting period are summarized in Table 1 and discussed in Section 3.2. Field notes for this reporting period are also provided in Appendix A.

3.2 Product Recovery

Product recovery was performed continuously in the Brown's Creek Protection Zone (BCPZ) and Cupboard Creek Protection Zone (CCPZ) in recovery wells, sumps, and trenches (Table 2) in accordance with the *Free-Product Recovery Plan – Revision 4* (CH2M-Jacobs, 2018a). Product recovery canisters or absorbent socks have been installed in the respective features that contain product to optimize product recovery and quantification. During each monthly collection event, the field team recorded the product collected from each canister or sock (Table 2). The amount of product collected from the canisters was tracked by measuring the fluid volume from the canister in a stainless-steel measuring cup and placing the fluid in a metal 5-gallon bucket. The amount of product collected from the absorbent socks was measured by weighing the absorbent socks before and after deployment into the recovery feature. Recovered fluids from the canisters 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 at the site during this reporting period except during October through December 2018 when the inspection was performed as one quarterly event. The inspection route of surface water features is presented in Figures 1, 2A, and 2B.

Surface water samples were collected in accordance with the CAP Addendum, Revision 2 (CH2M, 2017a). Surface water samples were collected monthly through July 2018, then quarterly in September and December 2018. Correspondence with DHEC in January 2019 (Jacobs, 2019a) proposed that a select group of surface water locations be monitored every 6 weeks.

Surface water samples were scheduled to be collected from 17 locations. During this reporting period, locations SW-01, SW-03, and SW-12 in Brown's Creek were not sampled in March 2019; SW-05 in Cupboard Creek was not sampled during three of six events; and SW-07 in Brown's Creek was not sampled in September 2018 because these locations were dry.

Sampling of SW-06 in Cupboard Creek and FP-01, FP-02, and FP-03 in Brown's Creek was discontinued in accordance with DHEC's December 11, 2018, letter (DHEC, 2018b) because SW-06 was dry and contaminants had not been detected in the other surface water locations. Therefore, September 2018 was the last event during which samples were collected for analysis at these locations.

Surface water samples were collected in accordance with the project QAPP, Revision 4 (CH2M, 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 trackable, overnight delivery under standard chain-of-custody (COC) procedures to Pace Analytical Services in Mount Juliet, Tennessee. Field notes for this reporting period are provided in Appendix A. Laboratory reports for surface water samples and COC records for January through March 2019 are included in Appendix B.

Previous laboratory reports and COC records were submitted in quarterly reports (CH2M-Jacobs, 2018m; Jacobs, 2019b, 2019f). Laboratory results are summarized in Table 3.

3.4 Groundwater Sampling Events

Eleven groundwater sampling events were performed during this annual reporting period. The air sparging system, including the stream aerators, was operating during these monitoring events. A comprehensive round of groundwater gauging was conducted prior to the quarterly sampling events, and select wells were gauged during all other events 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 after the final measurement. Decontamination was performed in accordance with the DHEC Programmatic QAPP, Revision 3.1 (DHEC UST Management Division, 2016) 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 provided in Appendix A. Figures 2A and 2B show groundwater elevations in the residuum and bedrock aquifers, respectively, while Figure 3 presents measurable product data for the site.

Monitoring wells without free product were sampled using either a HydraSleeve, a peristaltic pump using low-flow purging, or a submersible pump. Sample logs are provided in Appendix A. The height of the water column in the well dictated whether a HydraSleeve or peristaltic pump was used 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-Jacobs, 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 dissolved oxygen [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 (DHEC 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 field parameters were not collected.

Samples were labeled, packed on wet ice, and transported by overnight delivery under standard COC procedures to Pace Analytical Services 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 for this reporting period are provided in Appendix A. Laboratory reports for groundwater samples and COC records for January through March 2019 are included in Appendix B. Previous laboratory reports and COC records were submitted in quarterly reports (CH2M-Jacobs, 2018m; Jacobs, 2019b, 2019f). Laboratory results are summarized in Table 6.

3.5 Sparging System Operation and Maintenance

Routine O&M activities and inspections were performed during this reporting period. O&M logs for January through March 2018 are provided in Appendix C; previous O&M logs were submitted in quarterly reports (CH2M-Jacobs, 2018m; Jacobs, 2019b, 2019f).

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 VAS wells screened from 13.0 to 71.5 feet below ground surface (bgs) The flow rates in these wells averaged 8.13 standard cubic feet per minute (scfm) per sparging 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 11.38 scfm each during this reporting period.
- CCPZ: Air sparging in the CCPZ was performed using a curtain of 19 VAS wells screened from 9.5 to 31.2 feet bgs. The flow rates in these wells averaged 8.34 scfm per sparging 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 were maintained at approximately 0.67 scfm per foot of screen (scfm/ft) during this reporting period, resulting in the following approximate flows: 497, 475, and 257 scfm per well, respectively.

Groundwater levels, concentrations, and DO were measured periodically in the BCPZ, CCPZ, and Hayfield Zone to evaluate the influence and performance of the air sparging system on the residuum aquifer.

3.6 Additional Activities

Additional activities for April 2018 through December 2018 were discussed in the quarterly reports (CH2M-Jacobs, 2018m; Jacobs, 2019b, 2019f). Below is a summary of the additional activities performed during January 2019 through March 2019:

- Three residuum monitoring wells (MW-55, MW-56, and MW-57) were installed for additional delineation of dissolved hydrocarbons in the Hayfield Zone (MW-55) and CCPZ (MW-56 and MW-57). The wells were installed using a Geoprobe 8040DT drill rig. MW-56 and MW-57 were installed on March 12, 2019, downgradient of MW-46. Location MW-55 was installed on March 13, 2019, to expand the monitoring network south and west of MW-36. The wells were installed in accordance with DHEC Well Standards R. 61-71 (DHEC, 2016), DHEC Monitoring Well Approval Form Number MW-11667 for MW-55 (DHEC, 2018c), and Monitoring Well Approval Form Number MW-11841 for MW-56 and MW-57 (DHEC, 2019). 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 DHEC in a separate submittal by AE Drilling Services, LLC (Appendix D). Additionally, a soil sample was collected from the newly installed monitoring well boring for MW-57 in accordance with the project QAPP, Revision 4 (CH2M-Jacobs, 2018b). The soil sample was labeled, packed with wet ice, and transported by overnight delivery under standard COC procedures to Pace Analytical in Mount Juliet, Tennessee for BTEX analysis by Method SW-846 8260B. A soil sample was not collected for MW-56 due to the area being saturated with standing water, and the soil sample for MW-55 was reportedly lost in shipment to the laboratory. Field notes and purge logs for this reporting period are provided in Appendix A. Laboratory reports and COC records for March 2019 are included in Appendix B. Previous laboratory reports and COC records for soil samples were submitted in the *Third Quarter 2018 Monitoring Report* (Jacobs, 2019b). The soil sample was nondetect for all compounds analyzed (see Table 8).
- Two soil borings (SB-01A and SB-01B) were advanced on March 11, 2019, on the west side of Brown's Creek in the vicinity of the SW-02 location to further evaluate the depth to bedrock. Auger refusal was met for the borings at 4 and 6 feet bgs, respectively. No volatile organic compound readings above 0.0 parts per million were recorded using a PID during the advancement of these two soil borings.
- Thirteen additional VAS wells were installed between August 14 and September 7, 2018, including 5 VAS wells south and southwest of MW-17, and 8 VAS wells southwest to northeast of MW-11 (see Figure 1). Construction of the air sparging system expansion (wellhead completion, trenching, and piping) was conducted and completed between November 2018 and January 2019 to connect the new VAS wells to the existing air sparging system.

- Soil cuttings generated during installation of monitoring wells MW-55, MW-56, and MW-57 (approximately 0.75 cubic yard) were placed in a roll-off dumpster and transported for disposal on March 28, 2019, by A&D Environmental to the Republic Services Union County Regional Landfill in Enoree, South Carolina. See Appendix E for the manifest, waste profile, and extension letter from Republic Services. Purge water, free product recovered from canisters, and well development water are stored in the onsite tanks. No liquids were transported from the site during this reporting period.

4. Discussion of Results

This period of record includes the first year that the air sparging system was fully operated as designed. The system provided marked reductions in dissolved hydrocarbon concentrations and free product in the established treatment zones. Dissolved concentrations continue to show an overall decreasing trend, and in areas outside the treatment zones, concentrations are stable. The number of gallons of product recovered from the site decreased by 99.9 percent. Continual adjustments will be made to the system to focus on areas of the most need. There are two areas of concern located outside the treatment zones and near surface water bodies that show increasing dissolved concentrations. These areas are in the vicinity of monitoring wells MW-46 and MW-38, and additional remediation is being planned for these areas to occur during the next reporting period.

4.1 Product Recovery

From April 2018 through March 2019, only 9.12 gallons of product were recovered at the site, as compared to the previous year in which approximately 4,210 gallons were recovered. During this most recent quarter (January through March 2019), 2.43 gallons of product were recovered at the site with almost 50 percent of that recovered from RS-08 and RT-1B. Product thicknesses continue to be minimal across the site. Measurable thicknesses in March 2019 ranged from 0.01 foot (at RW-02 and RW-05) to 0.84 foot (at RW-03). In March 2019, measurable product thicknesses were observed at only 6 of 161 features monitored. Free product levels are presented alongside well gauging data in Table 4.

In the last two quarterly events (December 2018 and March 2019), no monitoring or recovery wells/ features within the BCPZ or the CCPZ contained measurable product.

Table 2 shows the dates and quantities of product that was recovered. Table 9 shows that no product was shipped offsite for disposal during this reporting period. Field notes for this reporting period are included in Appendix A.

4.2 Surface Water

From April 2018 through March 2019, BTEX and MTBE concentrations were detected in surface water at 8 of 16 locations sampled: SW-01, SW-02, SW-04, SW-08, SW-09, SW-12, SW-13, and SW-14 (Table 3). Benzene was the only constituent that exceeded the surface water standard for protection of human health for consumption of water and organisms of 2.2 micrograms per liter (µg/L) (DHEC, 2014). Isolated benzene exceedances were detected in samples collected from SW-13 in June 2018, and from SW-04 and SW-08 in March 2019. Surface water samples collected from SW-02 exceeded the surface water screening level for benzene in April 2018, and between December 2018 and March 2019.

No signs of distressed vegetation or hydrocarbon sheens were observed during the surface water inspections for this reporting period. 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. Observations made during this reporting period are summarized in Table 1. Field notes for this reporting period are included in Appendix A. Analytical data sheets and COC records are included in Appendix B for the events in January through March 2019. Prior analytical data sheets and COC records were presented in quarterly reports (CH2M-Jacobs, 2018m; Jacobs, 2019b, 2019f).

4.3 Groundwater Flow

Water levels from the March 2019 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) aquifers 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 March 2019 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 wells installed during this reporting period are presented in Table 7. Gauging sheets for this reporting period are included in Appendix A. Hydrographs for select monitoring wells and recovery features representative of general product thickness trends are presented in Appendix G.

4.4 Dissolved Oxygen Distribution

The average DO concentration at the site has been stable in the residuum wells and increased in the bedrock wells during this reporting period. In residuum wells, the average DO concentration was stable at 7.12 milligrams per liter (mg/L) in April 2018 to 7.43 mg/L in March 2019. In bedrock wells, the average DO concentration increased from 1.66 mg/L in March 2018 to 2.24 mg/L in April 2019. Overall trends in each zone are presented below. DO measurements in groundwater are provided in Table 5; field notes are included in Appendix A for this reporting period.

4.4.1 Brown's Creek Protection Zone

The average DO concentration in the BCPZ residuum wells has increased from 4.63 mg/L in April 2018 to 7.21 mg/L in March 2019. The average DO concentration in the bedrock wells has decreased from 1.57 mg/L in April 2018 to 0.21 mg/L in March 2019.

4.4.2 Cupboard Creek Protection Zone

The average DO concentration in the CCPZ residuum wells has been stable at 5.04 mg/L in April 2018 to 5.37 mg/L in March 2019. There are no bedrock wells that are currently being monitored for DO in the CCPZ.

4.4.3 Hayfield Zone

The average DO concentration in the Hayfield Zone residuum wells has been stable at 8.85 mg/L in April 2018 to 9.22 mg/L in March 2019. The average DO concentration in the bedrock well has increased from 2.23 mg/L in April 2018 to 10.47 mg/L in March 2019.

4.4.4 Shallow Bedrock Zone

The average DO concentration in the SBZ residuum wells has decreased from 1.69 mg/L in April 2018 to 0.82 mg/L in March 2019. The average DO concentration in the bedrock wells has decreased from 1.38 mg/L in April 2018 to 0.13 mg/L in March 2019.

4.5 Groundwater Monitoring Results

Groundwater monitoring results for this reporting period show significant decreases in dissolved concentrations of hydrocarbons in the BCPZ, CCPZ, and Hayfield Zone. The bedrock wells, which are outside the radius of influence of VAS and HAS systems, and the SBZ have stable dissolved concentrations. 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 in January through March 2019 are provided in Appendix B. Prior analytical data reports were presented in quarterly reports (CH2M-Jacobs, 2018m; Jacobs, 2019b, 2019f).

Although specific groundwater cleanup targets have not been established for the site, groundwater analytical results are screened against the risk-based screening levels (RBSLs) listed in the South Carolina Programmatic QAPP, Table D1 (DHEC UST Management Division, 2016), referred to as Target Screening Levels (TSLs). RBSLs are listed at the top of Table 6. The March 2019 results are shown on Figures 4A and 4B and summarized in the following sections. Trend plots for select groundwater monitoring wells are included in Appendix H. Note that the gray shaded area on the trend charts indicates the operational period

of the air sparging system for wells believed to be under the direct influence of the system, and monitoring wells that have been nondetect since sampling began are not presented. 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 groundwater of the BCPZ aquifer. For example, in monitoring wells MW-12, MW-15, MW-28, MW-39, and MW-40, BTEX concentrations have decreased by one to three orders of magnitude with constituents either below TSLs or nondetect as of March 2019. BTEX constituents are nondetect for the first time at MW-15, MW-28, and MW-40. Benzene concentrations were stable at MW-34 until September 2018 and have since been decreasing. Benzene concentrations are observed to be increasing at MW-38 (157 micrograms per liter [µg/L] in September 2018 to 887 µg/L in February 2019). Constituent concentrations in monitoring wells MW-24, MW-25, MW-35, MW-41, MW-42, and MW-49 have been nondetect during this reporting period. MW-37 and MW-43 have only MTBE detections during this reporting period and other constituents have been nondetect since December 2018. Benzene concentrations have been stable in bedrock wells (MW-12B and MW-15B) since June 2018. Benzene was nondetect in all other BCPZ bedrock monitoring wells during this reporting period.

4.5.2 Cupboard Creek Protection Zone

Since air sparging was initiated in March 2017, dissolved concentrations in the CCPZ have stabilized in residuum wells (MW-19, MW-20, MW-23, MW-26, and MW-29). MW-19 was not sampled regularly due to insufficient water but has been sampled regularly since June 2018 with only one detection above the TSL for naphthalene. Since the installation of MW-46 in September 2017, benzene concentrations increased from 294 µg/L in June 2018 to 2,350 µg/L in March 2019, along with an increase in other constituent concentrations. Monitoring wells MW-56 and MW-57 were installed in March 2019 to further delineate these dissolved concentrations downgradient of MW-46.

MW-20 was not sampled since its installation in July 2015 to June 2018 due to the presence of free product. However, it has been sampled three times since July 2018 with stable exceedances for BTEX, naphthalene, and MTBE. Downgradient monitoring wells MW-26 and MW-29 were nondetect for all constituents analyzed. No constituents were detected above TSLs in bedrock monitoring wells (MW-23B and MW-26B) in the CCPZ.

4.5.3 Hayfield Zone

A significant reduction of concentrations and number of detected constituents exceeding TSLs was observed in the residuum groundwater wells of the Hayfield Zone. During the March 2019 event, 25 of 36 monitoring wells sampled in the Hayfield Zone were nondetect or below the respective TSLs. In monitoring wells MW-02, MW-09, and MW-45, BTEX concentrations decreased during this reporting period by one to three orders of magnitude with current concentrations below TSLs or nondetect.

In the Hayfield Zone during this reporting period, benzene was detected above the TSL in 8 of 26 residuum monitoring wells, with detections in only 6 of 26 wells during the March 2019 event. Toluene concentrations exceeded the TSL in MW-07 (which is upgradient of the Cupboard Creek air sparging curtain). Naphthalene concentrations exceeded the TSL in MW-18 in March 2019, and BTEX constituents in MW-16 are decreasing with benzene and naphthalene remaining above their associated TSLs. Measurable product has not been detected at MW-16 or MW-18 since June 2018 and December 2018 respectively; furthermore, measurable product is no longer detected in any of the Hayfield Zone monitoring wells. MW-36 concentrations have remained stable while MW-09 and MW-13 concentrations have increased during this reporting period. The analytical results for MW-51, MW-52, MW-53, and MW-54 have remained below the TSLs.

TSL exceedances during the March 2019 event for residuum monitoring wells are shown in the table below.

Well	Date	Units	Benzene	Toluene	MTBE	Naphthalene
		TSLs:	**5**	**1,000**	**40**	**25**
MW-07	3/7/2019	µg/L	3,110	5,780	1 U	5 U
MW-09	3/7/2019	µg/L	6.24	64.3	5.90	5 U
MW-13	3/6/2019	µg/L	326	132	1 U	5 U
MW-16	3/7/2019	µg/L	9.1	74	1.02	398
MW-17	3/5/2019	µg/L	173	118	27.9	5 U
MW-18	3/7/2019	µg/L	2.47	60.4	13.5	72.7
MW-36	3/7/2019	µg/L	223	210	2.67	5 U

Gray shading indicates the analyte exceeded TSL

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

In bedrock wells, benzene was detected above its TSL in 3 of 10 wells, ranging from 13.2 µg/L in MW-09B to 8,360 µg/L in MW-17B during the March 2019 event. Concentrations of ethylbenzene, toluene, naphthalene, and MTBE exceeded the TSLs at MW-17B, which is upgradient of the Cupboard Creek air sparging curtain. MTBE also exceeded its TSL in MW-13B and MW-50B. At bedrock wells outside the influence of the air sparging system, only MW-13B, MW-17B, and MW-50B had concentrations of BTEX and/or MTBE above TSLs during the March 2019 event. These wells will continue to be evaluated. Constituent concentrations in monitoring wells MW-02B, MW-06B, MW-14B, MW-36B, MW-45B, and MW-48B were below TSLs during this reporting period.

4.5.4 Shallow Bedrock Zone

In the SBZ residuum aquifer, MW-11 has not been sampled since June 2017 due to the presence of free product. However, it was sampled in March 2019 with considerable BTEX levels. This well is in the area of the recently expanded air sparge system, which was not operational during this reporting period. However, the expansion is expected to directly affect this well and the impacts leading to the Brown's Creek area. In MW-27, benzene concentrations have been decreasing since March 2018 and have been below the TSL since September 2018. All constituents analyzed at locations MW-01, MW-22, and MW-44 were below their respective TSLs for this reporting period. No constituents were detected above TSLs in bedrock monitoring wells MW-27B and MW-44B in the SBZ. Benzene was detected above its TSL at MW-01B from June to December 2018, but was below the TSL in March 2019.

4.6 Air Sparging System Operating Efficiency and Performance Data

Between April 1, 2018, and March 31, 2019, the air sparging system operated a total of approximately 17,154 hours, with an operating uptime of 93 percent. Since two compressors were operating during this timeframe, system maintenance activities could be conducted with minimal system downtime. During this reporting period, the only downtime was due to power grid fluctuations caused by local area storms and scheduled system maintenance/system expansion. During this reporting period, air sparging flow rates in the stream aerators, horizontal wells, and vertical wells were at 76 percent, 89 percent, and 55 percent of design flow capacity, respectively. The VAS wells were turned off between August 30 and September 4, 2018, and between November 26 and December 19, 2018, to abandon a recovery well and temporary wells and to expand the VAS system by 13 new VAS wells. The system was down for approximately one day (September 20 to 21, 2018) to replace a piece of equipment on one of the two air compressors. The stream aerators were shut off due to low water levels from February 19 to April 8, 2019. When the VAS wells and stream aerators were turned back on, a ramp-up process was used to bring these systems back up to their respective capacities.

5. Conclusions

The following conclusions are based on the site work performed during this reporting period between April 1, 2018, and March 31, 2019:

- Since starting the air sparging system at the site in March 2017 (VAS in the BCPZ and CCPZ areas) and in May 2017 (horizontal sparging system in the Hayfield Zone), product thickness values have declined to insignificant levels 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 March 2019. None of the locations that have measurable product thickness are near the surface water bodies.
- The volume of product recovered has decreased significantly compared to the prior year. Approximately, 4,210 gallons were recovered from April 2017 to March 2018. Only 9.12 gallons were collected between April 2018 and March 2019. This is directly attributable to the operation of the air sparging system.
- The remedial efforts are protecting potential receptors as planned and have been highly effective at reducing dissolved concentrations. Groundwater monitoring results for this reporting period indicate that the air sparging system continues to decrease dissolved concentrations of hydrocarbons in the BCPZ, CCPZ, and Hayfield Zone, while creating stable trends in the SBZ, bedrock wells, and in other site feature locations outside the influence of the air sparging system. For example, BTEX concentrations in MW-15, MW-28, and MW-40 are nondetect for the first time since sampling began at these locations. BTEX concentrations in MW-12 and MW-39, are now below TSLs.
- The analytical results for new monitoring wells MW-51 and MW-52 have been below the TSLs for all constituents analyzed since they were installed. These two monitoring wells delineate the dissolved plume to the northwest and southwest of Brown's Creek.
- The analytical results for new monitoring wells MW-53 and MW-54 have been below the TSLs for all constituents analyzed since they were installed. These two monitoring wells delineate the dissolved plume to the north of the HAS system. Additionally, MW-54 improves monitoring in the area of MW-30, which has had insufficient water for sample collection.
- Although treatment zones have been established upgradient of both surface water bodies, surface water detections continue to be observed. Ten surface water sampling events were performed during this reporting period. Periodic exceedances of the benzene surface water screening value were recorded at sampling point SW-02 (4 of 10) and at SW-04, SW-08, and SW-13 (1 of 10). Concentrations at SW-12, near an identified seep, have been below the benzene surface water screening value since April 2018. During this reporting period, the air sparging system had an operating uptime of 93 percent. Operating flows in the stream aerators, HAS wells, and VAS wells were at 76 percent, 54 percent, and 56 percent of design flow capacity, respectively.
- There are two areas located outside the direct influence of the air sparging system and upgradient from streams (Cupboard Creek and Brown's Creek) that have monitoring wells with increasing dissolved hydrocarbon concentrations. These areas include monitoring wells MW-46, MW-56, and MW-57 for the CCPZ, and monitoring well MW-38 for the BCPZ. Oxidant injections are planned in these areas to address these concentrations as an interim step. Depending on the results of the injections, potential expansion of the air sparging system will be considered.

6. Future Activities

This section describes future activities planned for the Lewis Drive 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, 2017a), and with the revised groundwater monitoring plan requested in the DHEC letter (DHEC, 2019).[2]
- Continue collection of DO measurements and sampling of groundwater and surface water in accordance with Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017a).[2]
- Continue collection of groundwater from select monitoring wells and surface water sampling locations according to the mid-quarter schedule proposed in letters to DHEC dated January 16, 2019, and February 20, 2019 (Jacobs, 2019a, 2019c).[2]
- Submit quarterly reports in accordance with Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017a).
- Continue routine visual inspection of Brown's Creek and Cupboard Creek as outlined in the CAP Addendum, Revision 2 (CH2M, 2017a).
- 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 product recovery efforts using canisters and absorbent socks in accordance with the *Free-Product Recovery Plan – Revision 4* (CH2M-Jacobs, 2018a). Revised product collection frequency will be determined in the final monitoring, reporting, and product recovery plan to be submitted to DHEC in May 2019 as agreed upon during the May 17, 2019, meeting with DHEC.

6.3 System Operation and Maintenance

- Begin operation of the 13 new VAS wells installed during the expansion of the VAS air sparging system, following approval from the DHEC Bureau of Air Quality and UIC Division. (Note that this expansion of the air sparging system requires a DHEC air permit exemption and a final DHEC UIC permit-to-operate prior to system startup.)
- Continue routine O&M activities for the air sparging system to optimize performance.
- 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 up to the maximum design flow rate of 15 scfm in each if sufficient surface water is available.

6.4 Interim Remedial Measures

To address increased contaminant concentrations in the vicinity of MW-38 and MW-46, Plantation proposes oxidant injection and potential expansion of the air sparge system in these areas.

[2] The revised sampling frequency will be determined in the final monitoring, reporting, and product recovery plan to be submitted to DHEC in May 2019 as agreed upon during the May 17, 2019, meeting with DHEC.

7. References

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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 Cupboard Creek Zone and 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.)	Inspect Hayfield Area (Any odor, sheen or distressed vegetation? Describe.)	Inspect Shallow Bedrock Zone Area (Any odor, sheen or distressed vegetation? Describe.)
4/6/2018	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.		
5/3/2018	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.		
6/5/2018	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.		
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.		
12/3/2018	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. Water levels low upstream of Brown's Creek near SW-01.	Slight odor, no distressed vegetation observed, no biosheen in wells.	No odors or distressed vegetation observed.
1/22/2019	No odors, sheens, or distressed vegetation observed in wetlands south of Calhoun Road.	No odors or distressed vegetation observed in wetlands either upstream or downstream of culvert under Lewis Drive. Water levels have decreased since December 2018. Biological sheen was observed in all RT-2 wells and MW-39 along the western edge of Brown's Creek.	Air sparge system on. Odor was noted along tree line and Lewis Drive where air sparging was the strongest.	Odor near MW-11. No other odors or distressed vegetation observed.
2/19/2019	No odors, sheens, or distressed vegetation observed in wetlands south of Calhoun Road. Rainfall has increased water levels.	Odor near SW-12 location. No other odors, sheens, or distressed vegetation observed in wetlands either upstream or downstream of culvert under Lewis Drive. Water levels have decreased since December 2018.	Odor near MW-18, MW-08, RS-13, MW-16, and MW-07. Two tracks were noted adjacent to MW-18 and MW-08. No distressed vegetation observed.	No odors or distressed vegetation observed. Grass is growing in area.
3/6/2019	No odors, sheens, or distressed vegetation observed in wetlands south of Calhoun Road. Grass has started to grow in the areas impacted by the installation of the sparging system. Tire tracks observed near MW-20 from vehicles avoiding a pothole on Lewis Drive.	No odors, sheens, or distressed vegetation observed in wetlands either upstream or downstream of culvert under Lewis Drive. Water levels are low. SW-01, SW-03, and SW-12 locations were dry in the areas designated for sampling.	Slight odor along tree line adjacent to MW-18 and MW-03. Recent rain has left puddles of water along Hayfield Zone. No odors or distressed vegetation observed.	No odors or distressed vegetation observed. Grass has started to grow in the areas impacted by the installation of the sparging system.

Note:
ID = identification
MW = monitoring well
RT = recovery trench
SW = surface water

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)	Month 1 Volume Recovered (gal)	Month 2 Volume Recovered (gal)	Month 3 Volume Recovered (gal)	Month 4 Volume Recovered (gal)	Month 5 Volume Recovered (gal)	Month 6 Volume Recovered (gal)	Month 7 Volume Recovered (gal)	Month 8 Volume Recovered (gal)	Month 9 Volume Recovered (gal)	Month 10 Volume Recovered (gal)	Month 11 Volume Recovered (gal)	Month 12 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**	**10/5/2018**	**11/1/2018**	**12/4/2018**	**1/22/2019**	**2/19/2019**	**3/7/2019**	
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	-	0.002	-	-	0.000	-	**0.095**
RS-02	-	-	0.001	-	-	-	0.008	0.016	0.016	-	-	0.002	-	-	0.000	-	**0.041**
RS-05	0.844	0.813	1.094	1.125	0.031	0.002	0.008	0.004	0.023	0.016	0.004	0.002	0.002	-	0.000	0.000	**3.966**
RS-10	0.002	-	-	-	0.008	-	-	-	0.004	0.002	0.000	-	-	-	-	0.000	**0.016**
RS-14	0.016	-	-	-	-	-	0.008	0.002	0.004	-	-	-	-	-	0.000	0.000	**0.029**
RS-17	-	-	0.001	-	-	-	0.008	0.002	-	-	-	-	-	-	-	0.000	**0.010**
RW-02	-	0.090	0.047	-	0.033	-	0.008	0.001	0.016	0.023	-	-	0.002	-	0.002	-	**0.220**
RW-03	-	-	0.008	0.008	0.002	-	0.008	0.001	0.004	0.006	0.000	-	-	0.055	-	0.141	**0.232**
RW-04	-	0.008	0.016	-	0.001	-	0.016	0.023	0.008	-	0.000	-	-	-	-	0.000	**0.072**
RW-05	-	0.016	0.016	0.656	-	0.001	0.018	-	0.047	0.031	0.508	0.000	0.156	-	0.000	-	**1.449**
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	0.000	-	-	-	-	0.000	**0.238**
RW-10								0.234	0.004	-	-	-	0.002	-	-	0.000	**0.240**
											-	-					
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	-	-	0.211	0.125	0.144	0.265	0.226	0.025	**1.519**
RT-2K	-	-	-	-	0.006	0.006	0.209	0.152	0.187	-	0.051	0.021	0.004	-	0.143	0.095	**0.873**
RT-1A	-	-	-	-	0.228	0.036	0.254	0.205	0.233	0.131	0.039	-	0.120	0.224	0.208	0.049	**1.726**
RT-1B	-	-	-	-	0.251	0.038	0.244	0.235	0.212	-	-	0.009	0.021	0.247	0.210	0.063	**1.529**
RT-1C	-	-	-	-	0.255	0.039	0.231	0.201	0.069	0.041	-	0.102	-	0.224	0.195	0.055	**1.412**
Total:	**1.145**	**1.167**	**1.259**	**2.174**	**1.291**	**0.171**	**1.263**	**1.337**	**0.845**	**0.259**	**0.815**	**0.262**	**0.450**	**1.014**	**0.985**	**0.429**	**14.867**

Notes:

- = no product recovered
gal = gallons
ID = identification
MW = monitoring well
NA = not applicable
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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE			
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b		
SW-RELEASE	SW-RELEASE	1/20/2015	µg/L	**330**		**490**		**2,400**		**2,100**		**940**		**140**		**5.7**	**J**		
SW-01	SW01-121114	12/11/2014	µg/L	0.5	U	1	U	1	U	2	U	1	U	1	U	1	U		
	SW01-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-033115	3/31/2015	µg/L	5	U[c]	5	U	**17.6**		10	U	5	U	5	U	NA			
	SW01-042215	4/22/2015	µg/L	5	U[c]	5	U	**14.9**		10	U	5	U	5	U	NA			
	SW01-050715	5/7/2015	µg/L	5	U[c]	5	U	**7.0**		10	U	5	U	5	U	NA			
	SW01-051915	5/19/2015	µg/L	5	U[c]	5	U	**8.8**		**10.6**		**6.4**		5	U	NA			
	SW01-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW01-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW01-112415	11/24/2015	µg/L	**7.8**		**1.5**		**13.0**		**9.3**		**4.6**		1	U	NA			
	SW01-122215	12/22/2015	µg/L	**4.6**		1	U	**8.8**		**5.5**		**3.1**		1	U	NA			
	SW01-012516	1/25/2016	µg/L	**17.6**		**2.3**		**36.0**		**11.3**		**6.3**		1	U	NA			
	SW01-021816	2/18/2016	µg/L	**23.4**		**3.0**		**55.6**		**15.0**		**9.1**		1	U	NA			
	SW01-031616	3/16/2016	µg/L	**20.1**		**2.4**		**42.3**		**13.3**		**7.6**		1	U	NA			
	SW01-042716	4/27/2016	µg/L	**20.8**		1	U	**30.6**		**2.9**		**2.0**		1	U	NA			
	SW01-050916	5/9/2016	µg/L	**16.5**		**1.4**		**16.3**		**7.0**		**4.8**		1	U	NA			
	SW01-062716	6/27/2016	µg/L	**9**		1	U	**3.3**		2	U	1	U	1	U	NA			
	SW01-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW01-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW01-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW01-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW01-112816	11/28/2016	µg/L	**5.0**		1	U	**10.4**		**4.9**		**8.3**		1	U	NA			
	SW01-122916	12/29/2016	µg/L	**12.6**		1	U	**22.1**		**11.2**		**13.5**		1	U	NA			
	SW01-012017	1/20/2017	µg/L	**1.0**		1	U	**2.3**		2	U	**3.5**		1	U	NA			
	SW01-022817	2/28/2017	µg/L	**18.5**		**1.93**		**37.0**		**13.8**		**10.2**		5	U	NA			
	SW01-031517	3/15/2017	µg/L	**3.02**		1	U	**5.13**		**2.16**		**1.74**		5	U	NA			
	SW01-032117	3/21/2017	µg/L	1	U	1	U	**1.57**		2	U	1	U	5	U	NA			
	SW01-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			

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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-01	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**	
	SW01-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW01-021919	2/19/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	--	3/7/2019	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
SW-02	SW02-121114	12/11/2014	µg/L	0.5	U	1	U	1	U	2	U	1	U	1	U	1	U
	SW02-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-033115	3/31/2015	µg/L	5	U[c]	5	U	**6.0**		10	U	5	U	5	U	NA	
	SW02-042215	4/22/2015	µg/L	5	U[c]	5	U	**13.0**		10	U	5	U	5	U	NA	
	SW02-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-112415	11/24/2015	µg/L	**6**		**1.3**		**10.0**		**7.8**		**4.0**		1	U	NA	

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-02	SW02-122215	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	
	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	
	SW02-120418	12/4/2018	µg/L	11.9		1	U	1.32		4.40		3.75		5	U	2.23	

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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-02	SW02-021919	2/19/2019	µg/L	**19.7**		1	U	**2.67**		**4.60**		**4.44**		5	U	**2.12**	
	SW02-030719	3/7/2019	µg/L	**22.3**		1	U	**3.58**		**4.71**		**4.32**		5	U	**2.46**	
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	
	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	

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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE			
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b		
SW-03	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		
	SW03-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	--	3/7/2019	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
SW-04	SW-Downgradient	1/20/2015	µg/L	**95**		**27**		**310**		**110**		**63**		**94**		**2.7**			
	SW04-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW04-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW04-112415	11/24/2015	µg/L	**1.7**		1	U	**2.7**		**2.9**		**1.6**		1	U	NA			

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-04	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**	
	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**	
	SW04-120418	12/4/2018	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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-04	SW04-021919	2/19/2019	µg/L	1.47		1	U	1	U	2	U	1	U	5	U	1	U
	SW04-030719	3/7/2019	µg/L	3.11		1	U	1	U	2	U	1	U	5	U	1	U
SW-05	SW05-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW05-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW05-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW05-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW05-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW05-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW05-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	5/19/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/3/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/18/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/15/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/13/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	10/22/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW05-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW05-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW05-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW05-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW05-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	--	4/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	5/9/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/19/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	10/31/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	1/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	2/28/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/15/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/21/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/30/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-05	--	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	
	SW05-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW05-021919	2/19/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW05-030719	3/7/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-06	SW06-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW06-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW06-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW06-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	3/31/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW06-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	5/7/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	5/19/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/3/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/18/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/15/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/13/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	10/22/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	11/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW06-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-06	SW06-012516	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	
	--	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	

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

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-07	--	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	
	SW07-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW07-030719	3/7/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-08	SW08-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-122215	12/22/2015	µg/L	**1.6**		1	U	**3.8**		**2.5**		**1.6**		1	U	NA	
	SW08-012516	1/25/2016	µg/L	**2.4**		1	U	**5.6**		**2**		**1.3**		1	U	NA	
	SW08-021816	2/18/2016	µg/L	**2.9**		1	U	**7.6**		**2.3**		**1.5**		1	U	NA	
	SW08-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-08	SW08-062716	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
	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
	SW08-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-030719	3/7/2019	µg/L	**2.45**		1	U	1	U	2	U	1	U	5	U	**1.17**	
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	

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

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-09	SW09-121417	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
	SW09-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-030719	3/7/2019	µg/L	**1.88**		1	U	1	U	2	U	1	U	5	U	**1.07**	
SW-10	SW10-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-10	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
	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
	SW10-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-030719	3/7/2019	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	

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

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-11	SW11-030918	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
	SW11-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-030719	3/7/2019	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	
	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
	SW12-120418	12/4/2018	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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE			
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b		
SW-12	SW12-021919	2/19/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	--	3/7/2019	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
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**			
	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		
	SW13-120418	12/4/2018	µg/L	1	U	1	U	**1.84**		2	U	1	U	5	U	**3.49**			
	SW13-021919	2/19/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	SW13-030719	3/7/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**11.0**			
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			

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	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE			
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b		
SW-14	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		
	SW14-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.62**			
	SW14-021919	2/19/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.19**			
	SW14-030719	3/7/2019	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.68**			
FP-01	FP01-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP01-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
FP-01	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	
	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

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
FP-02	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	
	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

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	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
FP-03	FP03-050318	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 (DHEC) 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 DHEC R. 61-68.

[c] The analyte was analyzed for, but was not detected above the laboratory reporting/quantitation limit. However, the laboratory reporting/quantitation limit is above the screening criteria. The actual absence or presence of this analyte between the screening criteria and the laboratory reporting/quantitation limit 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)	Notes
MW-01*					853.07			
	3/4/2019	-	2.79	-		850.28	-	
	12/3/2018	-	3.91	-		849.16	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	4.07	-		849.00	-	
	8/1/2018	-	7.49	-		845.58	-	
	7/11/2018	-	6.64	-		846.43	-	
	6/4/2018	-	3.83	-		849.24	-	
	5/2/2018	-	5.20	-		847.87	-	
	4/5/2018	-	5.83	-		847.24	-	
MW-01B*					852.99			
	3/4/2019	-	4.02	-		848.97	-	
	12/3/2018	-	7.62	-		845.37	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	9.28	-		843.71	-	
	8/1/2018	-	8.01	-		844.98	-	
	7/11/2018	-	7.20	-		845.79	-	
	6/4/2018	-	6.47	-		846.52	-	
	5/2/2018	-	6.72	-		846.27	-	
	4/5/2018	-	6.63	-		846.36	-	
MW-02*					841.04			
	3/4/2019	-	-	-		841.04	-	water bubbling out of casing
	12/3/2018	-	3.58	-		837.46	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	12.10	-		828.94	-	
	8/1/2018	-	5.50	-		835.54	-	
	7/11/2018	-	15.25	-		825.79	-	
	6/4/2018	-	-	-		841.04	-	
	5/2/2018	-	10.85	-		830.19	-	
	4/5/2018	-	4.79	-		836.25	-	
MW-02B*					841.19			
	3/4/2019	-	3.74	-		837.45	-	

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)	Notes
MW-02B* (cont'd)	12/3/2018	-	12.92	-		828.27	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	18.65	-		822.54	-	
	8/1/2018	-	9.13	-		832.06	-	
	7/11/2018	-	5.88	-		835.31	-	
	6/4/2018	-	4.23	-		836.96	-	
	5/2/2018	-	7.16	-		834.03	-	
	4/5/2018	-	-	-		841.19	-	
MW-03					838.36			
	3/4/2019	-	6.70	-		831.66	-	strong sparge
	12/3/2018	-	14.00	-		824.36	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	17.30	-		821.06	-	
	8/1/2018	-	13.00	-		825.36	-	
	7/11/2018	-	-	-		838.36	-	bubbling over
	6/4/2018	-	16.50	-		821.86	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	15.40	-		822.96	-	
MW-04					844.42			
	3/4/2019	-	6.23	-		838.19	-	
	12/3/2018	-	7.55	-		836.87	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	13.31	-		831.11	-	
	8/1/2018	-	9.27	-		835.15	-	
	7/11/2018	-	8.27	-		836.15	-	
	6/4/2018	-	6.23	-		838.19	-	
	5/2/2018	-	6.94	-		837.48	-	
	4/5/2018	-	7.75	-		836.67	-	
MW-05*					851.11			
	3/4/2019	-	2.91	-		848.20	-	
	12/3/2018	-	12.39	-		838.72	-	
	11/1/2018	-	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)	Notes
MW-05* (cont'd)	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	14.18	-		836.93	-	
	8/1/2018	-	12.70	-		838.41	-	
	7/11/2018	-	11.70	-		839.41	-	
	6/4/2018	-	10.47	-		840.64	-	
	5/2/2018	-	11.13	-		839.98	-	
	4/5/2018	-	11.80	-		839.31	-	
MW-06*					852.92			
	3/4/2019	-	3.57	-		849.35	-	
	12/3/2018	-	11.24	-		841.68	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	12.69	-		840.23	-	
	8/1/2018	-	10.96	-		841.96	-	
	7/11/2018	-	10.31	-		842.61	-	
	6/4/2018	-	10.32	-		842.60	-	
	5/2/2018	-	11.17	-		841.75	-	
	4/5/2018	-	12.13	-		840.79	-	
MW-06B*					852.57			
	3/4/2019	-	3.99	-		848.58	-	
	12/3/2018	-	11.39	-		841.18	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	12.50	-		840.07	-	
	8/1/2018	-	10.58	-		841.99	-	
	7/11/2018	-	10.06	-		842.51	-	
	6/4/2018	-	10.15	-		842.42	-	
	5/2/2018	-	10.90	-		841.67	-	
	4/5/2018	-	11.70	-		840.87	-	
MW-07					853.02			
	3/4/2019	-	4.72	-		848.30	-	
	2/18/2019	-	6.15	-		846.87	-	
	12/3/2018	-	10.99	-		842.03	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	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)	Notes
MW-07 (cont'd)	9/11/2018	-	11.40	-		841.62	-	
	8/1/2018	-	10.06	-		842.96	-	
	7/11/2018	-	9.55	-		843.47	-	
	6/4/2018	-	9.44	-		843.58	-	
	5/2/2018	-	10.35	-		842.67	-	
	4/5/2018	-	11.39	-		841.63	-	
MW-08					844.72			
	3/4/2019	-	7.45	-		837.27	-	
	2/18/2019	-	7.84	-		836.88	-	
	1/23/2019	-	4.59	-		840.13	-	No product confirmed with baile
	12/3/2018	-	19.18	-		825.54	-	Product confirmed with bailer
	11/1/2018	-	19.29	-		825.43	-	
	10/5/2018	13.10	13.11	0.01		831.61	831.62	
	9/11/2018	-	16.85	-		827.87	-	
	8/1/2018	-	10.53	-		834.19	-	
	7/11/2018	-	9.30	-		835.42	-	
	6/5/2018	-	6.22	-		838.50	-	
	5/2/2018	-	6.40	-		838.32	-	
	4/5/2018	8.92	8.93	0.01		835.79	835.80	
MW-09					843.63			
	3/4/2019	-	8.00	-		835.63	-	sparge system affecting water
	12/3/2018	-	-	-		843.63	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	10.56	-		833.07	-	
	8/1/2018	-	-	-		843.63	-	
	7/11/2018	-	-	-		843.63	-	Water at surface
	6/4/2018	-	-	-		843.63	-	
	5/2/2018	-	-	-		843.63	-	
	4/5/2018	2.20	2.23	0.03		841.40	841.42	
MW-09B*					843.92			
	3/4/2019	-	4.07	-		839.85	-	
	12/3/2018	-	3.90	-		840.02	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	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)	Notes
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	-	
	6/4/2018	-	5.70	-		838.22	-	
	5/2/2018	-	7.18	-		836.74	-	
	4/5/2018	-	1.82	-		842.10	-	
MW-10*					845.41			
	3/4/2019	-	2.02	-		843.39	-	
	12/3/2018	-	7.35	-		838.06	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	16.41	-		829.00	-	
	8/1/2018	-	12.12	-		833.29	-	
	7/11/2018	-	10.75	-		834.66	-	
	6/4/2018	-	6.43	-		838.98	-	
	5/2/2018	-	6.97	-		838.44	-	
	4/5/2018	-	8.21	-		837.20	-	
MW-11					855.63			
	3/4/2019	-	23.01	-		832.62	-	strong odor; no product detecte
	2/18/2019	-	24.23	-		831.40	-	
	1/23/2019	-	24.71	-		830.92	-	
	12/3/2018	-	28.17	-		827.46	-	Confirmed product with bailer
	11/1/2018	30.66	30.77	0.11		824.86	824.94	
	10/5/2018	29.56	29.62	0.06		826.01	826.05	
	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	-	strong odor; no product detecte
	6/5/2018	-	26.29	-		829.34	-	
	5/2/2018	-	26.74	-		828.89	-	
	4/5/2018	-	27.73	-		827.90	-	
MW-12*					834.53			
	3/4/2019	-	5.05	-		829.48	-	No product confirmed with baile
	2/18/2019	-	10.49	-		824.04	-	
	12/3/2018	-	12.02	-		822.51	-	
	11/1/2018	-	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)	Notes
MW-12* (cont'd)	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	13.19	-		821.34	-	
	8/1/2018	-	12.98	-		821.55	-	
	7/11/2018	-	12.94	-		821.59	-	
	6/4/2018	-	9.20	-		825.33	-	
	5/2/2018	-	10.91	-		823.62	-	
	4/5/2018	-	11.46	-		823.07	-	
MW-12B*					834.98			
	3/4/2019	-	7.05	-		827.93	-	
	2/18/2019	-	10.68	-		824.30	-	
	12/3/2018	-	12.49	-		822.49	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	14.07	-		820.91	-	
	8/1/2018	-	12.88	-		822.10	-	
	7/11/2018	-	12.88	-		822.10	-	
	6/4/2018	-	9.83	-		825.15	-	
	5/2/2018	-	10.03	-		824.95	-	
	4/5/2018	-	12.28	-		822.70	-	
MW-13					848.84			
	3/4/2019	-	15.23	-		833.61	-	
	12/3/2018	-	20.87	-		827.97	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	21.85	-		826.99	-	
	8/1/2018	-	20.05	-		828.79	-	
	7/11/2018	-	19.41	-		829.43	-	
	6/4/2018	-	18.80	-		830.04	-	
	5/2/2018	-	19.21	-		829.63	-	
	4/5/2018	-	20.35	-		828.49	-	
MW-13B*					849.82			
	3/4/2019	-	16.37	-		833.45	-	
	12/3/2018	-	21.69	-		828.13	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	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)	Notes
MW-13B* (cont'd)	9/11/2018	-	21.81	-		828.01	-	
	8/1/2018	-	20.75	-		829.07	-	
	7/11/2018	-	20.10	-		829.72	-	
	6/4/2018	-	19.56	-		830.26	-	
	5/2/2018	-	20.20	-		829.62	-	
	4/5/2018	-	20.80	-		829.02	-	
MW-14					838.70			
	3/4/2019	-	9.49	-		829.21	-	
	12/3/2018	-	14.88	-		823.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	16.64	-		822.06	-	
	8/1/2018	-	15.60	-		823.10	-	
	7/11/2018	-	15.02	-		823.68	-	
	6/4/2018	-	13.48	-		825.22	-	
	5/2/2018	-	14.27	-		824.43	-	
	4/5/2018	-	14.97	-		823.73	-	
MW-14B*					840.20			
	3/4/2019	-	11.53	-		828.67	-	
	12/3/2018	-	16.60	-		823.60	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	17.59	-		822.61	-	
	8/1/2018	-	16.70	-		823.50	-	
	7/11/2018	-	16.10	-		824.10	-	
	6/4/2018	-	15.09	-		825.11	-	
	5/2/2018	-	15.66	-		824.54	-	
	4/5/2018	-	16.17	-		824.03	-	
MW-15					831.03			
	3/4/2019	-	7.07	-		823.96	-	
	2/18/2019	-	13.90	-		817.13	-	
	1/23/2019	-	8.61	-		822.42	-	
	12/4/2018	-	10.37	-		820.66	-	
	11/1/2018	-	11.70	-		819.33	-	
	10/5/2018	11.41	11.42	0.01		819.61	819.62	

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)	Notes
MW-15 (cont'd)	9/11/2018	-	11.35	-		819.68	-	
	8/1/2018	-	10.96	-		820.07	-	
	7/11/2018	-	10.30	-		820.73	-	
	6/5/2018	-	10.56	-		820.47	-	
	5/2/2018	-	10.48	-		820.55	-	
	4/5/2018	-	10.88	-		820.15	-	
MW-15B*					831.29			
	3/4/2019	-	13.14	-		818.15	-	
	2/18/2019	-	8.81	-		822.48	-	No product confirmed with baile
	12/4/2018	-	14.44	-		816.85	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	15.19	-		816.10	-	
	8/1/2018	-	14.61	-		816.68	-	
	7/11/2018	-	14.53	-		816.76	-	
	6/4/2018	-	13.84	-		817.45	-	
	5/2/2018	-	14.31	-		816.98	-	
	4/5/2018	-	14.62	-		816.67	-	
MW-16*					847.67			
	3/4/2019	-	2.00	-		845.67	-	well bubbling over casing
	2/18/2019	-	3.12	-		844.55	-	Sparge system on
	1/23/2019	-	-	-		847.67	-	Sparge system on
	12/3/2018	-	4.98	-		842.69	-	Sparge system on
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	6.20	-		841.47	-	
	9/11/2018	-	12.35	-		835.32	-	potential product on probe
	8/1/2018	-	-	-		847.67	-	
	7/11/2018	-	6.00	-		841.67	-	product in well; sparge system o
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	0.10	-		847.57	-	
	4/5/2018	-	0.10	-		847.57	-	
MW-17					855.35			
	3/4/2019	-	6.81	-		848.54	-	
	12/3/2018	-	10.85	-		844.50	-	
	11/1/2018	-	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)	Notes
MW-17 (cont'd)	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	10.86	-		844.49	-	
	8/1/2018	-	10.85	-		844.50	-	
	7/11/2018	-	10.85	-		844.50	-	
	6/4/2018	-	10.80	-		844.55	-	
	5/2/2018	-	10.89	-		844.46	-	
	4/5/2018	-	10.86	-		844.49	-	
MW-17B*					855.37			
	3/4/2019	-	7.18	-		848.19	-	
	2/18/2019	-	8.80	-		846.57	-	
	12/3/2018	-	13.22	-		842.15	-	
	11/1/2018	-	NM	-		-	-	Bubbling in well
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	13.74	-		841.63	-	
	8/1/2018	-	12.56	-		842.81	-	
	7/11/2018	-	17.10	-		838.27	-	
	6/4/2018	-	12.05	-		843.32	-	
	5/2/2018	-	12.85	-		842.52	-	
	4/5/2018	-	13.71	-		841.66	-	
MW-18					846.89			
	3/4/2019	-	15.90	-		830.99	-	Confirmed product with bailer
	2/18/2019	-	13.83	-		833.06	-	Confirmed product with bailer
	1/23/2019	-	16.76	-		830.13	-	No product confirmed with baile
	12/3/2018	17.83	17.85	0.02		829.04	829.05	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	16.11	18.57	**2.46**		828.32	830.11	
	9/11/2018	-	19.56	-		827.33	-	potential product on probe
	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	
	6/4/2018	11.70	12.12	0.42		834.77	835.07	
	5/2/2018	15.97	18.01	**2.04**		828.88	830.36	
	4/5/2018	12.45	16.85	**4.40**		830.04	833.25	
MW-19*					853.94			
	3/4/2019	-	5.67	-		848.27	-	
	2/18/2019	-	6.09	-		847.85	-	

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)	Notes
MW-19* (cont'd)	12/3/2018	-	9.94	-		844.00	-	Odor on probe
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	10.05	-		843.89	-	
	8/1/2018	-	8.74	-		845.20	-	
	7/11/2018	-	10.50	-		843.44	-	
	6/4/2018	-	7.81	-		846.13	-	
	5/2/2018	-	10.98	-		842.96	-	
	4/5/2018	-	10.16	-		843.78	-	
MW-20					852.89			
	3/4/2019	-	5.94	-		846.95	-	
	2/18/2019	-	6.39	-		846.50	-	
	1/23/2019	-	7.42	-		845.47	-	
	12/3/2018	-	9.99	-		842.90	-	Confirmed product sheen with b
	11/1/2018	11.23	12.00	**0.77**		840.89	841.45	
	10/5/2018	-	11.22	-		841.67	-	inconsistent solid tone at surfac
	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	-	product odor and residue
	6/5/2018	8.49	8.50	0.01		844.39	844.39	
	5/2/2018	-	9.70	-		843.19	-	
	4/5/2018	9.37	9.38	0.01		843.51	843.51	
MW-21					855.77			
	3/4/2019	-	8.84	-		846.93	-	
	12/3/2018	-	13.41	-		842.36	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	14.51	-		841.26	-	
	8/1/2018	-	13.53	-		842.24	-	
	7/11/2018	-	13.07	-		842.70	-	
	6/4/2018	-	12.43	-		843.34	-	
	5/2/2018	-	13.25	-		842.52	-	
	4/5/2018	-	13.84	-		841.93	-	
MW-22*					854.60			
	3/4/2019	-	3.41	-		851.19	-	

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)	Notes
MW-22* (cont'd)	12/3/2018	-	7.37	-		847.23	-	slight odor on probe
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	9.57	-		845.03	-	
	8/1/2018	-	8.45	-		846.15	-	
	7/11/2018	-	7.90	-		846.70	-	
	6/4/2018	-	5.72	-		848.88	-	
	5/2/2018	-	7.19	-		847.41	-	
	4/5/2018	-	7.27	-		847.33	-	
MW-23*					849.57			
	3/4/2019	-	2.83	-		846.74	-	
	2/18/2019	-	4.42	-		845.15	-	
	12/3/2018	-	6.97	-		842.60	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	5.94	-		843.63	-	
	8/1/2018	-	7.56	-		842.01	-	
	7/11/2018	-	7.15	-		842.42	-	
	6/4/2018	-	6.33	-		843.24	-	
	5/2/2018	-	7.12	-		842.45	-	
	4/5/2018	-	7.52	-		842.05	-	
MW-23B*					849.69			
	3/4/2019	-	6.69	-		843.00	-	
	12/3/2018	-	8.73	-		840.96	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	5.40	-		844.29	-	
	8/1/2018	-	8.47	-		841.22	-	
	7/11/2018	-	8.60	-		841.09	-	
	6/4/2018	-	6.06	-		843.63	-	
	5/2/2018	-	9.68	-		840.01	-	
	4/5/2018	-	11.26	-		838.43	-	
MW-24*					817.92			
	3/4/2019	-	5.07	-		812.85	-	
	12/3/2018	-	4.78	-		813.14	-	

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)	Notes
MW-24* (cont'd)	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	5.22	-		812.70	-	
	8/1/2018	-	4.45	-		813.47	-	
	7/11/2018	-	4.67	-		813.25	-	
	6/4/2018	-	4.45	-		813.47	-	
	5/2/2018	-	4.39	-		813.53	-	
	4/5/2018	-	4.31	-		813.61	-	
MW-24B*					818.72			
	3/4/2019	-	5.70	-		813.02	-	
	12/3/2018	-	5.59	-		813.13	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	5.85	-		812.87	-	
	8/1/2018	-	5.19	-		813.53	-	
	7/11/2018	-	5.35	-		813.37	-	
	6/4/2018	-	5.12	-		813.60	-	
	5/2/2018	-	5.10	-		813.62	-	
	4/5/2018	-	5.16	-		813.56	-	
MW-25*					826.18			
	3/4/2019	-	5.03	-		821.15	-	
	2/18/2019	-	6.33	-		819.85	-	
	12/3/2018	-	7.13	-		819.05	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	7.88	-		818.30	-	
	8/1/2018	-	7.41	-		818.77	-	
	7/11/2018	-	7.70	-		818.48	-	
	6/4/2018	-	6.73	-		819.45	-	
	5/2/2018	-	7.02	-		819.16	-	
	4/5/2018	-	7.46	-		818.72	-	
MW-25B*					823.81			
	3/4/2019	-	2.72	-		821.09	-	
	2/18/2019	-	3.04	-		820.77	-	
	12/3/2018	-	3.70	-		820.11	-	

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)	Notes
MW-25B* (cont'd)	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	4.76	-		819.05	-	
	8/1/2018	-	4.15	-		819.66	-	
	7/11/2018	-	3.91	-		819.90	-	
	6/4/2018	-	3.41	-		820.40	-	
	5/2/2018	-	3.92	-		819.89	-	
	4/5/2018	-	4.06	-		819.75	-	
MW-26*					847.56			
	3/4/2019	-	0.61	-		846.95	-	
	2/18/2019	-	1.21	-		846.35	-	
	12/3/2018	-	2.36	-		845.20	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	2.65	-		844.91	-	
	8/1/2018	-	3.78	-		843.78	-	
	7/11/2018	-	3.67	-		843.89	-	
	6/4/2018	-	2.01	-		845.55	-	
	5/2/2018	-	2.71	-		844.85	-	
	4/5/2018	-	2.88	-		844.68	-	
MW-26B*					847.81			
	3/4/2019	-	-	-		847.81	-	Water at surface
	12/3/2018	-	5.55	-		842.26	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	4.55	-		843.26	-	
	8/1/2018	-	6.18	-		841.63	-	
	7/11/2018	-	5.42	-		842.39	-	
	6/4/2018	-	3.66	-		844.15	-	
	5/2/2018	-	4.68	-		843.13	-	
	4/5/2018	-	5.03	-		842.78	-	
MW-27					854.11			
	3/4/2019	-	18.01	-		836.10	-	
	12/3/2018	-	24.96	-		829.15	-	biosheen noted
	11/1/2018	-	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)	Notes
MW-27 (cont'd)	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	25.17	-		828.94	-	
	8/1/2018	-	23.92	-		830.19	-	
	7/11/2018	-	23.30	-		830.81	-	
	6/4/2018	-	22.55	-		831.56	-	
	5/2/2018	-	23.00	-		831.11	-	
	4/5/2018	-	23.64	-		830.47	-	
MW-27B*					857.14			
	3/4/2019	-	24.49	-		832.65	-	
	12/3/2018	-	29.34	-		827.80	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	28.49	-		828.65	-	
	8/1/2018	-	28.10	-		829.04	-	
	7/11/2018	-	28.09	-		829.05	-	
	6/4/2018	-	28.42	-		828.72	-	
	5/2/2018	-	29.04	-		828.10	-	
	4/5/2018	-	30.66	-		826.48	-	
MW-28*					844.31			
	3/4/2019	-	16.42	-		827.89	-	Sparge system on
	2/18/2019	-	18.21	-		826.10	-	Sparge system on
	12/3/2018	-	21.17	-		823.14	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	22.00	-		822.31	-	
	8/1/2018	-	21.51	-		822.80	-	
	7/11/2018	-	20.92	-		823.39	-	
	6/4/2018	-	19.52	-		824.79	-	
	5/2/2018	-	20.81	-		823.50	-	
	4/5/2018	-	20.68	-		823.63	-	
MW-29*					852.20			
	3/4/2019	-	0.71	-		851.49	-	
	2/18/2019	-	2.37	-		849.83	-	
	12/3/2018	-	3.11	-		849.09	-	
	11/1/2018	-	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)	Notes
MW-29* (cont'd)	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	8.36	-		843.84	-	
	8/1/2018	-	7.18	-		845.02	-	
	7/11/2018	-	6.35	-		845.85	-	
	6/4/2018	-	3.23	-		848.97	-	
	5/2/2018	-	4.72	-		847.48	-	
	4/5/2018	-	5.28	-		846.92	-	
MW-30					841.28			
	3/4/2019	-	6.16	-		835.12	-	
	12/3/2018	-	12.77	-		828.51	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	14.60	-		826.68	-	
	8/1/2018	-	13.10	-		828.18	-	
	7/11/2018	-	12.26	-		829.02	-	
	6/4/2018	-	10.47	-		830.81	-	
	5/2/2018	-	11.49	-		829.79	-	
	4/5/2018	-	11.92	-		829.36	-	
MW-31					845.04			
	3/4/2019	-	13.42	-		831.62	-	
	12/3/2018	-	19.47	-		825.57	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	21.88	-		823.16	-	
	8/1/2018	-	19.25	-		825.79	-	
	7/11/2018	-	18.37	-		826.67	-	
	6/4/2018	-	17.25	-		827.79	-	
	5/2/2018	-	17.35	-		827.69	-	
	4/5/2018	-	18.59	-		826.45	-	
MW-31B*					844.94			
	3/4/2019	-	14.03	-		830.91	-	
	12/3/2018	-	20.53	-		824.41	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	21.25	-		823.69	-	

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)	Notes
MW-31B* (cont'd)	8/1/2018	-	18.95	-		825.99	-	
	7/11/2018	-	18.24	-		826.70	-	
	6/4/2018	-	17.72	-		827.22	-	
	5/2/2018	-	17.72	-		827.22	-	
	4/5/2018	-	20.60	-		824.34	-	
MW-32*					842.93			
	3/4/2019	-	5.22	-		837.71	-	
	12/3/2018	-	11.85	-		831.08	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	21.07	-		821.86	-	
	8/1/2018	-	12.70	-		830.23	-	
	7/11/2018	-	11.00	-		831.93	-	
	6/4/2018	-	7.16	-		835.77	-	
	5/2/2018	-	8.60	-		834.33	-	
	4/5/2018	-	9.73	-		833.20	-	
MW-33					849.20			
	3/4/2019	-	19.41	-		829.79	-	
	12/3/2018	-	25.37	-		823.83	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	26.75	-		822.45	-	
	8/1/2018	-	23.65	-		825.55	-	
	7/11/2018	-	22.87	-		826.33	-	
	6/4/2018	-	22.35	-		826.85	-	
	5/2/2018	-	22.70	-		826.50	-	
	4/5/2018	-	23.68	-		825.52	-	
MW-33T*					849.11			
	3/4/2019	-	20.72	-		828.39	-	
	12/3/2018	-	26.29	-		822.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	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)	Notes
MW-33T* (cont'd)	6/4/2018	-	23.56	-		825.55	-	
	5/2/2018	-	24.07	-		825.04	-	
	4/5/2018	-	24.73	-		824.38	-	
MW-34*					816.35			
	3/4/2019	-	2.66	-		813.69	-	
	2/18/2019	-	2.83	-		813.52	-	
	12/4/2018	-	2.87	-		813.48	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	3.18	-		813.17	-	
	8/1/2018	-	2.48	-		813.87	-	
	7/11/2018	-	2.60	-		813.75	-	
	6/4/2018	-	2.34	-		814.01	-	
	5/2/2018	-	2.31	-		814.04	-	
	4/5/2018	-	2.25	-		814.10	-	
MW-35*					829.40			
	3/4/2019	-	5.39	-		824.01	-	
	2/18/2019	-	6.82	-		822.58	-	
	12/3/2018	-	7.45	-		821.95	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	9.14	-		820.26	-	
	8/1/2018	-	8.50	-		820.90	-	
	7/11/2018	-	7.22	-		822.18	-	
	6/4/2018	-	8.15	-		821.25	-	
	5/2/2018	-	8.37	-		821.03	-	
	4/5/2018	-	8.39	-		821.01	-	
MW-36					858.47			
	3/4/2019	-	10.40	-		848.07	-	
	2/18/2019	-	11.97	-		846.50	-	
	12/4/2018	-	16.65	-		841.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	16.68	-		841.79	-	
	8/1/2018	-	15.78	-		842.69	-	

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)	Notes
MW-36 (cont'd)	7/11/2018	-	15.24	-		843.23	-	
	6/4/2018	-	15.21	-		843.26	-	
	5/2/2018	-	15.95	-		842.52	-	
	4/5/2018	-	16.68	-		841.79	-	
MW-36B*					858.15			
	3/4/2019	-	10.02	-		848.13	-	
	12/4/2018	-	16.32	-		841.83	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	16.39	-		841.76	-	
	8/1/2018	-	15.50	-		842.65	-	
	7/11/2018	-	14.97	-		843.18	-	
	6/4/2018	-	14.94	-		843.21	-	
	5/2/2018	-	15.69	-		842.46	-	
	4/5/2018	-	16.38	-		841.77	-	
MW-37*					813.92			
	3/4/2019	-	2.90	-		811.02	-	
	2/18/2019	-	3.08	-		810.84	-	
	12/3/2018	-	3.01	-		810.91	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	3.29	-		810.63	-	
	8/1/2018	-	3.10	-		810.82	-	
	7/11/2018	-	3.26	-		810.66	-	
	6/4/2018	-	3.26	-		810.66	-	
	5/2/2018	-	16.47	-		797.45	-	
	4/5/2018	-	3.33	-		810.59	-	
MW-38*					813.28			
	3/4/2019	-	0.72	-		812.56	-	
	2/18/2019	-	1.27	-		812.01	-	
	12/3/2018	-	1.12	-		812.16	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	2.17	-		811.11	-	
	8/1/2018	-	2.50	-		810.78	-	

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)	Notes
MW-38* (cont'd)	7/11/2018	-	1.45	-		811.83	-	
	6/4/2018	-	1.20	-		812.08	-	
	5/2/2018	-	1.70	-		811.58	-	
	4/5/2018	-	1.50	-		811.78	-	
MW-39*					819.90			
	3/4/2019	-	3.99	-		815.91	-	
	2/18/2019	-	4.42	-		815.48	-	
	12/4/2018	-	4.45	-		815.45	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	5.12	-		814.78	-	
	8/1/2018	-	4.83	-		815.07	-	
	7/11/2018	-	4.75	-		815.15	-	
	6/4/2018	-	4.34	-		815.56	-	
	5/2/2018	-	4.48	-		815.42	-	
	4/5/2018	-	4.54	-		815.36	-	
MW-40*					817.79			
	3/4/2019	-	1.82	-		815.97	-	
	2/18/2019	-	2.21	-		815.58	-	
	12/4/2018	-	2.27	-		815.52	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	2.77	-		815.02	-	
	8/1/2018	-	2.38	-		815.41	-	
	7/11/2018	-	2.44	-		815.35	-	
	6/4/2018	-	1.98	-		815.81	-	
	5/2/2018	-	2.23	-		815.56	-	
	4/5/2018	-	2.32	-		815.47	-	
MW-41*					819.68			
	3/4/2019	-	3.33	-		816.35	-	
	2/18/2019	-	3.58	-		816.10	-	
	12/3/2018	-	3.66	-		816.02	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	4.25	-		815.43	-	

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)	Notes
MW-41* (cont'd)	8/1/2018	-	3.90	-		815.78	-	
	7/11/2018	-	4.07	-		815.61	-	
	6/4/2018	-	3.69	-		815.99	-	
	5/2/2018	-	3.80	-		815.88	-	
	4/5/2018	-	4.00	-		815.68	-	
MW-42*					820.33			
	3/4/2019	-	4.06	-		816.27	-	
	12/3/2018	-	4.37	-		815.96	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	4.96	-		815.37	-	
	8/1/2018	-	4.68	-		815.65	-	
	7/11/2018	-	4.85	-		815.48	-	
	6/4/2018	-	5.37	-		814.96	-	
	5/2/2018	-	4.29	-		816.04	-	
	4/5/2018	-	4.98	-		815.35	-	
MW-43*					818.12			
	3/4/2019	-	4.36	-		813.76	-	
	12/3/2018	-	4.24	-		813.88	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	5.24	-		812.88	-	
	8/1/2018	-	4.41	-		813.71	-	
	7/11/2018	-	4.74	-		813.38	-	
	6/4/2018	-	4.28	-		813.84	-	
	5/2/2018	-	4.26	-		813.86	-	
	4/5/2018	-	4.18	-		813.94	-	
MW-43B*					818.80			
	3/4/2019	-	0.97	-		817.83	-	
	12/3/2018	-	2.30	-		816.50	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	1.88	-		816.92	-	
	8/1/2018	-	1.13	-		817.67	-	
	7/11/2018	-	0.95	-		817.85	-	

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)	Notes
MW-43B* (cont'd)	6/4/2018	-	0.90	-		817.90	-	
	5/2/2018	-	0.45	-		818.35	-	
	4/5/2018	-	0.80	-		818.00	-	
MW-44*					853.67			
	3/4/2019	-	1.41	-		852.26	-	
	12/3/2018	-	3.22	-		850.45	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	8.65	-		845.02	-	
	8/1/2018	-	7.12	-		846.55	-	
	7/11/2018	-	6.78	-		846.89	-	
	6/4/2018	-	3.16	-		850.51	-	
	5/2/2018	-	4.79	-		848.88	-	
	4/5/2018	-	5.63	-		848.04	-	
MW-44B*					853.38			
	3/4/2019	-	5.97	-		847.41	-	
	12/3/2018	-	11.36	-		842.02	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	12.35	-		841.03	-	
	8/1/2018	-	10.92	-		842.46	-	
	7/11/2018	-	10.05	-		843.33	-	
	6/4/2018	-	9.50	-		843.88	-	
	5/2/2018	-	10.21	-		843.17	-	
	4/5/2018	-	10.50	-		842.88	-	
MW-45					852.47			
	3/4/2019	-	5.64	-		846.83	-	
	12/3/2018	-	10.94	-		841.53	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	12.00	-		840.47	-	
	8/1/2018	-	11.22	-		841.25	-	
	7/11/2018	-	10.66	-		841.81	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	10.74	-		841.73	-	

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)	Notes
MW-45 (cont'd)	4/5/2018	-	11.30	-		841.17	-	
MW-45B*					852.85			
	3/4/2019	-	9.17	-		843.68	-	
	12/3/2018	-	13.13	-		839.72	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	12.84	-		840.01	-	
	8/1/2018	-	12.36	-		840.49	-	
	7/11/2018	-	12.20	-		840.65	-	
	6/4/2018	-	25.13	-		827.72	-	
	5/2/2018	-	12.83	-		840.02	-	
	4/5/2018	-	13.53	-		839.32	-	
MW-46*					845.47			
	3/4/2019	-	2.67	-		842.80	-	
	2/18/2019	-	3.83	-		841.64	-	
	12/3/2018	-	5.25	-		840.22	-	slight odor on probe
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	7.88	-		837.59	-	
	8/1/2018	-	6.67	-		838.80	-	
	7/11/2018	-	6.35	-		839.12	-	
	6/4/2018	-	5.20	-		840.27	-	
	5/2/2018	-	5.88	-		839.59	-	
	4/5/2018	-	6.36	-		839.11	-	
MW-47*					842.98			
	3/4/2019	-	10.27	-		832.71	-	
	12/3/2018	-	18.88	-		824.10	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	19.42	-		823.56	-	
	8/1/2018	-	16.84	-		826.14	-	
	7/11/2018	-	16.08	-		826.90	-	
	6/4/2018	-	13.92	-		829.06	-	
	5/2/2018	-	14.48	-		828.50	-	
	4/5/2018	-	15.54	-		827.44	-	

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)	Notes
MW-48B*					832.34			
	3/4/2019	-	13.75	-		818.59	-	
	12/3/2018	-	16.40	-		815.94	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	17.45	-		814.89	-	
	8/1/2018	-	16.70	-		815.64	-	
	7/11/2018	-	16.40	-		815.94	-	
	6/4/2018	-	15.91	-		816.43	-	
	5/2/2018	-	18.04	-		814.30	-	
	4/5/2018	-	16.50	-		815.84	-	
MW-49					846.78			
	3/4/2019	-	9.88	-		836.90	-	
	12/3/2018	-	17.49	-		829.29	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	18.28	-		828.50	-	
	8/1/2018	-	17.14	-		829.64	-	
	7/11/2018	-	16.39	-		830.39	-	
	6/4/2018	-	14.95	-		831.83	-	
	5/2/2018	-	15.65	-		831.13	-	
	4/5/2018	-	16.18	-		830.60	-	
MW-50B*					850.34			
	3/4/2019	-	15.33	-		835.01	-	
	12/3/2018	-	26.06	-		824.28	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	23.28	-		827.06	-	
	8/1/2018	-	22.43	-		827.91	-	
	7/11/2018	-	19.53	-		830.81	-	
	6/4/2018	-	18.36	-		831.98	-	
	5/2/2018	-	19.95	-		830.39	-	
	4/5/2018	-	18.43	-		831.91	-	
MW-51					831.92			
	3/4/2019	-	15.86	-		816.06	-	

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)	Notes
MW-51 (cont'd)	12/3/2018	-	17.38	-		814.54	-	
	10/5/2018	-	18.84	-		813.08	-	
MW-52					830.09			
	3/4/2019	-	14.43	-		815.66	-	
	12/3/2018	-	15.80	-		814.29	-	
	10/5/2018	-	16.90	-		813.19	-	
MW-53*					837.37			
	3/4/2019	-	2.02	-		835.35	-	
	12/3/2018	-	6.81	-		830.56	-	
	10/5/2018	-	11.54	-		825.83	-	
MW-54*					840.79			
	3/4/2019	-	5.50	-		835.29	-	confirm with bailer
	12/3/2018	-	12.95	-		827.84	-	
	10/5/2018	-	11.57	-		829.22	-	bubbling in well
RS-01*					849.13			
	3/5/2019	-	2.60	-		846.53	-	
	2/18/2019	3.81	3.83	0.02		845.30	845.31	
	1/23/2019	4.71	4.72	0.01		844.41	844.42	
	12/4/2018	8.83	8.85	0.02		840.28	840.29	
	11/1/2018	10.22	10.24	0.02		838.89	838.90	
	10/5/2018	-	11.10	-		838.03	-	
	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	
	6/7/2018	-	NM	-		-	-	
	5/2/2018	7.60	7.62	0.02		841.51	841.52	
	4/5/2018	-	8.92	-		840.21	-	
RS-02*					849.52			
	3/5/2019	1.95	1.98	0.03		847.54	847.56	
	2/18/2019	2.78	2.79	0.01		846.73	846.74	
	1/23/2019	-	3.30	-		846.22	-	
	12/4/2018	6.17	6.18	0.01		843.34	843.35	slick cannister
	11/1/2018	-	9.80	-		839.72	-	
	10/5/2018	-	11.25	-		838.27	-	
	9/11/2018	-	12.03	-		837.49	-	

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)	Notes
RS-02* (cont'd)	8/1/2018	-	6.71	-		842.81	-	
	7/11/2018	-	5.68	-		843.84	-	
	6/7/2018	-	4.65	-		844.87	-	
	5/2/2018	-	6.18	-		843.34	-	
	4/5/2018	-	8.01	-		841.51	-	
RS-04*					851.47			
	3/4/2019	-	2.60	-		848.87	-	
	2/18/2019	-	3.24	-		848.23	-	
	1/23/2019	-	3.96	-		847.51	-	
	12/3/2018	-	6.33	-		845.14	-	
	11/1/2018	-	9.77	-		841.70	-	
	10/5/2018	-	9.72	-		841.75	-	
	9/11/2018	-	9.79	-		841.68	-	
	8/1/2018	-	8.72	-		842.75	-	
	7/11/2018	-	7.95	-		843.52	-	
	6/4/2018	-	5.98	-		845.49	-	
	5/2/2018	-	8.67	-		842.80	-	
	4/5/2018	-	9.74	-		841.73	-	
RS-05					848.31			
	3/5/2019	3.00	3.05	0.05		845.26	845.30	
	2/18/2019	4.06	4.08	0.02		844.23	844.24	
	1/23/2019	4.95	4.96	0.01		843.35	843.36	
	12/4/2018	9.40	9.95	**0.55**		838.36	838.76	
	11/1/2018	9.21	9.23	0.02		839.08	839.09	
	10/5/2018	9.85	9.98	0.13		838.33	838.42	
	9/11/2018	14.57	14.58	0.01		833.73	833.74	
	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	
	6/7/2018	-	6.64	-		841.67	-	
	5/2/2018	8.00	8.50	0.50		839.81	840.18	
	4/5/2018	-	NM	-		-	-	
RS-06*					849.47			
	3/4/2019	-	2.67	-		846.80	-	
	2/18/2019	-	3.84	-		845.63	-	
	1/23/2019	-	4.64	-		844.83	-	

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)	Notes
RS-06* (cont'd)	12/3/2018	-	8.19	-		841.28	-	
	11/1/2018	-	9.99	-		839.48	-	
	10/5/2018	-	10.50	-		838.97	-	
	9/11/2018	-	12.92	-		836.55	-	
	8/1/2018	-	7.88	-		841.59	-	
	7/11/2018	-	6.70	-		842.77	-	
	6/4/2018	-	7.12	-		842.35	-	
	5/2/2018	-	8.44	-		841.03	-	
	4/5/2018	-	9.43	-		840.04	-	
RS-07					855.08			
	3/4/2019	-	6.74	-		848.34	-	
	2/18/2019	-	8.72	-		846.36	-	
	1/23/2019	-	7.47	-		847.61	-	
	12/3/2018	-	11.74	-		843.34	-	
	11/1/2018	-	12.69	-		842.39	-	
	10/5/2018	-	12.68	-		842.40	-	
	9/11/2018	-	11.79	-		843.29	-	
	8/1/2018	-	10.87	-		844.21	-	
	7/11/2018	-	10.21	-		844.87	-	
	6/4/2018	-	9.16	-		845.92	-	
	5/2/2018	-	10.40	-		844.68	-	
	4/5/2018	-	10.40	-		844.68	-	
RS-08					854.24			
	3/4/2019	-	6.24	-		848.00	-	
	2/18/2019	-	7.74	-		846.50	-	
	1/23/2019	-	7.97	-		846.27	-	
	12/3/2018	-	11.51	-		842.73	-	
	11/1/2018	-	12.84	-		841.40	-	
	10/5/2018	-	12.97	-		841.27	-	
	9/11/2018	-	10.35	-		843.89	-	
	8/1/2018	-	11.24	-		843.00	-	
	7/11/2018	-	10.50	-		843.74	-	
	6/7/2018	-	10.19	-		844.05	-	
	5/2/2018	-	10.53	-		843.71	-	
	4/5/2018	-	10.90	-		843.34	-	

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)	Notes
RS-09*					847.60			
	3/4/2019	-	1.97	-		845.63	-	
	2/18/2019	-	3.19	-		844.41	-	
	1/23/2019	-	5.86	-		841.74	-	
	12/3/2018	-	5.69	-		841.91	-	
	11/1/2018	-	8.25	-		839.35	-	
	10/5/2018	-	10.19	-		837.41	-	
	9/11/2018	-	15.91	-		831.69	-	
	8/1/2018	-	6.90	-		840.70	-	
	7/11/2018	-	6.23	-		841.37	-	
	6/4/2018	-	6.34	-		841.26	-	
	5/2/2018	-	6.23	-		841.37	-	
	4/5/2018	-	9.73	-		837.87	-	
RS-10*					847.42			
	3/5/2019	-	2.20	-		845.22	-	
	2/18/2019	-	2.91	-		844.51	-	
	1/23/2019	-	3.96	-		843.46	-	
	12/4/2018	-	8.59	-		838.83	-	slick cannister
	11/1/2018	-	7.28	-		840.14	-	
	10/5/2018	-	8.19	-		839.23	-	
	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	
	6/7/2018	-	5.69	-		841.73	-	
	5/2/2018	6.96	6.98	0.02		840.44	840.45	
	4/5/2018	7.76	7.77	0.01		839.65	839.66	
RS-11*					847.44			
	3/4/2019	-	1.64	-		845.80	-	
	2/18/2019	-	2.67	-		844.77	-	
	1/23/2019	-	3.52	-		843.92	-	
	12/3/2018	-	7.30	-		840.14	-	
	11/1/2018	-	7.28	-		840.16	-	
	10/5/2018	-	7.86	-		839.58	-	
	9/11/2018	-	12.06	-		835.38	-	
	8/1/2018	-	5.89	-		841.55	-	

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)	Notes
RS-11* (cont'd)	7/11/2018	-	5.35	-		842.09	-	
	6/4/2018	-	6.25	-		841.19	-	
	5/2/2018	-	7.36	-		840.08	-	
	4/5/2018	-	7.68	-		839.76	-	
RS-12*					847.74			
	3/4/2019	-	1.97	-		845.77	-	
	2/18/2019	-	2.89	-		844.85	-	
	1/23/2019	-	3.84	-		843.90	-	
	12/3/2018	-	8.71	-		839.03	-	
	11/1/2018	-	7.62	-		840.12	-	
	10/5/2018	-	8.20	-		839.54	-	
	9/11/2018	-	12.56	-		835.18	-	
	8/1/2018	-	6.21	-		841.53	-	
	7/11/2018	-	5.70	-		842.04	-	
	6/4/2018	-	6.59	-		841.15	-	
	5/2/2018	-	7.67	-		840.07	-	
	4/5/2018	-	8.03	-		839.71	-	
RS-13*					845.98			
	3/4/2019	-	0.89	-		845.09	-	
	2/18/2019	-	0.79	-		845.19	-	
	1/23/2019	-	2.41	-		843.57	-	
	12/3/2018	-	1.46	-		844.52	-	
	11/1/2018	-	5.87	-		840.11	-	
	10/5/2018	-	10.01	-		835.97	-	
	9/11/2018	-	15.42	-		830.56	-	
	8/1/2018	-	5.58	-		840.40	-	
	7/11/2018	-	4.66	-		841.32	-	
	6/4/2018	-	3.14	-		842.84	-	
	5/2/2018	-	4.75	-		841.23	-	
	4/5/2018	-	7.96	-		838.02	-	
RS-14*					845.97			
	3/5/2019	-	1.06	-		844.91	-	some product sheen around cas
	2/18/2019	-	0.99	-		844.98	-	
	1/23/2019	1.63	1.64	0.01		844.33	844.34	
	12/4/2018	3.89	3.90	0.01		842.07	842.08	odor present

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)	Notes
RS-14* (cont'd)	11/1/2018	5.25	5.27	0.02		840.70	840.71	
	10/5/2018	-	8.50	-		837.47	-	
	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	
	6/7/2018	-	3.85	-		842.12	-	
	5/2/2018	4.25	4.27	0.02		841.70	841.71	
	4/5/2018	6.24	6.26	0.02		839.71	839.72	
RS-15*					846.41			
	3/4/2019	-	0.88	-		845.53	-	
	2/18/2019	-	1.00	-		845.41	-	
	1/23/2019	-	1.86	-		844.55	-	
	12/3/2018	-	2.18	-		844.23	-	Biosheen observed
	11/1/2018	-	5.73	-		840.68	-	
	10/5/2018	-	8.37	-		838.04	-	
	9/11/2018	-	10.74	-		835.67	-	
	8/1/2018	-	4.28	-		842.13	-	
	7/11/2018	-	4.15	-		842.26	-	
	6/4/2018	-	2.91	-		843.50	-	
	5/2/2018	-	4.47	-		841.94	-	
	4/5/2018	-	6.29	-		840.12	-	
RS-16*					845.44			
	3/4/2019	-	1.42	-		844.02	-	
	2/18/2019	-	1.48	-		843.96	-	
	1/23/2019	-	1.89	-		843.55	-	
	12/3/2018	-	1.87	-		843.57	-	
	11/1/2018	-	6.42	-		839.02	-	
	10/5/2018	-	7.88	-		837.56	-	
	9/11/2018	-	13.87	-		831.57	-	
	8/1/2018	-	4.85	-		840.59	-	
	7/11/2018	-	3.63	-		841.81	-	
	6/4/2018	-	3.18	-		842.26	-	
	5/2/2018	-	3.64	-		841.80	-	
	4/5/2018	-	5.49	-		839.95	-	
RS-17*					844.22			

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)	Notes
RS-17* (cont'd)	3/5/2019	-	1.27	-		842.95	-	
	2/18/2019	-	1.27	-		842.95	-	
	1/23/2019	-	1.81	-		842.41	-	
	12/4/2018	-	2.74	-		841.48	-	odor present
	11/1/2018	5.14	5.16	0.02		839.06	839.07	
	10/5/2018	-	8.19	-		836.03	-	
	9/11/2018	-	9.95	-		834.27	-	
	8/1/2018	-	3.28	-		840.94	-	strong odor
	7/11/2018	-	3.52	-		840.70	-	
	6/7/2018	-	3.02	-		841.20	-	
	5/2/2018	-	3.24	-		840.98	-	
	4/5/2018	-	5.40	-		838.82	-	
RS-18*					847.89			
	3/4/2019	-	1.92	-		845.97	-	
	2/18/2019	-	3.19	-		844.70	-	
	1/23/2019	-	4.04	-		843.85	-	
	12/3/2018	-	3.61	-		844.28	-	
	11/1/2018	-	9.25	-		838.64	-	
	10/5/2018	-	10.20	-		837.69	-	
	9/11/2018	-	16.76	-		831.13	-	
	8/1/2018	-	7.33	-		840.56	-	
	7/11/2018	-	6.50	-		841.39	-	
	6/4/2018	-	6.36	-		841.53	-	
	5/2/2018	-	6.31	-		841.58	-	
	4/5/2018	-	8.90	-		838.99	-	
RS-19					850.40			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
RS-20*					842.69			
	3/4/2019	-	1.54	-		841.15	-	
	2/18/2019	-	2.09	-		840.60	-	
	1/23/2019	-	2.69	-		840.00	-	

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)	Notes
RS-20* (cont'd)	12/3/2018	-	2.73	-		839.96	-	
	11/1/2018	-	6.62	-		836.07	-	
	10/5/2018	-	9.40	-		833.29	-	
	9/11/2018	-	10.24	-		832.45	-	
	8/1/2018	-	5.22	-		837.47	-	
	7/11/2018	-	4.95	-		837.74	-	
	6/4/2018	-	3.80	-		838.89	-	
	5/2/2018	-	4.30	-		838.39	-	
	4/5/2018	-	5.71	-		836.98	-	
RT-1A					854.06			
	3/4/2019	-	6.74	-		847.32	-	
	2/18/2019	-	7.12	-		846.94	-	
	1/23/2019	-	7.22	-		846.84	-	
	12/3/2018	-	11.26	-		842.80	-	
	11/1/2018	-	13.12	-		840.94	-	
	10/5/2018	-	12.64	-		841.42	-	
	9/11/2018	-	11.72	-		842.34	-	
	8/1/2018	-	10.80	-		843.26	-	
	7/11/2018	-	10.75	-		843.31	-	
	6/7/2018	-	9.91	-		844.15	-	
	5/2/2018	-	11.06	-		843.00	-	
	4/5/2018	-	11.31	-		842.75	-	
RT-1B					854.15			
	3/4/2019	-	6.13	-		848.02	-	
	2/18/2019	-	7.14	-		847.01	-	
	1/23/2019	-	7.25	-		846.90	-	
	12/3/2018	-	11.24	-		842.91	-	
	11/1/2018	-	12.54	-		841.61	-	
	10/5/2018	-	12.63	-		841.52	-	
	9/11/2018	-	11.70	-		842.45	-	
	8/1/2018	-	10.78	-		843.37	-	
	7/11/2018	-	10.22	-		843.93	-	
	6/7/2018	-	9.91	-		844.24	-	
	5/2/2018	-	10.48	-		843.67	-	
	4/5/2018	-	10.92	-		843.23	-	

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)	Notes
RT-1C					854.55			
	3/4/2019	-	6.06	-		848.49	-	
	2/18/2019	-	7.72	-		846.83	-	
	1/23/2019	-	7.85	-		846.70	-	
	12/3/2018	-	11.82	-		842.73	-	Odor on probe
	11/1/2018	-	12.56	-		841.99	-	
	10/5/2018	-	13.22	-		841.33	-	
	9/11/2018	-	12.30	-		842.25	-	
	8/1/2018	-	11.39	-		843.16	-	
	7/11/2018	-	10.24	-		844.31	-	
	6/7/2018	-	10.50	-		844.05	-	
	5/2/2018	-	10.50	-		844.05	-	
	4/5/2018	-	10.74	-		843.81	-	
RT-2A*					817.48			
	3/4/2019	-	0.38	-		817.10	-	biosheen
	2/18/2019	-	0.42	-		817.06	-	
	1/23/2019	-	0.40	-		817.08	-	
	12/3/2018	-	0.50	-		816.98	-	
	11/1/2018	-	0.82	-		816.66	-	
	10/5/2018	-	0.70	-		816.78	-	
	9/11/2018	-	0.80	-		816.68	-	
	8/1/2018	-	0.60	-		816.88	-	
	7/11/2018	-	0.50	-		816.98	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	0.50	-		816.98	-	
	4/5/2018	-	0.70	-		816.78	-	
RT-2B*					817.61			
	3/4/2019	-	0.61	-		817.00	-	biosheen
	2/18/2019	-	0.54	-		817.07	-	
	1/23/2019	-	0.78	-		816.83	-	
	12/3/2018	-	0.80	-		816.81	-	
	11/1/2018	-	0.91	-		816.70	-	
	10/5/2018	-	0.60	-		817.01	-	
	9/11/2018	-	0.80	-		816.81	-	
	8/1/2018	-	0.80	-		816.81	-	

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)	Notes
RT-2B* (cont'd)	7/11/2018	-	0.08	-		817.53	-	
	6/4/2018	-	0.68	-		816.93	-	
	5/2/2018	-	0.74	-		816.87	-	
	4/5/2018	-	1.23	-		816.38	-	
RT-2C*					818.06			
	3/4/2019	-	1.02	-		817.04	-	biosheen
	2/18/2019	-	1.14	-		816.92	-	
	1/23/2019	-	0.17	-		817.89	-	
	12/3/2018	-	1.17	-		816.89	-	
	11/1/2018	-	1.13	-		816.93	-	
	10/5/2018	-	1.50	-		816.56	-	
	9/11/2018	-	1.46	-		816.60	-	
	8/1/2018	-	1.24	-		816.82	-	
	7/11/2018	-	1.20	-		816.86	-	
	6/4/2018	-	0.95	-		817.11	-	
	5/2/2018	-	1.20	-		816.86	-	
	4/5/2018	-	1.33	-		816.73	-	
RT-2D*					818.12			
	3/4/2019	-	1.11	-		817.01	-	
	2/18/2019	-	1.18	-		816.94	-	
	1/23/2019	-	1.19	-		816.93	-	
	12/3/2018	-	1.17	-		816.95	-	
	11/1/2018	-	1.13	-		816.99	-	
	10/5/2018	-	1.66	-		816.46	-	
	9/11/2018	-	1.50	-		816.62	-	
	8/1/2018	-	1.30	-		816.82	-	
	7/11/2018	-	1.33	-		816.79	-	
	6/4/2018	-	1.20	-		816.92	-	
	5/2/2018	-	1.30	-		816.82	-	
	4/5/2018	-	1.43	-		816.69	-	
RT-2E*					818.25			
	3/4/2019	-	2.18	-		816.07	-	
	2/18/2019	-	1.28	-		816.97	-	
	1/23/2019	-	1.31	-		816.94	-	
	12/3/2018	-	1.28	-		816.97	-	

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)	Notes
RT-2E* (cont'd)	11/1/2018	-	1.15	-		817.10	-	
	10/5/2018	-	1.74	-		816.51	-	
	9/11/2018	-	1.63	-		816.62	-	
	8/1/2018	-	1.42	-		816.83	-	
	7/11/2018	-	1.42	-		816.83	-	
	6/4/2018	-	1.34	-		816.91	-	
	5/2/2018	-	1.42	-		816.83	-	
	4/5/2018	-	1.71	-		816.54	-	
RT-2F*					818.57			
	3/4/2019	-	2.65	-		815.92	-	biosheen
	2/18/2019	-	1.66	-		816.91	-	
	1/23/2019	-	1.64	-		816.93	-	
	12/3/2018	-	1.79	-		816.78	-	
	11/1/2018	-	2.93	-		815.64	-	
	10/5/2018	-	2.10	-		816.47	-	
	9/11/2018	-	2.00	-		816.57	-	
	8/1/2018	-	1.76	-		816.81	-	
	7/11/2018	-	1.80	-		816.77	-	
	6/4/2018	-	1.66	-		816.91	-	
	5/2/2018	-	1.72	-		816.85	-	
	4/5/2018	-	1.03	-		817.54	-	
RT-2G*					820.07			
	3/4/2019	-	0.35	-		819.72	-	biosheen
	2/18/2019	-	0.63	-		819.44	-	
	1/23/2019	-	0.62	-		819.45	-	
	12/3/2018	-	1.30	-		818.77	-	
	11/1/2018	-	3.56	-		816.51	-	
	10/5/2018	-	2.68	-		817.39	-	
	9/11/2018	-	3.84	-		816.23	-	
	8/1/2018	-	2.99	-		817.08	-	
	7/11/2018	-	2.10	-		817.97	-	
	6/4/2018	-	1.08	-		818.99	-	
	5/2/2018	-	0.95	-		819.12	-	
	4/5/2018	-	1.04	-		819.03	-	
RT-2H*					822.17			

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)	Notes
RT-2H* (cont'd)	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
RT-2I*					819.51			
	3/4/2019	-	0.37	-		819.14	-	
	2/18/2019	-	0.87	-		818.64	-	
	1/23/2019	-	1.01	-		818.50	-	
	12/3/2018	-	1.29	-		818.22	-	
	11/1/2018	-	2.84	-		816.67	-	
	10/5/2018	-	2.44	-		817.07	-	
	9/11/2018	-	2.74	-		816.77	-	
	8/1/2018	-	2.63	-		816.88	-	
	7/11/2018	-	2.25	-		817.26	-	
	6/4/2018	-	1.02	-		818.49	-	
	5/2/2018	-	1.04	-		818.47	-	
	4/5/2018	-	1.04	-		818.47	-	
RT-2J*					817.63			
	3/4/2019	-	-	-		817.63	-	bubbling at surface of well
	2/18/2019	-	0.33	-		817.30	-	
	1/23/2019	-	-	-		817.63	-	Well overflowing with water
	12/3/2018	-	0.10	-		817.53	-	
	11/1/2018	-	1.09	-		816.54	-	
	10/5/2018	-	0.92	-		816.71	-	
	9/11/2018	-	1.15	-		816.48	-	
	8/1/2018	-	1.98	-		815.65	-	
	7/11/2018	-	0.80	-		816.83	-	
	6/4/2018	-	-	-		817.63	-	
	5/2/2018	-	0.04	-		817.59	-	
	4/5/2018	-	0.03	-		817.60	-	
RT-2K*					817.40			
	3/4/2019	-	0.37	-		817.03	-	
	2/18/2019	-	0.44	-		816.96	-	
	1/23/2019	-	0.49	-		816.91	-	

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)	Notes
RT-2K* (cont'd)	12/3/2018	-	0.60	-		816.80	-	
	11/1/2018	-	0.94	-		816.46	-	
	10/5/2018	-	1.18	-		816.22	-	
	9/11/2018	-	1.15	-		816.25	-	
	8/1/2018	-	0.78	-		816.62	-	
	7/11/2018	-	0.95	-		816.45	-	
	6/7/2018	-	1.20	-		816.20	-	
	5/2/2018	-	0.82	-		816.58	-	
	4/5/2018	-	0.60	-		816.80	-	
RT-2L*					819.54			
	3/4/2019	-	0.98	-		818.56	-	some odor
	2/18/2019	-	1.02	-		818.52	-	
	1/23/2019	-	1.06	-		818.48	-	
	12/3/2018	-	1.08	-		818.46	-	
	11/1/2018	-	2.38	-		817.16	-	
	10/5/2018	-	2.61	-		816.93	-	
	9/11/2018	-	2.28	-		817.26	-	
	8/1/2018	-	1.52	-		818.02	-	
	7/11/2018	-	1.40	-		818.14	-	
	6/4/2018	-	1.03	-		818.51	-	
	5/2/2018	-	1.16	-		818.38	-	
	4/5/2018	-	1.23	-		818.31	-	
RW-01					851.92			
	3/4/2019	-	12.11	-		839.81	-	
	2/18/2019	-	8.31	-		843.61	-	
	1/23/2019	-	8.67	-		843.25	-	
	12/3/2018	8.51	8.72	0.21		843.20	843.36	intermittent solid tone
	11/1/2018	-	13.83	-		838.09	-	
	10/5/2018	-	16.12	-		835.80	-	
	9/11/2018	-	10.06	-		841.86	-	
	8/1/2018	-	14.01	-		837.91	-	
	7/11/2018	-	13.97	-		837.95	-	
	6/4/2018	-	11.05	-		840.87	-	
	5/2/2018	-	12.18	-		839.74	-	
	4/5/2018	-	12.84	-		839.08	-	

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)	Notes
RW-02					852.69			
	3/5/2019	17.56	17.57	0.01		835.12	835.13	
	2/18/2019	19.22	19.44	0.22		833.25	833.41	
	1/23/2019	20.80	21.00	0.20		831.69	831.84	
	12/4/2018	-	22.02	-		830.67	-	
	11/1/2018	23.38	23.39	0.01		829.30	829.31	
	10/5/2018	-	23.38	-		829.31	-	
	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	
	6/7/2018	-	20.17	-		832.52	-	
	5/2/2018	20.98	20.99	0.01		831.70	831.71	
	4/5/2018	-	21.69	-		831.00	-	
RW-03*					852.34			
	3/5/2019	18.06	18.90	**0.84**		833.44	834.05	
	2/18/2019	18.74	18.75	0.01		833.59	833.60	
	1/23/2019	19.61	19.62	0.01		832.72	832.73	
	12/4/2018	-	23.09	-		829.25	-	
	11/1/2018	24.11	24.12	0.01		828.22	828.23	
	10/5/2018	23.97	23.99	0.02		828.35	828.36	
	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	-	
	6/7/2018	-	21.30	-		831.04	-	
	5/2/2018	-	22.00	-		830.34	-	
	4/5/2018	-	23.00	-		829.34	-	
RW-04					853.93			
	3/5/2019	22.77	22.79	0.02		831.14	831.16	
	2/18/2019	24.11	24.43	0.32		829.50	829.74	
	12/4/2018	28.34	28.52	0.18		825.41	825.54	
	11/1/2018	29.59	29.70	0.11		824.23	824.31	
	10/5/2018	25.59	29.70	**4.11**		824.23	827.23	
	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	

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)	Notes
RW-04 (cont'd)	6/7/2018	-	26.12	-		827.81	-	
	5/2/2018	26.84	27.04	0.20		826.89	827.04	
	4/5/2018	27.95	28.53	**0.58**		825.40	825.83	
RW-05					853.53			
	3/5/2019	26.61	26.62	0.01		826.91	826.92	
	2/18/2019	-	27.79	-		825.74	-	
	12/4/2018	31.75	31.81	0.06		821.72	821.77	
	11/1/2018	33.45	33.46	0.01		820.07	820.08	
	10/5/2018	33.06	33.09	0.03		820.44	820.47	
	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	
	6/7/2018	-	29.99	-		823.54	-	
	5/2/2018	31.14	31.19	0.05		822.34	822.38	
	4/5/2018	31.70	31.78	0.08		821.75	821.81	
RW-06					846.21			
	3/4/2019	-	20.47	-		825.74	-	
	2/18/2019	-	22.06	-		824.15	-	
	1/23/2019	-	22.97	-		823.24	-	
	12/3/2018	-	24.79	-		821.42	-	
	11/1/2018	-	26.36	-		819.85	-	
	10/5/2018	-	26.31	-		819.90	-	
	9/11/2018	-	25.55	-		820.66	-	
	8/1/2018	-	24.40	-		821.81	-	
	7/11/2018	-	24.31	-		821.90	-	
	6/4/2018	-	23.38	-		822.83	-	
	5/2/2018	-	24.16	-		822.05	-	
	4/5/2018	-	24.71	-		821.50	-	
RW-07					843.19			
	3/5/2019	-	16.78	-		826.41	-	
	2/18/2019	-	19.02	-		824.17	-	
	12/4/2018	-	21.42	-		821.77	-	
	11/1/2018	-	11.70	-		831.49	-	
	10/5/2018	-	23.18	-		820.01	-	
	9/11/2018	-	22.10	-		821.09	-	

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)	Notes
RW-07 (cont'd)	8/1/2018	-	21.49	-		821.70	-	
	7/11/2018	-	21.03	-		822.16	-	
	6/7/2018	-	20.40	-		822.79	-	
	5/2/2018	-	20.65	-		822.54	-	
	4/5/2018	-	21.26	-		821.93	-	
RW-08					835.48			
	3/4/2019	-	10.19	-		825.29	-	
	2/18/2019	-	12.44	-		823.04	-	
	1/23/2019	-	12.11	-		823.37	-	
	12/3/2018	-	14.27	-		821.21	-	slight odor on probe
	11/1/2018	-	16.55	-		818.93	-	
	10/5/2018	-	16.22	-		819.26	-	
	9/11/2018	-	15.21	-		820.27	-	
	8/1/2018	-	14.70	-		820.78	-	
	7/11/2018	-	14.66	-		820.82	-	
	6/7/2018	-	NM	-		-	-	
	5/2/2018	-	13.34	-		822.14	-	
	4/5/2018	-	13.41	-		822.07	-	
RW-09*					835.12			
	3/4/2019	-	6.47	-		828.65	-	
	2/18/2019	-	9.91	-		825.21	-	
	1/23/2019	-	9.26	-		825.86	-	
	12/3/2018	-	11.46	-		823.66	-	slight odor on probe
	11/1/2018	14.28	14.46	0.18		820.66	820.79	
	10/5/2018	-	13.88	-		821.24	-	
	9/11/2018	-	12.31	-		822.81	-	
	8/1/2018	-	12.11	-		823.01	-	
	7/11/2018	-	12.44	-		822.68	-	
	6/4/2018	-	8.95	-		826.17	-	
	5/2/2018	-	10.78	-		824.34	-	
	4/5/2018	-	9.89	-		825.23	-	
RW-10					848.53			
	3/5/2019	-	4.86	-		843.67	-	
	2/18/2019	-	5.91	-		842.62	-	
	1/23/2019	7.78	7.79	0.01		840.74	840.75	

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)	Notes
RW-10 (cont'd)	12/4/2018	-	13.53	-		835.00	-	
	11/1/2018	-	10.97	-		837.56	-	
	10/5/2018	-	9.95	-		838.58	-	
	9/11/2018	16.82	16.90	0.08		831.63	831.69	
	8/1/2018	-	10.40	-		838.13	-	product on outside of cannister
	7/11/2018	9.24	9.29	0.05		839.24	839.28	
	6/4/2018	-	8.95	-		839.58	-	
	5/2/2018	10.83	10.84	0.01		837.69	837.70	
	4/5/2018	-	9.56	-		838.97	-	
RW-11					852.97			
	3/4/2019	-	8.41	-		844.56	-	Heavy bubbling
	2/18/2019	-	10.40	-		842.57	-	
	1/23/2019	-	9.79	-		843.18	-	
	12/3/2018	-	10.33	-		842.64	-	Odor on probe
	11/1/2018	11.39	11.40	0.01		841.57	841.57	
	10/5/2018	-	12.50	-		840.47	-	
	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	-	
	6/4/2018	-	11.55	-		841.42	-	
	5/2/2018	-	10.45	-		842.52	-	
	4/5/2018	-	11.80	-		841.17	-	
RW-12					854.49			
	3/4/2019	-	8.93	-		845.56	-	
	2/18/2019	-	8.60	-		845.89	-	
	1/23/2019	-	NM	-		-	-	
	12/3/2018	-	11.59	-		842.90	-	
	11/1/2018	13.59	13.61	0.02		840.88	840.89	
	10/5/2018	-	13.03	-		841.46	-	
	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	-	
	6/4/2018	-	11.95	-		842.54	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	13.47	-		841.02	-	

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)	Notes
RW-13					847.97			
	3/4/2019	-	NM	-		-	-	
	12/3/2018	-	NM	-		-	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	NM	-		-	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
RW-14					827.54			
	3/4/2019	-	7.98	-		819.56	-	
	2/18/2019	-	9.18	-		818.36	-	
	1/23/2019	-	9.12	-		818.42	-	
	12/4/2018	-	10.18	-		817.36	-	
	11/1/2018	-	11.47	-		816.07	-	Sparge system on
	10/5/2018	-	9.88	-		817.66	-	Sparge system on
	9/11/2018	-	9.70	-		817.84	-	
	8/1/2018	-	1.70	-		825.84	-	bubbling in well
	7/11/2018	-	10.02	-		817.52	-	
	6/4/2018	-	9.97	-		817.57	-	
	5/2/2018	-	10.05	-		817.49	-	
	4/5/2018	-	6.72	-		820.82	-	
RW-15					851.64			
	3/5/2019	-	6.42	-		845.22	-	
	2/18/2019	-	6.57	-		845.07	-	
	1/23/2019	-	8.05	-		843.59	-	
	12/4/2018	-	12.20	-		839.44	-	
	11/1/2018	-	13.08	-		838.56	-	
	10/5/2018	-	13.61	-		838.03	-	
	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	
	6/7/2018	-	10.34	-		841.30	-	

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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)	Notes
RW-15 (cont'd)	5/2/2018	-	11.98	-		839.66	-	
	4/5/2018	-	12.91	-		838.73	-	
SW-01					812.82			
	3/4/2019	-	-	-		812.82	-	
	2/19/2019	-	-	-		812.82	-	
	12/3/2018	-	-	-		812.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	(0.20)	-		813.02	-	
	8/1/2018	-	(0.75)	-		813.57	-	
	7/11/2018	-	(5.69)	-		818.51	-	
	6/4/2018	-	(0.90)	-		813.72	-	
	5/2/2018	-	(1.66)	-		814.48	-	
	4/5/2018	-	(1.67)	-		814.49	-	
SW-02					808.65			
	3/4/2019	-	(1.88)	-		810.53	-	
	2/18/2019	-	(1.80)	-		810.45	-	
	12/3/2018	-	(1.86)	-		810.51	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	(1.80)	-		810.45	-	
	8/1/2018	-	(1.90)	-		810.55	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	(1.74)	-		810.39	-	
	5/2/2018	-	(1.76)	-		810.41	-	
	4/5/2018	-	(1.09)	-		809.74	-	
SW-03					815.09			
	3/4/2019	-	-	-		815.09	-	
	12/3/2018	-	(0.58)	-		815.67	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	-	-		815.09	-	
	8/1/2018	-	(0.30)	-		815.39	-	
	7/11/2018	-	(0.59)	-		815.68	-	
	6/4/2018	-	NM	-		-	-	

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Plantation Pipe Line Company

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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)	Notes
SW-03 (cont'd)	5/2/2018	-	(1.78)	-		816.87	-	
	4/5/2018	-	(1.76)	-		816.85	-	
SW-05					838.75			
	3/4/2019	-	(0.39)	-		839.14	-	
	2/18/2019	-	(0.39)	-		839.14	-	
	12/3/2018	-	(0.39)	-		839.14	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	-	-		838.75	-	
	8/1/2018	-	(0.30)	-		839.05	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	(0.36)	-		839.11	-	
	4/5/2018	-	NM	-		-	-	
SW-08					802.04			
	3/4/2019	-	(0.74)	-		802.78	-	
	12/3/2018	-	(0.40)	-		802.44	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	(0.94)	-		802.98	-	
	8/1/2018	-	(0.85)	-		802.89	-	
	7/11/2018	-	(0.84)	-		802.88	-	
	6/4/2018	-	(0.86)	-		802.90	-	
	5/2/2018	-	(1.05)	-		803.09	-	
	4/5/2018	-	(1.04)	-		803.08	-	
SW-10					778.09			
	3/4/2019	-	(0.56)	-		778.65	-	
	12/3/2018	-	(0.50)	-		778.59	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	(0.43)	-		778.52	-	
	8/1/2018	-	(0.40)	-		778.49	-	
	7/11/2018	-	(0.40)	-		778.49	-	
	6/4/2018	-	(0.44)	-		778.53	-	
	5/2/2018	-	(0.70)	-		778.79	-	

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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)	Notes
SW-10 (cont'd)	4/5/2018	-	(0.90)	-		778.99	-	
TW-04R					852.64			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	3.30	-		849.34	-	
	6/4/2018	-	1.64	-		851.00	-	
	5/2/2018	-	3.39	-		849.25	-	
	4/5/2018	-	3.99	-		848.65	-	
TW-05R*					849.93			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	1.40	-		848.53	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
TW-14R					853.37			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	4.40	-		848.97	-	
	6/4/2018	-	2.85	-		850.52	-	
	5/2/2018	-	4.21	-		849.16	-	
	4/5/2018	-	4.71	-		848.66	-	
TW-15R*					850.62			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	1.02	-		849.60	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
TW-21*					849.70			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	2.89	-		846.81	-	
	6/4/2018	-	0.25	-		849.45	-	
	5/2/2018	-	1.87	-		847.83	-	
	4/5/2018	-	2.43	-		847.27	-	
TW-28					851.42			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	20.50	-		830.92	-	
	6/4/2018	-	20.09	-		831.33	-	

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)	Notes
TW-28 (cont'd)	5/2/2018	-	20.60	-		830.82	-	
	4/5/2018	21.65	21.67	0.02		829.75	829.77	
TW-30					851.81			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	19.55	-		832.26	-	
	6/4/2018	-	18.95	-		832.86	-	
	5/2/2018	-	19.55	-		832.26	-	
	4/5/2018	-	20.43	-		831.38	-	
TW-34					854.79			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	22.11	-		832.68	-	
	6/4/2018	-	22.14	-		832.65	-	
	5/2/2018	-	22.14	-		832.65	-	
	4/5/2018	-	22.15	-		832.64	-	
TW-35					854.10			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	22.63	-		831.47	-	
	6/4/2018	-	22.67	-		831.43	-	
	5/2/2018	-	22.67	-		831.43	-	
	4/5/2018	-	22.73	-		831.37	-	
TW-40					853.35			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	26.15	-		827.20	-	
	6/4/2018	-	25.83	-		827.52	-	
	5/2/2018	-	26.49	-		826.86	-	
	4/5/2018	-	27.26	-		826.09	-	
TW-41					849.38			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	24.40	-		824.98	-	
	6/4/2018	-	23.46	-		825.92	-	
	5/2/2018	-	24.56	-		824.82	-	
	4/5/2018	-	25.13	-		824.25	-	
TW-42					846.84			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	23.25	23.76	**0.51**		823.08	823.45	

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)	Notes
TW-42 (cont'd)	6/4/2018	22.14	22.79	**0.65**		824.05	824.52	
	5/2/2018	23.35	23.81	0.46		823.03	823.36	
	4/5/2018	23.82	24.31	0.49		822.53	822.89	
TW-45					848.31			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	24.91	-		823.40	-	
	6/4/2018	-	24.15	-		824.16	-	
	5/2/2018	24.88	25.05	0.17		823.26	823.38	
	4/5/2018	25.45	25.57	0.12		822.74	822.83	
TW-46					846.88			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	NM	-		-	-	
	6/4/2018	-	NM	-		-	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
TW-55*					845.93			
	3/4/2019	-	-	-		845.93	-	
	12/3/2018	-	-	-		845.93	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	11.51	-		834.42	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	-	-		845.93	-	well bubbling over
	6/4/2018	-	-	-		845.93	-	
	5/2/2018	-	3.89	-		842.04	-	
	4/5/2018	-	3.00	-		842.93	-	
TW-59*					834.78			
	3/4/2019	-	-	-		834.78	-	Water overlfowing at casing
	2/18/2019	-	10.26	-		824.52	-	
	12/4/2018	-	12.29	-		822.49	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	-	-		834.78	-	bubbling over casing
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	13.36	-		821.42	-	

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)	Notes
TW-59* (cont'd)	6/4/2018	-	-	-		834.78	-	
	5/2/2018	-	13.17	-		821.61	-	
	4/5/2018	-	12.27	-		822.51	-	
TW-60*					828.03			
	3/4/2019	-	4.29	-		823.74	-	
	2/18/2019	-	5.80	-		822.23	-	
	12/4/2018	-	7.00	-		821.03	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	10.25	-		817.78	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	8.86	-		819.17	-	
	6/4/2018	-	-	-		828.03	-	
	5/2/2018	-	8.75	-		819.28	-	
	4/5/2018	-	2.59	-		825.44	-	
TW-64					845.88			
	3/4/2019	-	11.06	-		834.82	-	
	12/3/2018	-	18.59	-		827.29	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	19.80	-		826.08	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	15.56	-		830.32	-	
	6/4/2018	-	14.44	-		831.44	-	
	5/2/2018	-	15.27	-		830.61	-	
	4/5/2018	-	15.11	-		830.77	-	
TW-65					845.62			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	19.21	-		826.41	-	
	6/4/2018	-	18.54	-		827.08	-	
	5/2/2018	-	18.94	-		826.68	-	
	4/5/2018	-	19.90	-		825.72	-	
TW-66*					820.31			
	3/4/2019	-	-	-		820.31	-	
	2/18/2019	-	-	-		820.31	-	

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)	Notes
TW-66* (cont'd)	12/3/2018	-	0.30	-		820.01	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	2.17	-		818.14	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	1.46	-		818.85	-	
	6/4/2018	-	-	-		820.31	-	
	5/2/2018	-	1.15	-		819.16	-	
	4/5/2018	-	0.42	-		819.89	-	
TW-67*					852.71			
	3/4/2019	-	6.16	-		846.55	-	sparge active and bubbling
	2/18/2019	-	6.54	-		846.17	-	
	12/3/2018	-	10.47	-		842.24	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	10.68	-		842.03	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	9.19	-		843.52	-	
	6/4/2018	-	8.14	-		844.57	-	
	5/2/2018	-	8.29	-		844.42	-	
	4/5/2018	-	5.75	-		846.96	-	
TW-68					846.45			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	20.87	-		825.58	-	
	6/4/2018	-	20.70	-		825.75	-	
	5/2/2018	-	21.13	-		825.32	-	
	4/5/2018	-	22.26	-		824.19	-	
TW-69					840.27			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	13.18	-		827.09	-	
	6/4/2018	-	11.38	-		828.89	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	12.51	-		827.76	-	
TW-70					841.95			
	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)	Notes
TW-70 (cont'd)	7/11/2018	-	16.73	-		825.22	-	
	6/4/2018	-	15.39	-		826.56	-	
	5/2/2018	-	16.08	-		825.87	-	
	4/5/2018	-	16.90	-		825.05	-	
TW-73*					850.53			
	3/4/2019	-	2.68	-		847.85	-	
	2/18/2019	-	3.72	-		846.81	-	
	12/3/2018	-	4.36	-		846.17	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	8.10	-		842.43	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	4.77	-		845.76	-	
	6/4/2018	-	13.09	-		837.44	-	
	5/2/2018	-	5.25	-		845.28	-	
	4/5/2018	-	3.55	-		846.98	-	
TW-76					852.44			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	9.55	-		842.89	-	
	6/4/2018	-	10.32	-		842.12	-	
	5/2/2018	-	10.79	-		841.65	-	
	4/5/2018	-	11.92	-		840.52	-	
TW-81					849.43			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	2.90	-		846.53	-	
	6/4/2018	-	0.03	-		849.40	-	
	5/2/2018	-	1.94	-		847.49	-	
	4/5/2018	-	2.55	-		846.88	-	
TW-82					849.64			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	2.80	-		846.84	-	
	6/4/2018	-	0.60	-		849.04	-	
	5/2/2018	-	1.73	-		847.91	-	
	4/5/2018	-	2.42	-		847.22	-	
TW-83					850.44			

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)	Notes
TW-83 (cont'd)	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	3.52	-		846.92	-	
	6/4/2018	-	0.67	-		849.77	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	3.06	-		847.38	-	
TW-84					851.22			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	4.19	-		847.03	-	
	6/4/2018	-	1.99	-		849.23	-	
	5/2/2018	-	3.39	-		847.83	-	
	4/5/2018	-	3.93	-		847.29	-	
TW-85*					843.49			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	-	-		843.49	-	
	6/4/2018	-	-	-		843.49	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	NM	-		-	-	
TW-86					853.10			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	5.28	-		847.82	-	
	6/4/2018	-	3.10	-		850.00	-	
	5/2/2018	-	4.55	-		848.55	-	
	4/5/2018	-	5.10	-		848.00	-	
TW-87					852.25			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	5.16	-		847.09	-	
	6/4/2018	-	3.30	-		848.95	-	
	5/2/2018	-	3.98	-		848.27	-	
	4/5/2018	-	4.68	-		847.57	-	

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)	Notes
TW-90*					845.43			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	-	-		845.43	-	
	6/4/2018	-	-	-		845.43	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	-	-		845.43	-	
TW-94*					840.58			
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	-	-		840.58	-	
	6/4/2018	-	-	-		840.58	-	
	5/2/2018	-	-	-		840.58	-	
	4/5/2018	-	-	-		840.58	-	
TW-96*					840.40			
	3/4/2019	-	-	-		840.40	-	Sparging over casing
	12/3/2018	-	2.79	-		837.61	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
	9/11/2018	-	16.00	-		824.40	-	
	8/1/2018	-	NM	-		-	-	
	7/11/2018	-	-	-		840.40	-	well bubbling over
	6/4/2018	-	-	-		840.40	-	
	5/2/2018	-	NM	-		-	-	
	4/5/2018	-	3.00	-		837.40	-	

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 March 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

"B" designation in the location ID indicates bedrock well.

* = well is not bracketing the water table

amsl = above mean sea level MW = monitoring well

BTOC = below top of casing NM = not measured RW = recovery well

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)	Notes

ft = feet RS = recovery sump SW = surface water

ID = identification RT = recovery trench TW = temporary piezometer well

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) 4/5/2018	DO (mg/L) 5/2/2018	DO (mg/L) 6/4/2018	DO (mg/L) 7/11/2018	DO (mg/L) 9/10/2018	DO (mg/L) 12/3/2018	DO (mg/L) 3/4/2019
MW-02	Hayfield	HAS-02	33	1.17	9.80	11.90	11.41	6.90	9.48	10.20
MW-02B	Hayfield	HAS-02	24	2.23	8.08	4.60	3.24	8.16	9.58	10.47
MW-03	Hayfield	HAS-02	12	11.15	10.82	12.34	11.30	12.02	9.46	10.15
MW-04	Hayfield	HAS-01	82	8.38	8.71	8.64	7.01	7.17	8.80	8.20
MW-08	Hayfield	HAS-03	12	FP	10.39	FP	9.90	9.07	FP	10.80
MW-09	Hayfield	HAS-01	37	FP	9.26	NM	10.62	10.57	9.00	10.51
MW-10	Hayfield	HAS-03	27	9.46	9.65	7.68	8.00	5.50	9.72	8.00
MW-16	Hayfield	HAS-01	24	FP	FP	NM	FP	FP	8.62	10.42
MW-18	Hayfield	HAS-03	2	FP	FP	FP	FP	FP	FP	FP
MW-30	Hayfield	HAS-01	15	5.21	4.04	4.43	0.72	DRY	6.90	5.08
TW-55	Hayfield	HAS-01	40	8.96	10.30	12.02	9.86	11.20	9.60	10.95
TW-59	Hayfield	VAS-38	6	10.85	10.05	9.34	6.95	11.49	9.71	NM
TW-60	Hayfield	VAS-25	10	9.85	9.85	NM	8.50	8.10	3.42	9.69
TW-64	Hayfield	HAS-03	132	8.80	7.10	7.96	3.25	2.72	8.80	8.85
TW-66	Hayfield	VAS-28	49	9.10	9.15	10.33	8.00	7.23	8.75	10.91
TW-67	Hayfield	VAS-11	14	10.50	10.05	11.69	9.06	9.72	7.48	13.39
TW-73	Hayfield	VAS-19	11	11.18	10.22	10.80	8.70	5.70	0.96	0.83
TW-96	Hayfield	HAS-03	78	10.45	9.24	10.62	9.90	9.85	9.78	10.30
Average Hayfield Zone Values				8.38	9.17	9.41	7.90	8.36	8.13	9.30
MW-12	Brown's Creek	VAS-37	18	7.93	6.70	10.53	7.98	8.45	1.26	9.20
MW-12B	Brown's Creek	VAS-37	9	1.94	0.78	1.24	0.31	1.66	1.02	0.15
MW-15	Brown's Creek	VAS-21	14	FP	9.07	FP	10.20	6.20	7.54	9.28
MW-15B	Brown's Creek	VAS-22	13	1.17	0.93	3.88	0.45	2.44	1.24	0.13
MW-25	Brown's Creek	VAS-29	54	5.07	5.90	9.20	6.41	5.55	8.86	9.63
MW-25B	Brown's Creek	VAS-29	56	1.60	0.57	5.55	0.88	1.95	1.15	0.34
MW-28	Brown's Creek	VAS-46	26	0.90	1.41	4.85	0.94	1.99	0.89	0.72
Average Brown's Creek Protection Zone Values				3.10	3.62	5.88	3.88	4.03	3.14	4.21
MW-19	Cupboard Creek	VAS-08	17	5.60	1.55	4.20	0.82	2.15	5.45	11.43
MW-20	Cupboard Creek	VAS-03	23	FP	3.90	FP	FP	FP	0.91	0.15
MW-29	Cupboard Creek	VAS-19	111	4.47	3.10	1.59	3.70	5.32	7.35	4.53
Average Cupboard Creek Protection Zone Values				5.04	2.85	2.90	2.26	3.74	4.57	5.37

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) 4/5/2018	DO (mg/L) 5/2/2018	DO (mg/L) 6/4/2018	DO (mg/L) 7/11/2018	DO (mg/L) 9/10/2018	DO (mg/L) 12/3/2018	DO (mg/L) 3/4/2019
MW-01	Shallow Bedrock	VBS-01	147	1.67	1.44	1.24	0.12	1.17	2.40	1.61
MW-01B	Shallow Bedrock	VBS-01	152	1.38	0.59	1.15	0.10	1.34	0.92	0.13
MW-11	Shallow Bedrock	VBS-01	368	FP	6.15	FP	3.64	FP	NM	0.18
MW-22	Shallow Bedrock	VBS-03	115	1.70	1.42	1.23	0.69	6.87	1.23	0.68
Average Shallow Bedrock Zone Values				1.58	2.40	1.21	1.14	3.13	1.52	0.65
Average Residuum				7.12	7.17	7.93	6.57	7.04	6.52	7.43
Average Bedrock Values				1.66	2.19	3.28	1.00	3.11	2.78	2.24
Monitoring Wells Outside Reasonable Expectation of ZOI:										
MW-32	Hayfield	HAS-02	75							
MW-34	Brown's		67							
MW-35	Brown's		62							
MW-39	Brown's		48							
MW-40	Brown's		58							
MW-41	Brown's		87							
MW-42	Brown's		95							
TW-45	Brown's	VAS-41	27							

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

ZOI = zone of influence

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-01	SBZ	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
	06/2015	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-01-120518	12/3/2018	3.91	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-030519	3/4/2019	2.79	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-01B	SBZ	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
	06/2015	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-01B-120518	12/3/2018	7.62	12/5/2018	µg/L	**8.30**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-030519	3/4/2019	4.02	3/5/2019	µg/L	**3.32**		1	U	1	U	3	U	1	U	**1.02**		5	U	--	
MW-02	Hayfield	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
	06/2015	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	--	
		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-02-120618	12/3/2018	3.58	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02-030719	3/4/2019	0	3/7/2019	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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-02B	Hayfield 06/2015	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-02B-120618	12/3/2018	12.92	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-030719	3/4/2019	3.74	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-03	Hayfield 06/2015	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	--	
		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-03-120618	12/3/2018	14	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-030719	3/4/2019	6.7	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-04	Hayfield 06/2015	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-04	Hayfield 06/2015	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-04-120618	12/3/2018	7.55	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-030719	3/4/2019	6.23	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-05	Hayfield (outside sparging system limits) 06/2015	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	--	
		MW-05-120618	12/3/2018	12.39	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-030719	3/4/2019	2.91	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-06	Hayfield (outside sparging system limits) 06/2015	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-06-120618	12/3/2018	11.24	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-030719	3/4/2019	3.57	3/7/2019	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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-06B	Hayfield (outside sparging system limits) 10/2017	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-06B-120618	12/3/2018	11.39	12/6/2018	µg/L	1	U	1	U	**1.89**		3	U	1	U	1	U	5	U	--	
		MW-06B-030719	3/4/2019	3.99	3/7/2019	µg/L	1	U	1	U	**1.42**		3	U	1	U	1	U	5	U	--	
MW-07	Hayfield (outside sparging system limits) 06/2015	--			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-07-120618	12/3/2018	10.99	12/6/2018	µg/L	**4,850**		**574**		**13,400**		**9,890**		100	U[b]	100	U[b]	500	U[b]	--	
		MW-07-021919	2/18/2019	6.15	2/19/2019	µg/L	**5,360**		**516**		**12,400**		**7,280**		1	U	1	U	**6.32**		--	
		MW-07-030719	3/4/2019	4.72	3/7/2019	µg/L	**3,110**		**147**		**5,780**		**4,110**		1	U	1	U	5	U	--	
		MW-07-D-030719	3/4/2019	4.72	3/7/2019	µg/L	**2,990**		**150**		**5,390**		**3,750**		1	U	1	U	5	U	--	
MW-08	Hayfield 06/2015				7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
		MW-08-012616			1/26/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-08-120616			12/6/2016	µg/L	1	U	1	U	**14.4**		**7.1**		1	U	1	U	1	U	--	
		MW-08-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		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	--	
		--	12/3/2018	19.18	12/3/2018	--	NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS	
		MW-08-030719	3/4/2019	7.45	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-09	Hayfield 06/2015	--			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]	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-09	Hayfield 06/2015	--			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	could 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-09-120618	12/3/2018	0	12/6/2018	µg/L	**6.39**		**2.61**		**48.3**		**39.8**		1	U	**5.68**		**6.79**		--	
		MW-09-030719	3/4/2019	8.00	3/7/2019	µg/L	**6.24**		**3.80**		**64.3**		**52.7**		1	U	**5.90**		5	U	--	
MW-09B	Hayfield 10/2017	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-09B-120618	12/3/2018	3.9	12/6/2018	µg/L	**2.19**		**2.14**		**8.22**		**16.8**		1	U	1	U	5	U	--	
		MW-09B-030719	3/4/2019	4.07	3/7/2019	µg/L	**13.2**		**13.7**		**51.1**		**110**		1	U	**2.46**		**6.54**		--	
MW-10	Hayfield 06/2015	MW-10-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
		MW-10-012616			1/26/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-10-120616			12/6/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-10-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-050317-FD			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-100417	10/3/2017	17.33	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-110817	11/7/2017	12.64	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-120717	12/4/2017	10.85	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-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-10-120618	12/3/2018	7.35	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-030719	3/4/2019	2.02	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

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

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-11	SBZ	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
	07/2015	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	
		--	9/10/2018	29.03	9/10/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/3/2018	28.17	12/3/2018	--	NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS	
		MW-11-030619	3/4/2019	23.01	3/6/2019	µg/L	**8,260**		**1,990**		**30,300**		**11,900**		200	U[b]	200	U[b]	1,000	U[b]	--	
MW-12	BCPZ	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
	06/2015	--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/13/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/20/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/31/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			4/6/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-12-062817			6/28/2017	µg/L	**1,190**		**467**		**7,910**		**5,100**		50	U[b]	50	U[b]	250	U[b]	--	
		MW-12-090817			9/8/2017	µg/L	**648**		**436**		**3,470**		**4,440**		100	U[b]	100	U[b]	500	U[b]	--	
		MW-12-120617	12/4/2017	15.55	12/6/2017	µg/L	**367**		**137**		**1,540**		**4,660**		10	U[b]	10	U	**54.4**		--	
		MW-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-12-120518	12/3/2018	12.02	12/5/2018	µg/L	**5.81**		**2.75**		**9.08**		**72.0**		1	U	1	U	5	U	--	
		MW-12-030619	3/4/2019	5.05	3/6/2019	µg/L	1	U	1	U	**3.94**		**4.86**		1	U	1	U	5	U	--	
MW-12B	BCPZ	MW-12B-012616			1/26/2016	µg/L	**228**		**31.4**		**193**		**532**		1	U	**5.4**		**14.6**		0.019	U
	12/2015	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**		**68.0**		1	U	1	U	**18.7**		--	
		MW-12B-120518	12/3/2018	12.49	12/5/2018	µg/L	**240**		**57.7**		**29.5**		**160**		1	U	1	U	**17.7**		--	
		MW-12B-030619	3/4/2019	7.05	3/6/2019	µg/L	**309**		**70.4**		**19.6**		**201**		1	U	1	U	**36.7**		--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-13	Hayfield (outside sparging system limits) 06/2015	--			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	--	
		--	9/10/2018	21.85	9/10/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-13-120718	12/3/2018	20.87	12/7/2018	µg/L	**83.4**		**9.62**		**158**		**23.6**		1	U	1	U	5	U	--	
		MW-13-030619	3/4/2019	15.23	3/6/2019	µg/L	**326**		**10.9**		**132**		**120**		1	U	1	U	5	U	--	
MW-13B	Hayfield (outside sparging system limits) 12/2015	MW-13B-012816			1/28/2016	µg/L	**367**		1	U	**5.6**		**59.5**		1	U	**119**		1	U	0.02	U
		MW-13B-D-012816			1/28/2016	µg/L	**405**		1	U	**6.1**		**59.1**		1	U	**108**		1	U	0.02	U
		MW-13B-113016			11/30/2016	µg/L	**550**		**5.1**		**21.2**		**140**		5	U[b]	**158**		**7.9**		--	
		MW-13B-062817			6/28/2017	µg/L	**308**		**3.09**		**10.3**		**103**		1	U	**121**		**5.13**		--	
		MW-13B-090817			9/8/2017	--	NS-SL		NS-SL		NS-SL		NS-SL		NS-SL		NS-SL		NS-SL		NS-SL	
		MW-13B-110817	11/7/2017	23.08	11/8/2017	µg/L	**325**		**3.42**		**19**		**91.6**		1	U	**173**		**5.55**		--	
		MW-13B-D-110817	11/7/2017	23.08	11/8/2017	µg/L	**356**		**3.85**		**20.8**		**100**		1	U	**168**		**6.61**		--	
		MW-13B-120617	12/4/2017	22.66	12/6/2017	µg/L	**269**		**3.97**		**24.4**		**100**		1	U	**140**		**8.83**		--	
		MW-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-13B-120618	12/3/2018	21.69	12/6/2018	µg/L	**614**		**93.5**		**823**		**516**		1	U	**139**		**10.8**		--	
		MW-13B-030619	3/4/2019	16.37	3/6/2019	µg/L	**445**		**53.1**		**679**		**383**		1	U	**143**		**8.60**		--	
MW-14	Hayfield (outside sparging system limits) 06/2015	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-14-120618	12/3/2018	14.88	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-14-030619	3/4/2019	9.49	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-14B	Hayfield (outside sparging system limits) 05/2016	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-14B	Hayfield (outside sparging system limits) 05/2016	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-14B-120618	12/3/2018	16.6	12/6/2018	µg/L	**3.56**		1	U	**1.40**		**6.34**		1	U	**6.56**		5	U	--	
		MW-14B-030619	3/4/2019	11.53	3/6/2019	µg/L	**2.70**		1	U	1	U	3	U	1	U	**8.83**		5	U	--	
MW-15	BCPZ 06/2015	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]	--	
		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-15-120618	12/3/2018	10.37	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**15.9**		5	U	--	
		MW-15-030619	3/4/2019	7.07	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	**2.57**		5	U	--	
MW-15B	BCPZ 07/2015	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-15B-120618	12/3/2018	14.44	12/6/2018	µg/L	**725**		**96.4**		**1,890**		**777**		1	U	**71.8**		**11.7**		--	
		MW-15B-021919	2/18/2019	8.81	2/19/2019	µg/L	**686**		**71.2**		**1,420**		**621**		1	U	**92.3**		**12.6**		--	
		MW-15B-030619	3/4/2019	13.14	3/6/2019	µg/L	**729**		**78.3**		**1,580**		**649**		1	U	**91.2**		**15.4**		--	
		MW-15B-D-030619	3/4/2019	13.14	3/6/2019	µg/L	**817**		**81.0**		**1,710**		**718**		1	U	**110.0**		**16.2**		--	

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Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-16	Hayfield 06/2015	--			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-16-120618	12/3/2018	4.98	12/6/2018	µg/L	**10.3**		**38.7**		**132**		**398**		5	U	5	U	**460**		--	
		MW-16-030719	3/4/2019	2.00	3/7/2019	µg/L	**9.1**		**15.7**		**74**		**186**		1	U	**1.02**		**398**		--	
MW-17	Hayfield (outside sparging system limits) 06/2015	--			7/27/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			3/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			3/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			3/31/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			4/6/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			6/26/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	10.85	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	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	
		--	12/3/2018	10.85	12/3/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-17-030519	3/4/2019	6.81	3/5/2019	µg/L	**173**		**19.9**		**118**		**474**		1	U	**27.9**		5	U	--	
MW-17B	Hayfield (outside sparging system limits) 01/2016	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]	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-17B	Hayfield (outside sparging system limits) 01/2016	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-17B-110218	11/2/2018	14.67	11/2/2018	µg/L	**7,770**		**1,080**		**12,700**		**7,380**		20	U[b]	**841**		**113**		--	
		MW-17B-D-110218	11/2/2018	14.67	11/2/2018	µg/L	**7,670**		**1,070**		**12,900**		**5,130**		10	U[b]	**888**		**126**		--	
		MW-17B-120518	12/3/2018	13.22	12/5/2018	µg/L	**6,860**		**1,010**		**24,400**		**8,550**		50	U[b]	**690**		250	U[b]	--	
		MW-17B-021919	2/18/2019	8.8	2/19/2019	µg/L	**7,810**		**1,140**		**20,200**		**8,330**		1	U	**410**		**181**		--	
		MW-17B-D-021919	2/18/2019	8.8	2/19/2019	µg/L	**7,910**		**1,210**		**20,700**		**8,910**		1	U	**401**		250	U[b]	--	
		MW-17B-030519	3/4/2019	7.18	3/5/2019	µg/L	**8,360**		**1,370**		**22,400**		**9,180**		50	U[b]	**308**		**261**		--	
MW-18	Hayfield 06/2015	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			6/26/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/4/2017	11.64	12/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	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	
		--	12/3/2018	17.85	12/3/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-18-030719	3/4/2019	15.9	3/7/2019	µg/L	**2.47**		**8.16**		**60.4**		**141**		1	U	**13.5**		**72.7**		--	
MW-19	CCPZ 06/2015	--			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**		**16.0**		**96.5**		1	U	1	U	**6.55**		--	
		MW-19-120518	12/3/2018	9.94	12/5/2018	µg/L	5	U	**8.23**		**13.7**		**217**		5	U	5	U	25	U	--	
		MW-19-030519	3/4/2019	5.67	3/5/2019	µg/L	5	U	**33.1**		**19.4**		**756**		5	U	5	U	**294**		--	
MW-20	CCPZ 06/2015	--			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	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-20	CCPZ 06/2015	--			4/6/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			5/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			6/26/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			7/17/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			8/1/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	10/3/2017	13.79	10/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	11/7/2017	13.61	11/8/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	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**		**1350**		**18100**		**14500**		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	
		--	12/3/2018	9.99	12/3/2018	--	NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS	
		MW-20-021919	2/18/2019	6.39	2/19/2019	µg/L	**6,650**		**1080**		**13900**		**11700**		5	U	**128**		**341**		--	
		MW-20-030519	3/4/2019	5.94	3/5/2019	µg/L	**9,480**		**1320**		**19200**		**10800**		100	U[b]	**187**		500	U[b]	--	
MW-21	Hayfield (outside sparging system limits) 06/2015	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-21-120518	12/3/2018	13.41	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-030519	3/4/2019	8.84	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-22	SBZ 07/2015	--			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	

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

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-22	SBZ	MW-22-062917			6/29/2017	µg/L	**234**		10	U	**125**		30	U	10	U[b]	10	U	50	U[b]	--	
	07/2015	--			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-22-120518	12/3/2018	7.37	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-22-030519	3/4/2019	3.41	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-23	CCPZ (outside sparging system limits) 07/2015	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]	--	
		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	**1.10**		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	**32.0**		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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-23	CCPZ (outside sparging system limits) 07/2015	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	**2.30**		1	U	1	U	3	U	1	U	**11.0**		5	U	--	
		MW-23-110218	11/2/2018	9.19	11/2/2018	µg/L	**11.1**		1	U	**2.48**		**4.85**		1	U	**8.35**		5	U	--	
		MW-23-120518	12/3/2018	6.97	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.08**		5	U	--	
		MW-23-D-120518	12/3/2018	6.97	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.03**		5	U	--	
		MW-23-022019	2/18/2019	4.42	2/20/2019	µg/L	**5.34**		1	U	**2.16**		3	U	1	U	**7.24**		5	U	--	
		MW-23-D-022019	2/18/2019	4.42	2/20/2019	µg/L	**7.09**		1	U	**3.22**		**3.57**		1	U	**7.77**		5	U	--	
		MW-23-030519	3/4/2019	2.83	3/5/2019	µg/L	**87.7**		**1.16**		**1.35**		**46.2**		1	U	**16.5**		5	U	--	
		MW-23-D-030519	3/4/2019	2.83	3/5/2019	µg/L	**81.6**		**1.21**		**1.26**		**42.1**		1	U	**15.9**		5	U	--	
MW-23B	CCPZ (outside sparging system limits) 07/2015	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-23B-120518	12/3/2018	8.73	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-23B-030519	3/4/2019	6.69	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-24	BCPZ (outside sparging system limits) 07/2015	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	--	
		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-24-120618	12/3/2018	4.78	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24-030619	3/4/2019	5.07	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-24B	BCPZ (outside sparging system limits) 07/2015	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-24B	BCPZ (outside sparging system limits) 07/2015	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-24B-120618	12/3/2018	5.59	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24B-030619	3/4/2019	5.7	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-25	BCPZ 01/2016	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	--	
		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-25-120518	12/3/2018	7.13	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-030619	3/4/2019	5.03	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-25B	BCPZ 01/2016	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-25B	BCPZ 01/2016	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-25B-120518	12/3/2018	3.7	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-030619	3/4/2019	2.72	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-D-030619	3/4/2019	2.72	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-26	CCPZ (outside sparging system limits) 01/2016	MW-26-012016			1/20/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-26-120116			12/1/2016	µg/L	1	U	1	U	**2.3**		1	U	1	U	1	U	1	U	--	
		MW-26-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-040617-FD			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-090717			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-100417	10/3/2017	7.71	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-110817	11/7/2017	6.56	11/8/2017	µg/L	1	U	1	U	**1.17**		3	U	1	U	1	U	5	U	--	
		MW-26-120617	12/4/2017	6.83	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-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-26-120518	12/3/2018	2.36	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-021919	2/18/2019	1.21	2/19/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-030519	3/4/2019	0.61	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-26B	CCPZ (outside sparging system limits) 01/2016	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-26B	CCPZ (outside sparging system limits) 01/2016	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-26B-120518	12/3/2018	5.55	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-030519	3/4/2019	0.00	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-27	SBZ (outside sparging system limits) 01/2016	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	--	
		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-27-120518	12/3/2018	24.96	12/5/2018	µg/L	**2.96**		**9.03**		**23.1**		**50.3**		1	U	1	U	5	U	--	
		MW-27-030519	3/4/2019	18.01	3/5/2019	µg/L	1	U	1	U	**4.05**		**9.95**		1	U	1	U	5	U	--	
		MW-27-D-030519	3/4/2019	18.01	3/5/2019	µg/L	**1.01**		1	U	**4.73**		**12.0**		1	U	1	U	5	U	--	
MW-27B	SBZ (outside sparging system limits) 04/2016	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**		**25.0**		1	U	1	U	5	U	--	
		MW-27B-120518	12/3/2018	29.34	12/5/2018	µg/L	1	U	**2.47**		**4.97**		**21.1**		1	U	1	U	5	U	--	
		MW-27B-030519	3/4/2019	24.49	3/5/2019	µg/L	1	U	**2.40**		**4.76**		**20.0**		1	U	1	U	5	U	--	
MW-28	BCPZ 01/2016	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**		--	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																					
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-28	BCPZ	--	10/3/2017	23.80	10/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	01/2016	--	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	--	
		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-28-120518	12/3/2018	21.17	12/5/2018	µg/L	**13.7**		**8.04**		**1.47**		3	U	1	U	1	U	5	U	--	
		MW-28-030619	3/4/2019	16.42	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-29	CCPZ	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
	01/2016	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-29-120518	12/3/2018	3.11	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-030519	3/4/2019	0.71	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-30	Hayfield	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
	01/2016	--			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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																					
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-30	Hayfield 01/2016	MW-30-062917			6/29/2017	µg/L	**646**		25	U	**1,630**		**736**		25	U[b]	25	U	125	U[b]	--	
		MW-30-071717			7/17/2017	µg/L	**922**		25	U	**2,050**		**1,320**		25	U[b]	25	U	125	U[b]	--	
		MW-30-080217			8/2/2017	µg/L	**1,240**		**25.9**		**1,020**		**2,230**		25	U[b]	25	U	125	U[b]	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	10/3/2017	14.58	10/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	11/7/2017	14.60	11/8/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	14.47	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	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-30-120718	12/3/2018	12.77	12/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**1.94**		**9.22**		--	
		MW-30-D-120718	12/3/2018	12.77	12/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.05**		5	U	--	
		MW-30-030719	3/4/2019	6.16	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-31	Hayfield (outside sparging system limits) 04/2016	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	--	
		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-31-120618	12/3/2018	19.47	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-030619	3/4/2019	13.42	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-31B	Hayfield (outside s	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

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-32	Hayfield 04/2016	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-32-120618	12/3/2018	11.85	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-030719	3/4/2019	5.22	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-33	Hayfield (outside s	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	Hayfield (outside sparging system limits) 04/2016	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-33T-120618	12/3/2018	26.29	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-33T-030619	3/4/2019	20.72	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-34	BCPZ 03/2017	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]	--	
		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**		--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-34	BCPZ 03/2017	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-34-110218	11/2/2018	2.9	11/2/2018	µg/L	**75.1**		1	U	**1.53**		**8.16**		1	U	**302**		5	U	--	
		MW-34-120618	12/3/2018	2.87	12/6/2018	µg/L	1	U	1	U	1	U	**6.63**		1	U	**271**		5	U	--	
		MW-34-022019	2/18/2019	2.83	2/20/2019	µg/L	**124**		**1.13**		**3.82**		15	U	1	U	**303**		5	U	--	
		MW-34-030619	3/4/2019	2.66	3/6/2019	µg/L	**42.4**		1	U	1	U	**5.32**		1	U	**242**		5	U	--	
MW-35	BCPZ 04/2016	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	--	
		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-35-120518	12/3/2018	7.45	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-030619	3/4/2019	5.39	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-36	Hayfield (outside sparging system limits) 04/2016	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-36	Hayfield (outside sparging system limits) 04/2016	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-36-120618	12/3/2018	16.65	12/6/2018	µg/L	**146**		1	U	**181**		**142**		1	U	1	U	5	U	--	
		MW-36-D-120618	12/3/2018	16.65	12/6/2018	µg/L	**143**		1	U	**175**		**134**		1	U	1	U	5	U	--	
		MW-36-021919	2/18/2019	11.97	2/19/2019	µg/L	**708**		1	U	**186**		**152**		1	U	1	U	5	U	--	
		MW-36-030719	3/4/2019	10.4	3/7/2019	µg/L	**223**		1	U	**210**		**161**		1	U	**2.67**		5	U	--	
MW-36B	Hayfield (outside sparging system limits) 04/2016	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-36B-120618	12/3/2018	16.32	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-030719	3/4/2019	10.02	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-D-030719	3/4/2019	10.02	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-37	BCPZ (outside sparging system limits) 08/2016	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-37-120618	12/3/2018	3.01	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-37-021919	2/18/2019	3.08	2/19/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-37-030619	3/4/2019	2.9	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-38	BCPZ (outside sparging system limits) 08/2016	MW-38-113016			11/30/2016	µg/L	1	U	1	U	1	U	1	U	1	U	**5.5**		1	U	--	
		MW-38-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**9.14**		5	U	--	
		MW-38-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**7.55**		5	U	--	
		MW-38-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**10.2**		5	U	--	
		MW-38-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**8.06**		5	U	--	
		MW-38-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**9.08**		5	U	--	
		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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-38	BCPZ (outside sparging system limits) 08/2016	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-38-120618	12/3/2018	1.12	12/6/2018	µg/L	**412**		1	U	**1.90**		**236**		1	U	**89.7**		**13.7**		--	
		MW-38-021919	2/18/2019	1.27	2/19/2019	µg/L	**887**		1	U	10	U	**331**		1	U	**87.1**		**14.3**		--	
		MW-38-030619	3/4/2019	0.72	3/6/2019	µg/L	**849**		1	U	**2.55**		**278**		1	U	**96.7**		**18.0**		--	
MW-39	BCPZ 11/2016	MW-39-120716			12/7/2016	µg/L	**6,320**		**682**		**1,290**		**3,650**		50	U[b]	**311**		**86**		--	
		MW-39-031417			3/14/2017	µg/L	**6,370**		**431**		**2,200**		**3,700**		10	U[b]	**199**		**117**		--	
		MW-39-032017			3/20/2017	µg/L	**7,340**		**704**		**2,990**		**4,050**		100	U[b]	**248**		500	U[b]	--	
		MW-39-033117			3/31/2017	µg/L	**7,540**		**899**		**3,140**		**4,400**		50	U[b]	**272**		250	U[b]	--	
		MW-39-040617			4/6/2017	µg/L	**6,180**		**754**		**3,280**		**3,860**		50	U[b]	**257**		250	U[b]	--	
		MW-39-062817			6/28/2017	µg/L	**5,470**		**58**		**3,360**		**3,900**		20	U[b]	**239**		100	U[b]	--	
		MW-39-071717			7/17/2017	µg/L	**4,690**		100	U	**3,760**		**4,580**		100	U[b]	**344**		500	U[b]	--	
		MW-39-080117			8/1/2017	µg/L	**4,630**		100	U	**2,880**		**4,740**		100	U[b]	**348**		500	U[b]	--	
		MW-39-090817			9/8/2017	µg/L	**3,380**		**10.7**		**1,040**		**2,740**		1	U	**376**		**15.6**		--	
		MW-39-100417	10/3/2017	3.75	10/4/2017	µg/L	**1,560**		50	U	**365**		**1,350**		50	U[b]	**305**		250	U[b]	--	
		MW-39-110817	11/7/2017	4.89	11/8/2017	µg/L	**878**		50	U	**123**		**368**		50	U[b]	**442**		250	U[b]	--	
		MW-39-120617	12/4/2017	5.72	12/6/2017	µg/L	**345**		50	U	**69**		**150**		50	U[b]	**355**		250	U[b]	--	
		MW-39-D-120617	12/4/2017	5.72	12/6/2017	µg/L	**286**		1	U	**31**		**131**		1	U	**353**		5	U	--	
		MW-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	**1.00**		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	**1.00**		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	U	3	U	1	U	**187**		5	U	--	
		MW-39-120618	12/3/2018	4.45	12/6/2018	µg/L	**30.6**		1	U	**7.49**		**29.3**		1	U	**156**		5	U	--	
		MW-39-021919	2/18/2019	4.42	2/19/2019	µg/L	1	U	1	U	1	U	3	U	1	U	**53.8**		5	U	--	
		MW-39-030619	3/4/2019	3.99	3/6/2019	µg/L	**1.91**		1	U	**1.01**		3	U	1	U	**61.0**		5	U	--	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-40	BCPZ 11/2016	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	**28.2**		**1.67**		**15.3**		**14.0**		1	U	**112**		5	U	--	
		MW-40-110218	11/2/2018	2.64	11/2/2018	µg/L	**6.40**		1	U	**2.05**		3	U	1	U	**76.7**		5	U	--	
		MW-40-120618	12/3/2018	2.27	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**36.2**		5	U	--	
		MW-40-022019	2/18/2019	2.21	2/20/2019	µg/L	**2.68**		1	U	1	U	3	U	1	U	**7.34**		5	U	--	
		MW-40-030619	3/4/2019	1.82	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	**3.73**		5	U	--	
MW-41	BCPZ (outside sparging system limits) 11/2016	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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-41	BCPZ (outside sparging system limits) 11/2016	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-41-120618	12/3/2018	3.66	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-D-120618	12/3/2018	3.66	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-021919	2/18/2019	3.58	2/19/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-030619	3/4/2019	3.33	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-42	BCPZ (outside sparging system limits) 11/2016	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	--	
		MW-42-120618	12/3/2018	4.37	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-42-030619	3/4/2019	4.06	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-43	BCPZ (outside sparging system limits)	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-43-120618	12/3/2018	4.24	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-030619	3/4/2019	4.36	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-43B	BCPZ (outside sparging system limits) 10/2017	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-43B-120618	12/3/2018	2.3	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43B-030619	3/4/2019	0.97	3/6/2019	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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-44	SBZ (outside sparging system limits) 01/2017	--			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-44-120518	12/3/2018	3.22	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44-030519	3/4/2019	1.41	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-44B	SBZ (outside sparging system limits) 01/2017	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	--	
		MW-44B-120518	12/3/2018	11.36	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44B-030519	3/4/2019	5.97	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-45	Hayfield (outside sparging system limits) 01/2017	--			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	--	

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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-45	Hayfield (outside sparging system limits) 01/2017	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-45-120518	12/3/2018	10.94	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**3.67**		5	U	--	
		MW-45-030519	3/4/2019	5.64	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-45B	Hayfield (outside sparging system limits) 01/2017	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	--	
		MW-45B-120518	12/3/2018	13.13	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-45B-030519	3/4/2019	9.17	3/5/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-46	CCPZ (outside sparging system limits) 09/2017	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-46-110218	11/2/2018	7.95	11/2/2018	µg/L	**1790**		**7.1**		**120**		**740**		1	U	**299**		**16.6**		--	
		MW-46-120518	12/3/2018	5.25	12/5/2018	µg/L	**1250**		**3.07**		**46.7**		**521**		**1.90**		**290**		**7.38**		--	
		MW-46-022019	2/18/2019	3.83	2/20/2019	µg/L	**2380**		**2.97**		**82.4**		**799**		1	U	**346**		**22.4**		--	
		MW-46-030519	3/4/2019	2.67	3/5/2019	µg/L	**2350**		**4.01**		**73.7**		**701**		1	U	**406**		**32.8**		--	
MW-47	Hayfield (outside sparging system limits) 09/2017	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-47-120618	12/3/2018	18.88	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-47-030619	3/4/2019	10.27	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-48B	Hayfield (outside sparging system limits) 10/2017	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-48B-120618	12/3/2018	16.4	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**1.56**		5	U	--	
		MW-48B-030619	3/4/2019	13.75	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	**1.64**		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	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-49	BCPZ (outside sparging system limits) 09/2017	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	--	
		MW-49-120518	12/3/2018	17.49	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-49-D-120518	12/3/2018	17.49	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-49-030619	3/4/2019	9.88	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-50B	Hayfield (outside sparging system limits) 10/2017	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**		**1.20**		**57.9**		**47.8**		1	U	**87.9**		5	U	--	
		MW-50B-120618	12/3/2018	26.06	12/6/2018	µg/L	**27.4**		1	U	**3.21**		3	U	1	U	**40.6**		5	U	--	
		MW-50B-030619	3/4/2019	15.33	3/6/2019	µg/L	**1.18**		1	U	1	U	3	U	1	U	**43.9**		5	U	--	
MW-51	Hayfield (outside s 09/2018	MW-51-100518	10/5/2018	18.84	10/5/2018	µg/L	1	U	1	U	**1.88**		3	U	1	U	1	U	5	U	--	
		MW-51-120618	12/3/2018	17.38	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-51-030619	3/4/2019	15.86	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-52	Hayfield (outside s 09/2018	MW-52-100518	10/5/2018	16.9	10/5/2018	µg/L	1	U	1	U	**1.25**		3	U	1	U	**3.12**		5	U	--	
		MW-52-120618	12/3/2018	15.8	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-52-030619	3/4/2019	14.43	3/6/2019	µg/L	1	U	1	U	1	U	3	U	1	U	**1.32**		5	U	--	
MW-53	Hayfield (outside s 08/2018	MW-53-100518	10/5/2018	11.54	10/5/2018	µg/L	1	U	1	U	**5.43**		3	U	1	U	1	U	5	U	--	
		MW-53-D-100518	10/5/2018	11.54	10/5/2018	µg/L	1	U	1	U	**2.11**		3	U	1	U	1	U	5	U	--	
		MW-53-120618	12/3/2018	6.81	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-53-030719	3/4/2019	2.02	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-54	Hayfield 08/2018	MW-54-100518	10/5/2018	11.57	10/5/2018	µg/L	1	U	1	U	**1.72**		3	U	1	U	**1.35**		5	U	--	
		MW-54-120618	12/3/2018	12.95	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-54-030719	3/4/2019	5.50	3/7/2019	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	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 constituent 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.

[c] 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

BCPZ = Brown's Creek Protection Zone

CCPZ = Cupboard Creek Protection Zone

SBZ = Shallow Bedrock Zone

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

NS-PS = sample not collected due to observation of product sheen in well

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

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-24B	CME 550 HSA	MW-10136	7/20/2015	Still in use	Monitoring Well/Gauging	815.83	818.72	45.10	10	6	39.50	776.3	22.39	42.39	19.5	39.5	796.3	776.3	20.00
MW-25	Geoprobe 3230 DT HSA	MW-10463	1/5/2016	Still in use	Monitoring Well/Gauging	823.46	826.18	18.07	8	2	15.00	808.5	8.04	18.04	5.0	15.0	818.5	808.5	10.00
MW-25B	Geoprobe 3230 DT HSA	MW-10464	1/5/2016	Still in use	Monitoring Well/Gauging	822.59	823.81	59.00	10	6	58.00	764.6	49.22	59.22	48.0	58.0	774.6	764.6	10.00
MW-26	Geoprobe 3230 DT HSA	MW-10465	1/4/2016	Still in use	Monitoring Well/Gauging	844.76	847.56	17.15	8	2	15.25	829.5	7.27	17.27	5.0	15.0	839.8	829.8	10.00
MW-26B	Geoprobe 3230 DT HSA	MW-10466	1/4/2016	Still in use	Monitoring Well/Gauging	844.81	847.81	43.84	10	6	38.00	806.8	29.00	41.00	26.0	38.0	818.8	806.8	12.00
MW-27	Geoprobe 3230 DT HSA	MW-10467	1/5/2016	Still in use	Monitoring Well/Gauging	854.22	854.11	29.51	8	2	30.25	824.0	15.11	30.11	15.0	30.0	839.2	824.2	15.00
MW-27B	CME 550 HSA / Schramm	MW-10578	4/26/2016	Still in use	Monitoring Well/Gauging	854.27	857.14	41.45	10	6	46.00	808.3	31.45	41.45	36.0	46.0	818.3	808.3	10.00
MW-28	Geoprobe 3230 DT HSA	MW-10468	1/5/2016	Still in use	Monitoring Well/Gauging	841.49	844.31	25.93	8	2	25.25	816.2	13.50	23.50	15.0	25.0	826.5	816.5	10.00
MW-29	Geoprobe 3230 DT HSA	MW-10469	1/4/2016	Still in use	Monitoring Well/Gauging	852.07	852.20	15.10	8	2	15.25	836.8	5.00	15.00	5.0	15.0	847.1	837.1	10.00
MW-30	Geoprobe 3230 DT HSA	MW-10470	1/6/2016	Still in use	Monitoring Well/Gauging	841.21	841.28	14.69	8	2	15.25	826.0	5.00	15.00	5.0	15.0	836.2	826.2	10.00
MW-31	CME 550 HSA	MW-10578	4/19/2016	Still in use	Monitoring Well/Gauging	842.26	845.04	28.20	8	2	25.00	817.3	13.20	28.20	10.0	25.0	832.3	817.3	15.00
MW-31B	CME 550 HSA / Schramm	MW-10578	4/22/2016	Still in use	Monitoring Well/Gauging	842.01	844.94	79.25	10	6	76.00	766.0	68.25	79.25	65.0	76.0	777.0	766.0	11.00
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

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-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	828.77	831.92	25.34	6.25	2	22.50	806.3	10.45	25.45	7.3	22.3	821.5	806.5	15.00
MW-52	CME 750 HSA	MW-11508	9/4/2018	Still in use	Monitoring Well/Gauging	826.72	830.09	33.43	6.25	2	28.50	798.2	16.37	31.37	13.0	28.0	813.7	798.7	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
MW-55	Geoprobe 8040 DT	MW-11667	3/13/2019	Still in use	Monitoring Well/Gauging	859.84	859.71	25.50	6.0	2	25.50	834.3	10.00	25.00	10.0	25.0	849.8	834.8	15.00
MW-56	Geoprobe 8040 DT	MW-11841	3/12/2019	Still in use	Monitoring Well/Gauging	840.71	843.94	14.30	6.0	2	14.80	825.9	7.30	17.30	4.3	14.3	836.4	826.4	10.00
MW-57	Geoprobe 8040 DT	MW-11841	3/12/2019	Still in use	Monitoring Well/Gauging	842.50	845.63	13.88	6.0	2	14.38	828.1	6.90	16.90	3.9	13.9	838.6	828.6	10.00
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
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

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)
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
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

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-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

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-39	Mobile B57 HSA	SCHE03020469	6/22/2016	Still in use	Brown's Creek Protection	835.956	NS	NA	8.50	2.00	42.40	NA	NA	NA	38.90	41.40	NA	NA	2.50
VAS-40	Mobile B57 HSA	SCHE03020469	6/23/2016	Still in use	Brown's Creek Protection	833.753	NS	NA	8.50	2.00	40.00	NA	NA	NA	36.50	39.00	NA	NA	2.50
VAS-41	Mobile B57 HSA	SCHE03020469	6/28/2016	Still in use	Brown's Creek Protection	845.071	NS	NA	8.50	2.00	27.80	NA	NA	NA	24.30	26.80	NA	NA	2.50
VAS-42A	Mobile B57 HSA	SCHE03020469	7/14/2016	Still in use	Brown's Creek Protection	845.304	NS	NA	8.50	2.00	39.30	NA	NA	NA	35.80	38.30	NA	NA	2.50
VAS-43A	Mobile B57 HSA	SCHE03020469	7/15/2016	Still in use	Brown's Creek Protection	843.078	NS	NA	8.50	2.00	66.50	NA	NA	NA	63.00	65.50	NA	NA	2.50
VAS-44A	Mobile B57 HSA	SCHE03020469	7/18/2016	Still in use	Brown's Creek Protection	838.353	NS	NA	8.50	2.00	72.50	NA	NA	NA	69.00	71.50	NA	NA	2.50
VAS-46	Mobile B57 HSA	SCHE03020469	6/24/2016	Still in use	Brown's Creek Protection	839.503	NS	NA	8.50	2.00	20.80	NA	NA	NA	18.00	20.50	NA	NA	2.50
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. Analytical Results for Soil
Plantation Pipe Line Company
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	Analyte: 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
MW-57-0.3'-0.8'-031219	0.3-0.8	0.4	Smear	3/13/2019	mg/kg	0.0011 U	0.00275 U	0.00551 U	0.00716 U	0.0138 U
		Ingestion/Dermal Contact RBSL[c]:			mg/kg	13	63	6,300	16,000	1,600
	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	13	63	6,300	16,000	1,600
	Leaching RBSL for 10-15 ft separation distance[e]:				mg/kg	0.008	6.168	1.167	22.495	0.069

Table 8. Analytical Results for Soil

Plantation Pipe Line Company

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	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes[b]	Naphthalene
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	13	63	6,300	16,000	1,600

Notes:

[a] Estimated separation distance is the difference of the depth to water below ground surface measured during well installation and the bottom depth of the sample interval.

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

[c] RBSL = risk-based screening levels identified in DHEC Underground Storage Tank (UST) Management Division Programmatic Quality Assurance Program Plan (QAPP), Revision 2, Table D6 "RBSLs for Ingestion or Dermal Contact with Surficial Soil," February 2016. Note RBSL applied to potential exposure of workers (DHEC UST Management Division, 2016).

[d] RBSLs identified in DHEC UST QAPP, Rev. 3, Table D4 "RBSLs for Clay-rich Soil," <10 ft separation distance, February 2016 (DHEC UST Management Division, 2016).

[e] RBSLs identified in DHEC UST QAPP, Rev. 3, Table D4 "RBSLs for Clay-rich Soil," 10-15 ft separation distance, February 2016 (DHEC UST Management Division, 2016).

[f] The constituent 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

ft = foot/feet

mg/kg = milligram(s) per kilogram

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)		Date	Destination	Total Product (gal)
12/9/2014	PPL Greensboro	4,289		6/3/2015	Allied Energies	4,214
12/9/2014	PPL Greensboro	3,100		8/10/2015	Allied Energies	6,000
12/12/2014	PPL Greensboro	1,189		11/2/2015	Allied Energies	5,800
12/30/2014	Crystal Clean (FCC)	5,057		11/13/2015	Crystal Clean (FCC)	2,900
12/31/2014	Crystal Clean (FCC)	5,333		12/1/2015	Allied Energies	6,690
1/4/2015	Crystal Clean (FCC)	5,000		12/1/2015	Allied Energies	6,700
1/4/2015	Crystal Clean (FCC)	2,872		12/7/2015	Crystal Clean (FCC)	500
1/5/2015	Crystal Clean (FCC)	5,013		9/28/2016	Shamrock	495
1/6/2015	Crystal Clean (FCC)	4,800		10/17/2016	Shamrock	110
1/7/2015	Allied Energies	6,532		10/24/2016	Shamrock	85
1/7/2015	Allied Energies	6,425		10/31/2016	Shamrock	70
1/7/2015	Allied Energies	8,200		11/10/2016	Shamrock	168
1/9/2015	Allied Energies	6,482		1/18/2017	A&D Archdale, NC	3,758
1/9/2015	Allied Energies	7,825		3/3/2017	A&D Archdale, NC	460
1/12/2015	Allied Energies	6,540		3/8/2017	A&D Archdale, NC	500
1/12/2015	Allied Energies	6,467		3/15/2017	A&D Archdale, NC	4,189
1/13/2015	Allied Energies	6,732		4/3/2017	A&D Archdale, NC	458
1/13/2015	Allied Energies	6,595		4/19/2017	A&D Archdale, NC	927
1/15/2015	Allied Energies	6,500		4/19/2017	A&D Archdale, NC	747
1/22/2015	Allied Energies	5,791		5/22/2017	A&D Archdale, NC	50
1/23/2015	Allied Energies	5,450		6/7/2017	A&D Archdale, NC	658
1/27/2015	Allied Energies	5,791		6/29/2017	A&D Archdale, NC	695
1/27/2015	Allied Energies	5,557		8/25/2017	A&D Archdale, NC	566
1/27/2015	Allied Energies	6,043		9/8/2017	A&D Archdale, NC	99
1/28/2015	Allied Energies	4,411		1/8/2018	A&D Archdale, NC	6
2/5/2015	Allied Energies	5,513		3/7/2019	Remaining in poly tanks	14.0
2/11/2015	Allied Energies	5,732			**Total (gallons)**	**222,988**
2/11/2015	Allied Energies	5,606			**Total (barrels)**	**5,309**
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				

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

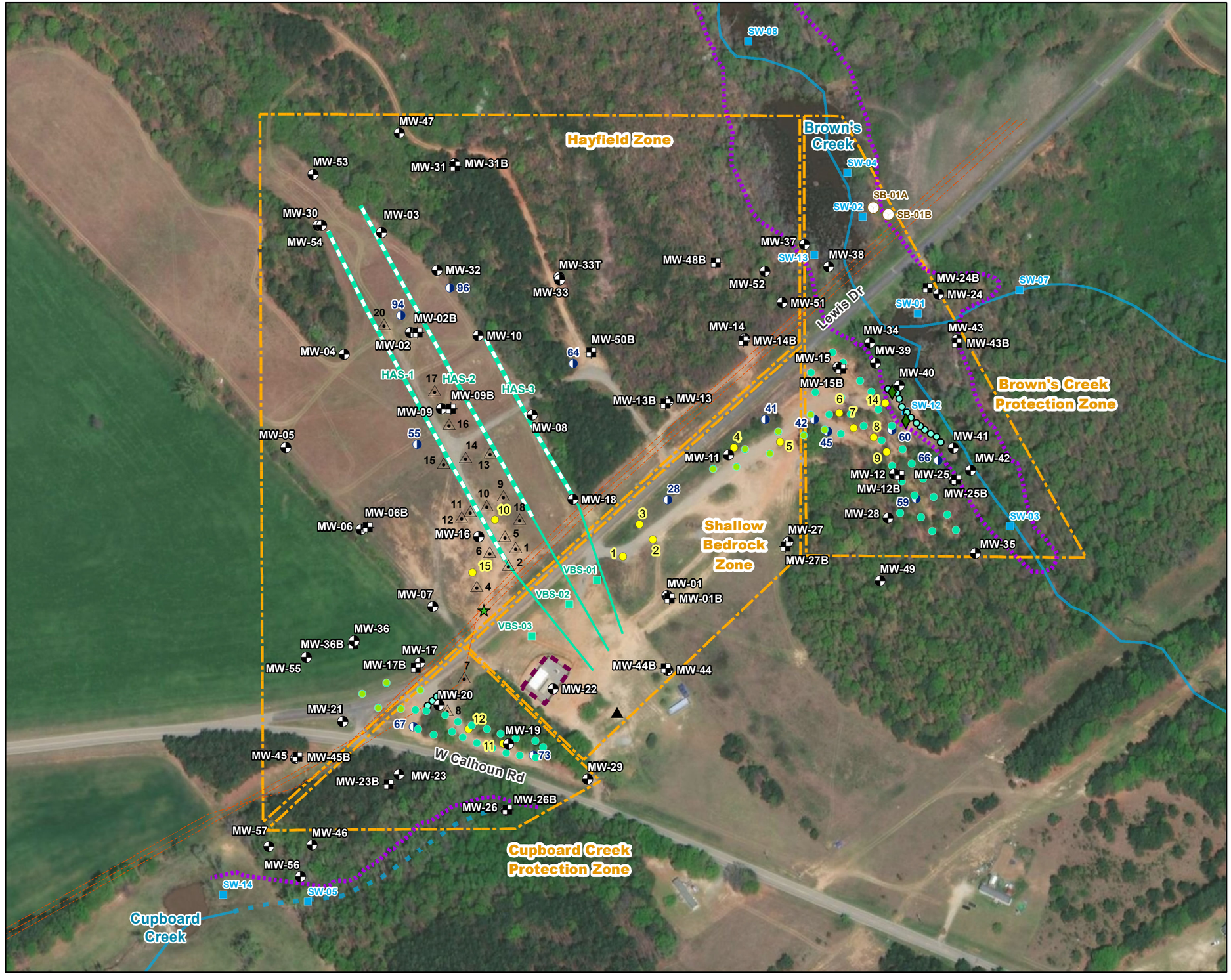
PPL = Plantation Pipe Line Company

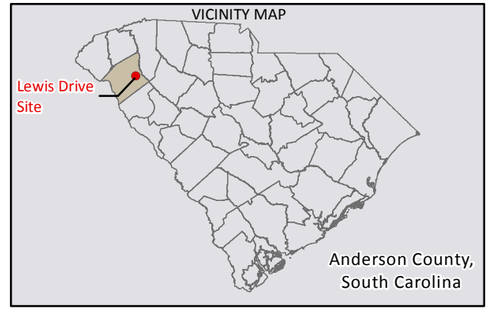
Table 10. Stream Gauge Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

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

Notes:
amsl = above mean sea level relative to North American Vertical Datum of 1988 (NAVD88). Benchmark is 34.8289659 degrees north, 82.3710354 degrees west (NAD83, 2011), elevation 929.1 ft NAVD88.
ft = feet
ID = identification
NS = location not surveyed
SW = surface water

Figures





LEGEND

- Release Point
- Residuum Monitoring Well
- Bedrock Monitoring Well
- Piezometer
- Recovery Sump
- Soil Boring Location
- Recovery Trench Point
- Recovery Well (4" diameter)
- Surface Water Sampling Location
- Septic Tank
- 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
- AS System Compound
- Remediation Zone

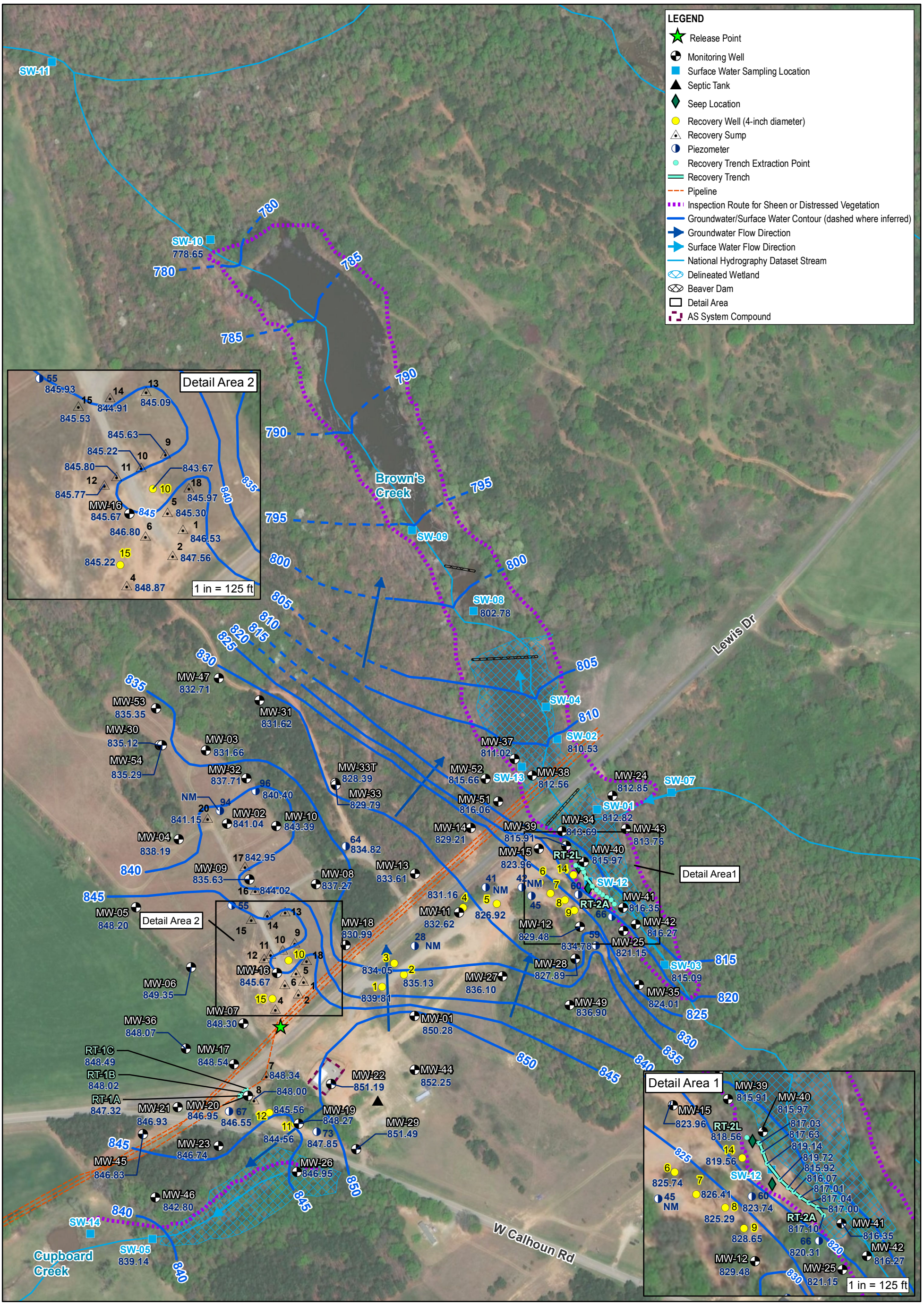
Base Map Sources:
*Environmental Systems Research Institute (Esri) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

N

0 200 400
Scale in feet

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

JACOBS



827.89 Corrected Groundwater Elevation as of 3/4/2019 in feet above mean sea level

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)

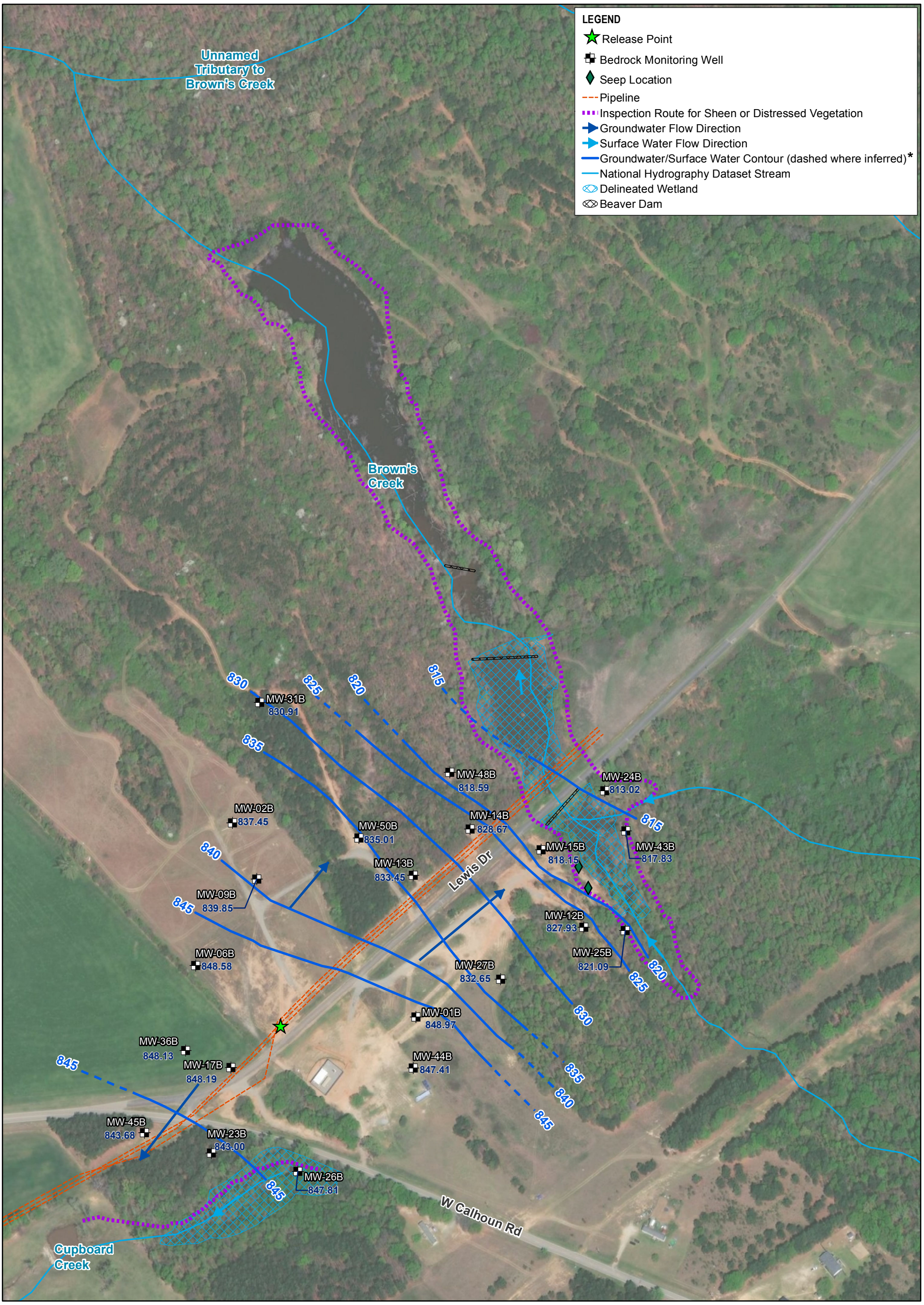
N

0 250 500

Scale in Feet

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

JACOBS



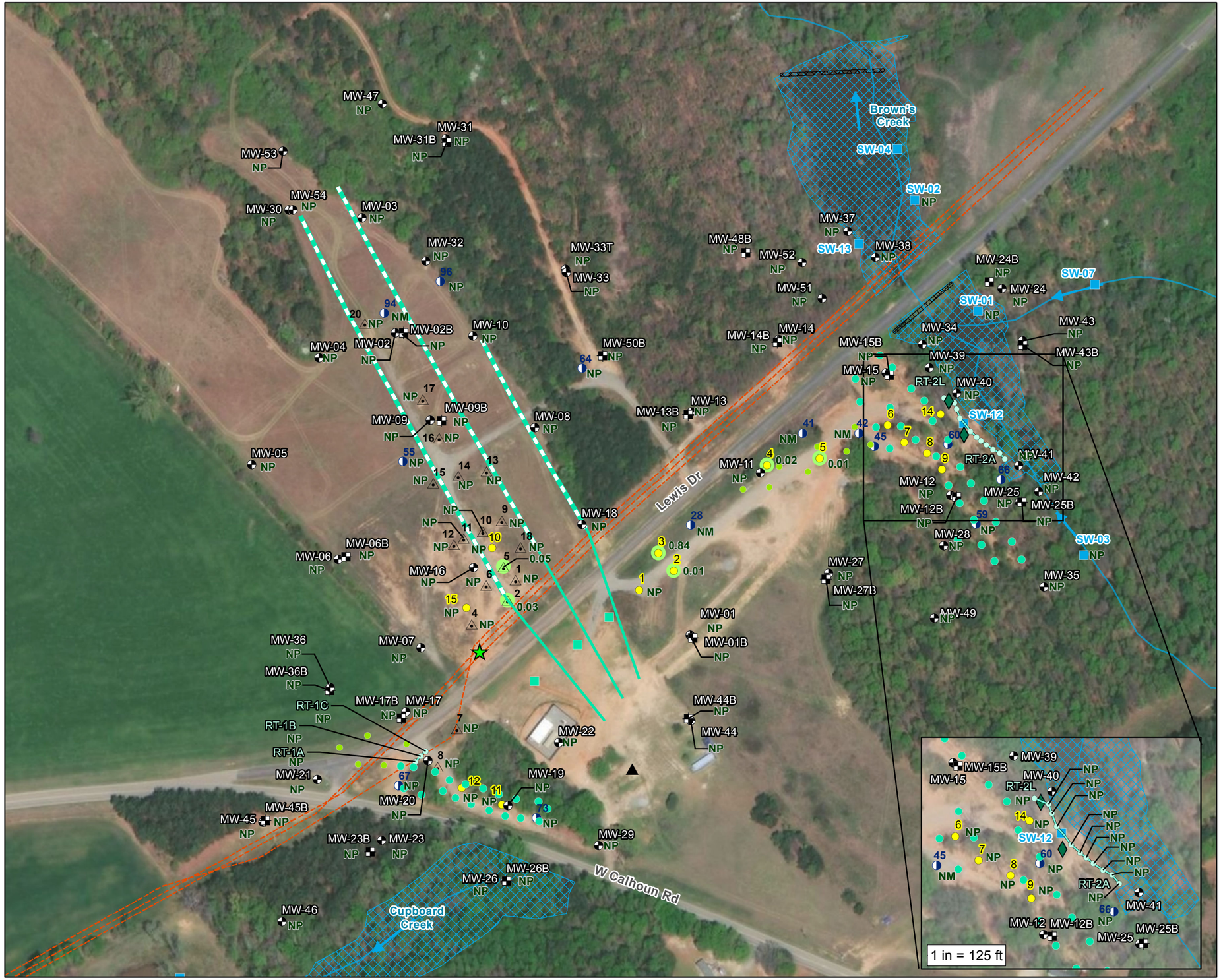
843.00 Corrected Groundwater Elevation as of 3/4/2019 in feet above mean sea level

* Based on 2014 Belton West, SC USGS Topographic map

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

JACOBS



LEGEND

- Release Point
- Monitoring Well
- Bedrock Monitoring Well
- Seep Location
- Recovery Sump
- Piezometer ("R" indicates Replacement)
- Recovery Well (4-inch diameter)
- Well Contains Product as of 3/4/19
- Newly Installed Vertical Sparging Well
- 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

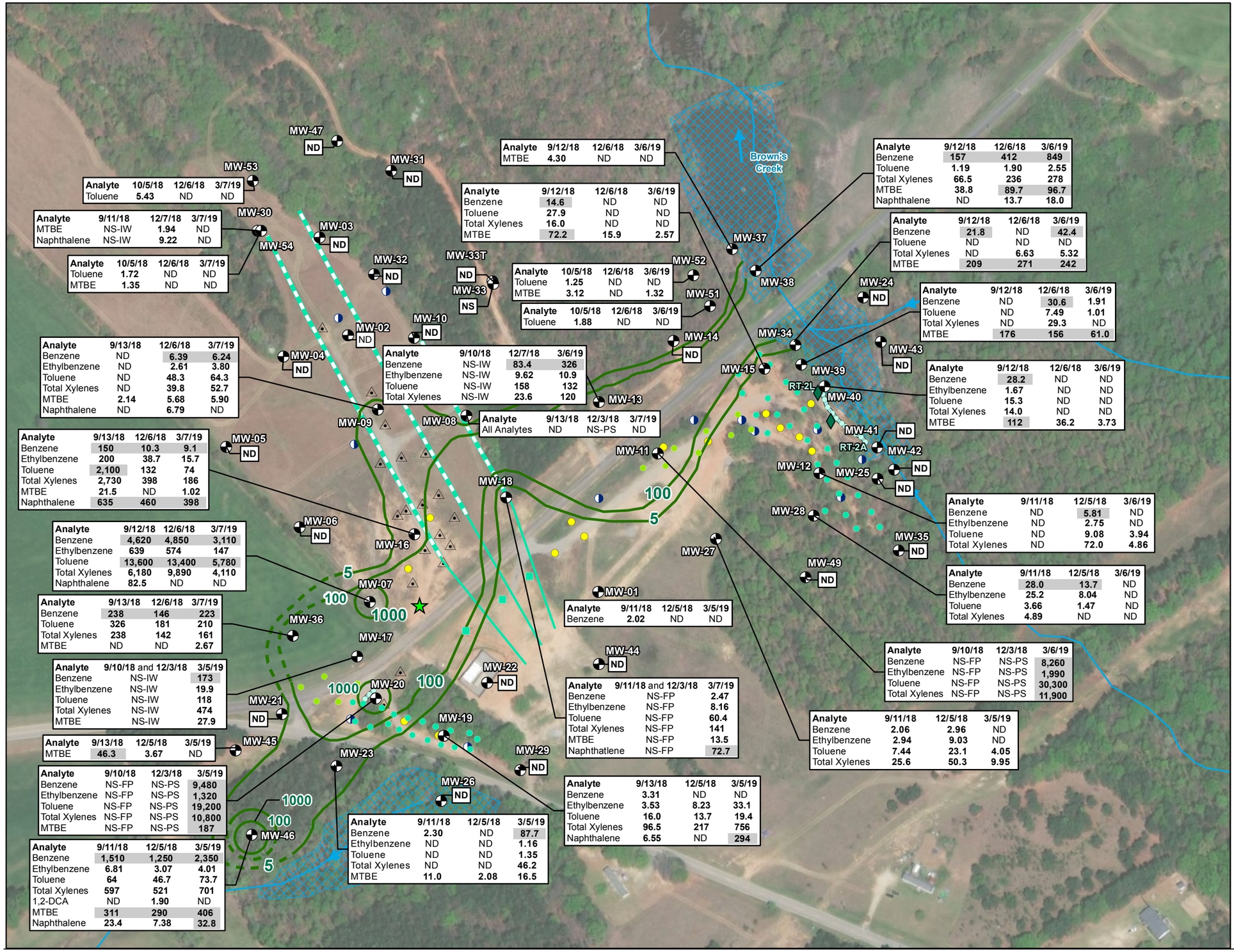
0.03 Product thickness in feet as of 3/4/2019
NP No product detected
NM Not measured

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. Site Features with Measurable Product
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"



LEGEND

- Release Point
- Residuum Monitoring Well
- Piezometer
- Newly Installed Vertical Sparging Well
- 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 as of March 2019 (µg/L) (Dashed where inferred)
- National Hydrography Dataset Stream
- Delineated Wetland

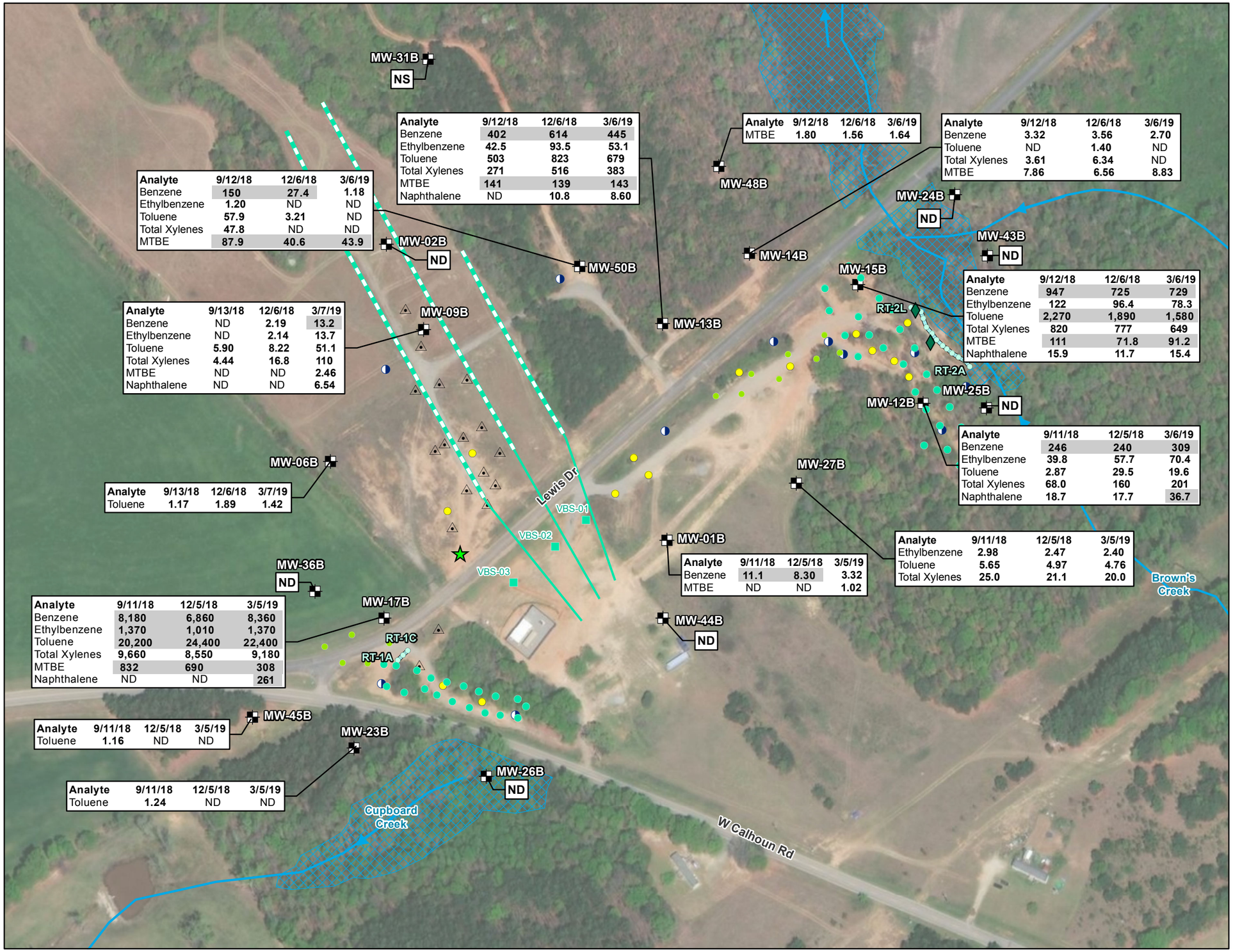
NOTES:
1. Total Xylenes is the sum of m&p xylenes and o-xylene.
2. MTBE = Methyl Tertiary Butyl Ether
3. 1,2-DCA = 1,2-dichloroethane
4. Analyte concentration in microgram(s) per liter (µg/L)
5. Only detected analytes are shown on map.
6. ND = Groundwater was collected and analyzed, but no analytes were 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-PS = Sample not collected due product sheen observed in well
10. 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)

Figure 4A. Groundwater Analytical Results in Residuum Aquifer, September/October, December 2018 and March 2019
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

JACOBS



Analyte	9/12/18	12/6/18	3/6/19
Benzene	150	27.4	1.18
Ethylbenzene	1.20	ND	ND
Toluene	57.9	3.21	ND
Total Xylenes	47.8	ND	ND
MTBE	87.9	40.6	43.9

Analyte	9/12/18	12/6/18	3/6/19
Benzene	402	614	445
Ethylbenzene	42.5	93.5	53.1
Toluene	503	823	679
Total Xylenes	271	516	383
MTBE	141	139	143
Naphthalene	ND	10.8	8.60

Analyte	9/13/18	12/6/18	3/7/19
Benzene	ND	2.19	13.2
Ethylbenzene	ND	2.14	13.7
Toluene	5.90	8.22	51.1
Total Xylenes	4.44	16.8	110
MTBE	ND	ND	2.46
Naphthalene	ND	ND	6.54

Analyte	9/13/18	12/6/18	3/7/19
Toluene	1.17	1.89	1.42

Analyte	9/11/18	12/5/18	3/5/19
Benzene	8,180	6,860	8,360
Ethylbenzene	1,370	1,010	1,370
Toluene	20,200	24,400	22,400
Total Xylenes	9,660	8,550	9,180
MTBE	832	690	308
Naphthalene	ND	ND	261

Analyte	9/11/18	12/5/18	3/5/19
Toluene	1.16	ND	ND

Analyte	9/11/18	12/5/18	3/5/19
Toluene	1.24	ND	ND

Analyte	9/12/18	12/6/18	3/6/19
MTBE	1.80	1.56	1.64

Analyte	9/12/18	12/6/18	3/6/19
Benzene	3.32	3.56	2.70
Toluene	ND	1.40	ND
Total Xylenes	3.61	6.34	ND
MTBE	7.86	6.56	8.83

Analyte	9/12/18	12/6/18	3/6/19
Benzene	947	725	729
Ethylbenzene	122	96.4	78.3
Toluene	2,270	1,890	1,580
Total Xylenes	820	777	649
MTBE	111	71.8	91.2
Naphthalene	15.9	11.7	15.4

Analyte	9/11/18	12/5/18	3/6/19
Benzene	246	240	309
Ethylbenzene	39.8	57.7	70.4
Toluene	2.87	29.5	19.6
Total Xylenes	68.0	160	201
Naphthalene	18.7	17.7	36.7

Analyte	9/11/18	12/5/18	3/5/19
Benzene	11.1	8.30	3.32
MTBE	ND	ND	1.02

Analyte	9/11/18	12/5/18	3/5/19
Ethylbenzene	2.98	2.47	2.40
Toluene	5.65	4.97	4.76
Total Xylenes	25.0	21.1	20.0

LEGEND

- Release Point
- Bedrock Monitoring Well
- Piezometer
- Newly Installed Vertical Sparging Well
- 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
- National Hydrography Dataset Stream
- Delineated Wetland

NOTES:

All analyte concentrations in microgram(s) per liter (µg/L).
µg/L = microgram(s) per liter
Total Xylenes is the sum of m&p xylenes and o-xylene.
MTBE = Methyl Tertiary Butyl Ether
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/October, December 2018 and March 2019
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

JACOBS

Appendix A
Field Notes, Gauging Sheets, and Purge Logs

Location Belton, SC Date ~~04/05/18~~ 04/05/18

Project / Client Lewis Drive

K. Sexton

TASK: Groundwater & Surface Water Gauging and product recovery

Team: K. Sexton, M. Warren, Jake Crostic, Janine Morgan

Equipment: Manta # 28790, cal 0.0 & 100.0
Solinst 286743
solinst 225158
ODO Probe 015260
ODO Probe 35562

0700 Team onsite, conduct PTSP
0715 Calibrate equipment
0730 Gather equipment, plan out day
0745 Begin Gauging
1200 Break for lunch
1300 Return from lunch
1301 M. Warren and J. Crostic begin Product Recovery
1730 Team completes gauging and product recovery, minus socks
1735 Team offsite

Location BELTON, SC Date 04/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER / SURFACE WATER SAMPLING; PRODUCT RECOVERY; TROLL DATA

TEAM: M. WARREN, K. SEXTON

EQUIPMENT: SEE PAGE 75.

	ISO LOT #	EXP:
0700	TEAM ONSITE. HOLDS PTSP.	
0730	TEAM BEGINS HIKE TO SW-11.	
0755	SW11-040618	NO SHEEN
0805	SW10-040618	0.90' NO SHEEN
0815	FP01-040618	BIO SHEEN
0820	FP02-040618	NO SHEEN
0830	SW09-040618	NO SHEEN
0835	SW08-040618	1.08' ~~NO~~ BIO SHEEN
0840	SW13-040618	BIO SHEEN
0900	FP03-040618	
0910	SW04-~~0608~~ 040618	
0915	SW02-040618	1.68'
0917	SW01-040618	
0920	SW07-040618	1.08'
0925	SW12-040618	
0930	SW03-040618	
0935	IB01-040618	
1000	TEAM BREAKS FOR WNCH	
1000	SW14-040618	

Location BELTON, SC Date 04/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1100 TEAM RETURNS FROM LUNCH

1115 MW-29-040618

1120 MW-29-D-040618

1125 MW-26-040618

1130 MW-23-040618

1135 MW-22-040618

1200 MW-43-040618

1210 MW-38-040618

1215 MW-38-D-040618

1225 MW-34-040618

1230 MW-39-040618

1235 MW-40-040618

1240 MW-41-040618

1250 MW-25-040618

1300 MW-35-040618

1305 MW-28-040618

1320 FB01-040618

1345 MW-31-040618

1355 MW-30-040618

1405 MW-03-040618

1415 MW-02-040618

1420 MW-10-040618

1450 ~~MW-07-040618~~ 1.0mm PRODUCT

1455 MW-05-040618

Rate in the Rain

78

Location BELTON, SC Date 04/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1500 MW-45 - 040618

1505 TB01 - 040618

NOTE: SW05 AND SW06 WERE DRY.

1553 RT-2K 3.8 oz

1600 MW-11 23.2 oz

1610 RS-05 DTP 8.53 DTB 8.59

RS-05 DTB 25.00

1620 RT-1A 26.0 oz

1625 RT-1B 28.3 oz

1630 RT-1C 28.7 oz

1635 WEST TANK 0.97 ft HIGH

EAST TANK 0.90 ft HIGH

1640 TEAM DEPARTS FIELD.

04/06/18

Melissa Warren

Location BELTON, SC Date 04/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

ADDENDUM TO 04/05/18 NOTES

PRODUCT RECOVERY

WELL	AMOUNT RECOVERED (OZ)
RW-15	4.0
RS-02	DRY
RS-10	1.0
RS-01	DRY
RS-17	DRY
RW-03	0.2
RW-02	4.2
RW-04	0.1
RW-07	0.0
RW-08	DRY
MW-15	ALL WATER
MW-20	0.2
MW-08	0.1

04/06/18

Location BELTON, SC Date 05/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK SURFACEWATER AND GROUNDWATER GAUGING / PRODUCT RECOVERY

TEAM M. WARREN (BIO/FTL). J. MORGAN (SCI) M. TRAMONTE, C. CARRUBBA

EQUIPMENT MINIRAE # 18490 EXP: 11/30/2022 LOT # 881-248-100-10

MINIRAE # 021579 LOT #

SOLINST # 266846 / SOLINST # 27681

YSI PRO ODO # 15260

YSI PRO ODO # 35562

0710 TEAM ARRIVES ON SITE

CALIBRATION MINIRAE # 021579

	BEFORE	AFTER
AIR	0	0
ISO	0	~~100.1~~ 101.3

MINIRAE # 18490

	BEFORE	AFTER
AIR	0	0
ISO	0	~~100.1~~ 99.9

0730 TEAM GEARS UP AND HOLDS PTSP.

0810 TEAM FINISHES GEARING UP AND BEGINS GAUGING

1145 TEAM BREAKS FOR LUNCH

1245 TEAM RETURNS FROM LUNCH

Location BELTON, SC Date 05/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1810 TEAM GEARS DOWN AND BEGINS DOCUMENT QC

1845 TEAM DEPARTS FIELD

05/02/18

M Warren

Location BELTON, SC Date 05/03/18

Project / Client LEWIS DRIVE

AUTHOR: M. NARAEN

TASK: SURFACE WATER AND GROUNDWATER SAMPLING / PRODUCT RECOVERY

TEAM: M. WARREN (BIO/FTL), K. SEXTON (GEO), J. MORGAN (SCI)

EQUIPMENT: SEE PAGE 80

0710 TEAM ARRIVES ONSITE. TEAM GEARS UP AND HOLDS PTSP

0800 TEAM BEGINS HIKE TO SW-11

0825 SW11-050318

0835 SW10-050318

0840 FP01-050318

0850 FP02-050318

0900 SW09-050318

0905 SW08-050318

~~1000~~ 0910 SW13-050318

0935 FP03-050318

0945 SW04-050318

0950 SW02-050318

0955 SW01-050318

1000 SW07-050318

1005 SW12-050318

~~1010~~ SW03-050318

1015 TB01-050318

Location BELTON, SC Date 05/03/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1020 Measured sock weights from RT-1A, RT-1B, RT-1C, RT-2K, RS-08, and MW-11. All replaced socks (new) measured 4g.

Well	Dirty Sock Weight (g)	Replaced (Y/N)
RT-1A	102g	Y
RT-1B	108	Y
RT-1C	110	Y
RT-2K	108	N
RS-08	114	N
MW-11	114	Y

1030 SW14-050318

1035 SW05-050318

NOTE SW06 WAS DRY

1045 TEAM BREAKS FOR LUNCH

1145 TEAM RETURNS FROM LUNCH

✓ 1155 MW-29-050318

✓ 1205 MW-26-050318

~~1215~~ MW-20-050318 OBSERVED PRODUCT NO SAMPLE

✓ 1220 MW-23-050318

✓ 1223 MW-23-D-050318

✓ 1225 MW-45-050318

✓ 1240 MW-22-050318

✓ 1300 MW-43-050318

✓ 1315 MW-38-050318

✓ 1320 MW-34-050318

Rite in the Rain

Location BELTON, SC Date 05/03/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1325	MW-39-050318
1335	MW-40-050318
~~1340~~ 1340	MW-41-050318
1350	MW-25-050318
1355	MW-35-050318
1405	MW-28-050318
1415	TB01-050318
1450	MW-31-050318
1452	MW-31-D-050318
1510	MW-10-050318
1515	MW-02-050318
1525	MW-03-050318
1535	MW-30-050318
1540	MW-05-050318
1550	MW-07-050318
1600	FB01-050318
1655	J. MORGAN DEPARTS FIELD

M. WARREN AND K. SEXTON

BEGIN PRODUCT RECOVERY

WELL	DISTANCE TO SKIMMER (DTS)	PRODUCT (OZ)
RS-01	5.19	DRY
RS-02	5.10	DRY
RS-05	6.79	0.2
RW-15	11.30	0.2

Location BELTON, SC Date 05/03/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

WELL	DTS	PRODUCT (oz)
RS-10	5.7	DRY
RS-14	2.11	DRY
RS-17	1.6	~~DRY~~ ALL WATER
MW-08	6.2	ALL WATER
RW-02	19.64	DRY
RW-03	20.79	ALL WATER
RW-04	26.10	DRY
RW-05	30.09	~~ALL WATER~~ 0.1
RW-07	19.68	DRY
RW-08	6.87	DRY
MW-15	10.24	ALL WATER
MW-20	8.92	ALL WATER

1830 TEAM DEPARTS FIELD

05/03/18

86

Location BELTON, SC Date 6-4-18

Project / Client LEWIS Dr

AUTHOR: K. SEXTON

TASK: Groundwater ~~gauging~~ and Surfacewater gauging

TEAM: K. Sexton, B. Garvey, C. Carnohan, E. Harker

Equipment: ① Mini Rae # 037608 cal# MBH-248-100-8
② Mini Rae # 038258 cal# GBH-248-100-18
③ Solinst # 27681 ⑤ ODO
④ Solinst # 37062 ⑥ YSI 550 DO

0700 Team onsite, hold PtSp

0715 Begin cal.
① 0.0, 100.0
② 0.0, 100.0

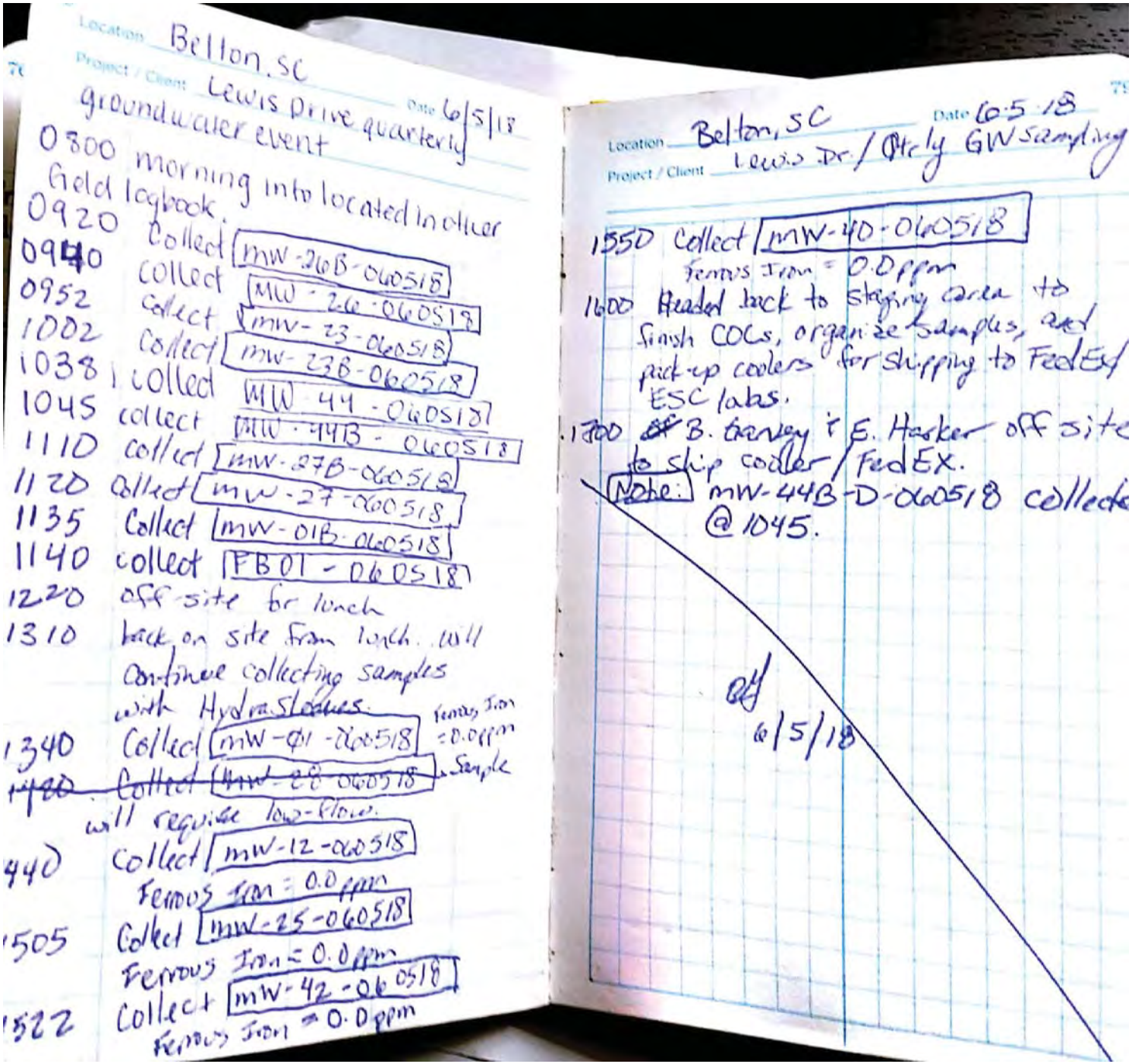
0730 Begin gauging

1145 Break for lunch, attempt to contact O'Dell Farm

1230 Return onsite

2000 Team completes gauging 6-4-18

2015 Team offsite



Location Belton, SC
Project / Client Lewis Drive quarterly groundwater event
Date 6/5/18

0800 morning info located in office
Gold logbook.
0920 Collect MW-26B-060518
0940 Collect MW-26-060518
0952 Collect MW-23-060518
1002 Collect MW-23B-060518
1038 Collect MW-44-060518
1045 collect MW-44B-060518
1110 collect MW-27B-060518
1120 collect MW-27-060518
1135 Collect MW-01B-060518
1140 collect FB01-060518
1220 off-site for lunch
1310 back on site from lunch. will continue collecting samples with Hydrastleves.
1340 Collect MW-01-060518 Ferrous Iron = 0.0 ppm
~~1400 Collect MW-28-060518~~ Sample will require low-flow.
1440 Collect MW-12-060518
Ferrous Iron = 0.0 ppm
1505 Collect MW-25-060518
Ferrous Iron = 0.0 ppm
1522 Collect MW-42-060518
Ferrous Iron = 0.0 ppm

Location Belton, SC
Project / Client Lewis Dr / Qtrly GW sampling
Date 6-5-18

1550 Collect MW-40-060518
Ferrous Iron = 0.0 ppm
1600 Headed back to staging area to finish COCs, organize samples, and pick-up coolers for shipping to FedEx/ESC labs.
1700 B. Carney & E. Hasker off site to ship cooler / FedEx.
Note: MW-44B-D-060518 collected @ 1045.

DJ
6/5/18

Location Belton, SC Date 6-5-18

Project / Client Lewis Dr.

K. Sexton

TASK: Groundwater sampling

TEAM: K. Sexton, B. Gainey, E. Harker, J. Morgan

Equip.: see pg 83

0800 TEAM onsite, hold PtSP

0810 Prep field equip.

0850 Begin sampling

0900 MW-29-060518 VOC

0910 ~~MW-19-060518 MNA~~ (#5)

0915 No water recovered in hydrasleeve. Re-gauged DTW at 10.04'. Call Tom Wiley and decide to low flow. Will return later after calibration

0935 MW-46-060518 VOC

0945 Begin calibrating EXO #30194

Parameter	Pre	Post	Lot #	Expiration
DO	104.4	~~10.5~~ 99.1	-	-
cond	1314.7	1413	7GL849	12/18
ORP00	7.32	0	C800582	10/18
ORP 124	124.29	124	18B1044011	02/19
pH4	4.02	4.0	3703F77	3/19
pH7	7.11	7.0	2708A14	7/23/19
pH10	10.06	10.0	2709A29	3/19
ORP	236.1	240.1	0647	10/2021

1045 Calibration complete. Set up on MW-19

1111 Begin purging MW-19

1122 Fixed pump - begin purging

Date

1139 MW-19 dry

1210 MW-22-060518 MNA Fe = 0.5 mL

1225 Break for lunch

1315 Return from lunch

1320 Go gauge MW-08, 11, 15, +20 with skimmers

	DTP	DTW	DTB
MW20	8.49	8.50	19.45
MW08	–	6.22	19.74
MW11	–	24.29	38.98
MW15	–	10.50	19.04

1400 Begin sampling Brown's Creek Area

1415 MW-49-060518

1425 MW-12B-060518

1440 MW-25B-060518

1450 MW-41-060518

1510 MW-37-060518

1520 MW-38-060518

1530 MW-34-060518

1540 MW-39-060518

1625 MW-28-060518 MNA. Fe = 2.25 mL

1640 Was approached down by Creek by a man named "John". Possibly a local. Claimed to be looking for fish. Drove a white GMC truck. Had 2 passengers, looked to be teens.

Location _____ Date _____

Project / Client _____

8

1700 Pack coolers. B. Garvey + E. Harker take coolers to FedEx. K. Sexton or J. Magan to clean site and prep for tomorrow.

1715 Offsite

Rite in the Rain

Location Belton, SC Date 6-6-18

Project / Client Lewis Drive
K. Sexton

TASK: Groundwater sampling
Team: See pg. 87
Equip: See pg 83

0700 team onsite
0715 Hold PtSp
0730 prep Field equip. Set up on MW-19
0735 calibrate PID, 0.0 & 100.0
0747 MW-19-060618 MNA Fe^{+2} = 2.0
0834 Head over to Brown's Creek to finish area
0900 MW-35-060618 MNA, Fe^{+2} = 0.0
0925 MW-15-060618 MNA, Fe^{+2} = 0.0
0940 Meet Scott Schmida for access to MW-09.
1000 Weigh & replace sock at MW-11. Thick product on sock, decide to not sample.
1020 Meet back up with B. Garvey to discuss plan
1040 M66 to Mayfield
1100 MW-04-060618 MNA Fe^{+2} = 0.0
1117 MW-03-060618 MNA Fe^{+2} = 0.0
1135 Hydrasleeve fell off clip into well, go to compound to get hooks and fishing line
1200 Break for lunch
1215 Team back on site
1250 Begin fishing MW02
1415 Removed dropped sleeve from MW02

Location Date

Project / Client

1440 MW-02-060618 MNA Fe^{+2} = 0.0
1450 Talk to Scott Schmida about pads. Agree to pick up on Friday.
1500 Gauge MW-09, PID = 12.1, DTW = 0, DTB = 19.70
1525 MW-09-060618 MNA Fe^{+2} = 0.0
1540 House keeping and cooler prep
1620 B. Garvey + E. Harker offsite
1630 K. Sexton + J. Morgan offsite

Return the Favor

Location Belton, SC Date 6.6.18

Project / Client Lewis Dr. / Qtrly GW Sampling

0700 B Garvey & E Harker arrived on-site Morning H&S meeting and daily objectives are in the other field logbook.

0740 Headed to Brown's Creek area to keep sampling w/ Hydrasleeves

0755 Collect mw-43B-060618

0805 Collect mw-43-060618

0820 Collect mw-24-060618

0830 Collect mw-24B-060618

0900 Collect mw-15B-060618

0940 Collect mw-14B-060618

0950 Collect mw-14-060618

1010 Collect mw-13B-060618

1020 Collect mw-13-060618

1045 Collect mw-47-060618

1055 Collect mw-31-060618

1107 Collect mw-33T-060618

1125 Collect mw-48B-060618 and mw-48B-D-060618

1138 Collect FB02-060618

1313 Collect mw-50B-060618

Note: off-site for lunch ~ 1155. Back on-site ~ 1245.

1345 Collect mw-32-060618

Ferrous Iron = 0.0ppm

Location Belton, SC Date 6.6.18

Project / Client Lewis Dr. / Qtrly GW Sampling

1405 Collect mw-10-060618

Ferrous Iron = 0.0ppm

1440 Collect mw-08-060618

Ferrous Iron = 0.0ppm

1500 Collect mw-30-060618

1510 Collect mw-02B-060618

1527 Collect mw-09B-060618

1540 Head back to staging area to fill-out COCs, organize samples, and pack-up coolers for shipping to ESC.

1620 B Garvey & E Harker off-site for the day.

RL 6.6.18

Location Belton, SC Date 6-7-18

Project / Client Lewis Dr.

K. Sexton

TASK Complete Groundwater sampling and Surface water sampling

TEAM See page 83

Equipment See pg 83

0700 Team onsite

0715 Hold HTSP

0720 Begin hike to SW-11

0825 Arrive at SW-11

0830 SW-11-060718 - no sheen

0845 SW-10-060718 - bio sheen

0855 FP-01-060718 - no sheen

0905 FP-02-060718 - no sheen

0915 SW-09-060718 - no sheen

0920 SW-08-060718 - bio sheen

0926 SW-13-060718 - bio sheen

1020 DP-03-060718 - bio sheen

1045 SW-12-060718 - no sheen

1055 SW-03-060718 - no sheen under water level low

1105 SW-01-060718 - no sheen

1115 SW-07-060718 - no sheen W.L. low

1125 SW-02-060718 - no sheen

1135 SW-04-060718 - no sheen

Location Date 6-7-18

Project / Client

1150 SW-14-060718 - bio sheen

1200 Break for lunch

1300 Return from lunch

1310 Begin TROLL data collection

1400 Finish TROLL collection. Meet up with B. Garvey & E. Hunter

1655 B. Garvey & E. Hunter offsite, complete housekeeping.

1730 K. Sexton & J. Morgan offsite

Location Belton, SC Date 6.7.18

Project / Client Lewis Dr. / Qtrly GW Sampling

0700 B. Gaskey & E Harter arrive on-site. Begin organizing car & VOA vials for each team to get day started. One team will do Surface water sampling, the other will complete the Hydrasleeve sampling.

H&S topic - end of the week, don't rush. make sure each task is completed.

0800 Collect MW-45-060718

0810 Collect MW-45B-060718

0820 Collect MW-21-060718

0835 Collect MW-17B-060718

MW-17B-D-060718

0855 Collect ~~MW~~ FB03-060718

0910 Collect MW-05-060718

0920 Collect MW-06-060718

0930 Collect MW-06B-060718

1015 Collect MW-36-060718

1025 Collect MW-36B-060718

1050 Return to the staging area and get the cooler / samples organized.

1205 Off-site for lunch

1300 returned from lunch

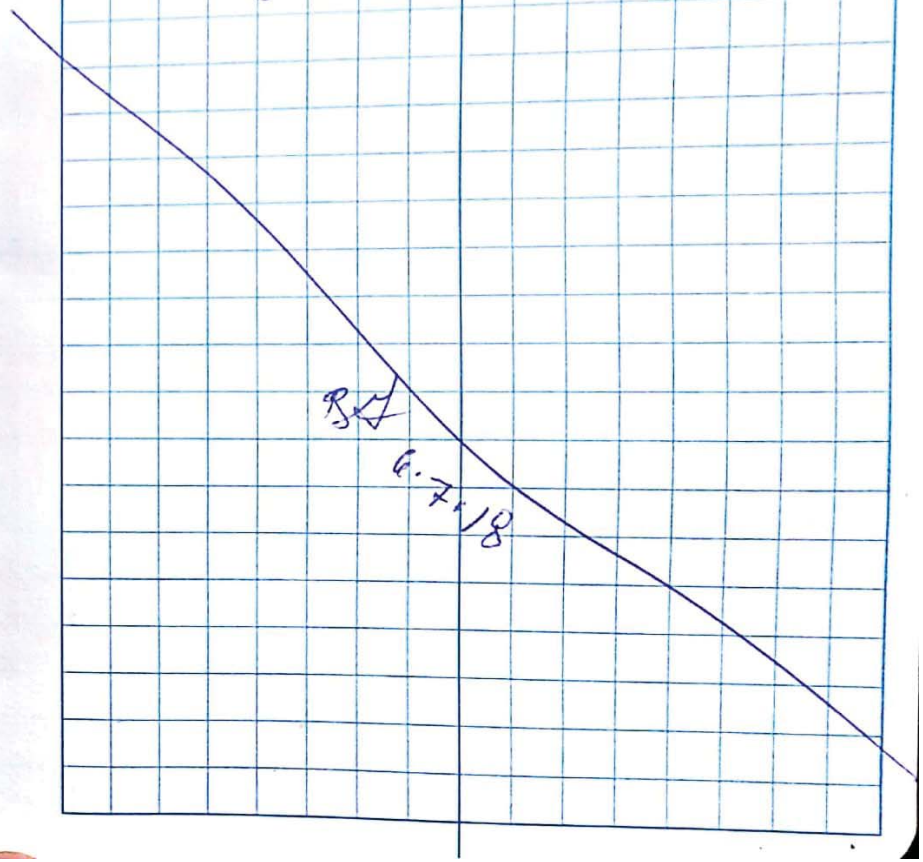
Location Belton, SC Date 6.7.18

Project / Client Lewis Dr / Qtrly GW Sampling

1320 Leaving Staging area to go do product recovery.

1630 Completed product recovery. Headed to FedEx to ship samples

1655 B Gaskey & E. Harter off-site for day.



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: SOUNOT 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
150	~~100.0~~ 0.0	100.0

MINIRAE 2

	BEFORE	AFTER
AIR	0.0	0.0
150	0.0	100.0

0700 TEAM ARRIVES ON SITE 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.

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

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

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. HANLEY 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 = 30.10ft* W/ SKIMMER
DTW = 30.45ft* 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

Rite in the Rain

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-248-10019

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 Ø	0.0	0.0	1/23/19	11367
NTU 26	130.00	126.00	2/28/2019	18B1804401
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 CST 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 P~~
DTP W/ SLIMMER: 6.53ft
DTP W/ WATER: 6.59 ft
DTS: 6.86 ft.

0800 M. WARREN AND E. HARPER 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

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

1000 ~~0900~~ LOW FLOW MW-30

1230 BEGIN MARKINGS FOR

~~1307~~ 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 MILES 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	MW-34-071218
1556	MW34-071218-DUP
1605	MW40-071218
1615	~~MW-35~~ MW38-071218
1625	MW-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 (M)
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 (MW) 103

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 HUM. D. LIGHT SHOWER OCCURED LAST EVENING.

0645 TEAM HOLDS TSP ABOUT COMPLACENCY

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

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 = 0.2 OZ

0915 RS-14 PRODUCT RECOVERY = 0.2 OZ

0920 RW-10 PRODUCT RECOVERY = 30.0 OZ

0918 RS-10 PRODUCT RECOVERY = 0.0 OZ

0940 RS-5 PRODUCT RECOVERY = 0.5 OZ

0945 RS-01 PRODUCT RECOVERY = 4.0 OZ

0950 RS-02 PRODUCT RECOVERY = 2.0 OZ

1000 ~~MW-15~~ RW-02 PRODUCT RECOVERY = 1.0 OZ

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. HARLER (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	36.62
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-99	–	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

Return to 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	—	22.71	34.82

EH

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-S1 AND MW-S2

STAFF M. WARREN, K. SEATON

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

PROBE #1 CALIBRATION

PH 4 → 4.13 → 4.0

PH 7 → 7.06 → 7.0

PH 10 → 9.89 → 10.0

DO → 99.9 → 100.0

~~COND → 1.410 → 1.415~~ (S)

ORP → 6.78 → 0.0

12 PH 4.0 ORP → 133.70 → 124

COND 1.413 ms/cm → 1.410 → 1.413

ORP → 242.4 → 240.0

PROBE #2 CALIBRATION

PH 4 → 4.14 → 4.0

PH 7 → 7.09 → 7.0

PH 10 → 9.85 → 10.0

DO → 101.0 → 100.7

~~COND → 1.755 → 1.413~~ (S)

ORP → 6.6 → 0.0

12 PH 4.0 ORP → 155.4 → 124

COND 1.413 ms/cm → 1.735 → 1.413

ORP → 235.4 → 240.0

~~X~~: (Fluid, Lot#, Exp) (cond, 76L849, 12/18) (ORP, 1800982, 10/18) (ORP, 1830907, 02/19) (pH4, 2708G89, 08/19) (pH7, 784J36, 01/20) (pH10, 2709H29, 03/12/19) (ORP, 3059, 06/23)

Location BELTON, SC Date 08/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0810 RT-2K 50K=620g, NOT 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

1312 BEGIN PUMP SETUP ON MW-40. DTW = 2.44

1317 BEGIN PUMPING MW-40

1389 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.
Date 8-13-18
K. Sexton

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~~ reads KM safety video. C. Sloan
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. Schaida with AT+T service man.
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-b

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

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 lining 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

86

Location Elkton, SC Date 8-13-18

Project / Client Lewis DC.

K. Sexton

1540	Sand measured to 14.9' (4.3' of filter), 2 bags
1545	Add bentonite pellets, measured at 8.8' bgs (6.1' of bent.) add 5 gal H_2O
1600	Begin 1hr hydration time for bentonite. Begin decon. Crew to load rig for change out. Next rig to be used tomorrow.
1610	K. Sexton to compound. Move trash outside of compound for pick up.
1650	Well lock placed on VAS-54
1700	Crew offsite. K. Sexton lock up; offsite.

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 Thru 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' very 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 ...~~
Gap in augers cause bridge. Gap in old augers joint allowed water in. Tribat to fix
1505 Begin Trib in
1530 Begin putting sand in. Insert in 4" lifts to try and prevent bridging.
1550 Sand measured to 30.5, start bentonite.
~~[illegible]~~ 1.5 bags of sand

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

1558 Tim Davidson of USIC onsite for utility locate briefing - no conflicts w/ 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 rig to VAS-51
1700 Team offsite.

90

Location Belton, SC Date 8-15-18

Project / Client Lewis Dr. VAS Instal.

K. SEXTON

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
0830	Check in call w/ T. Wiley, topics discuss, 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 Install.

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.

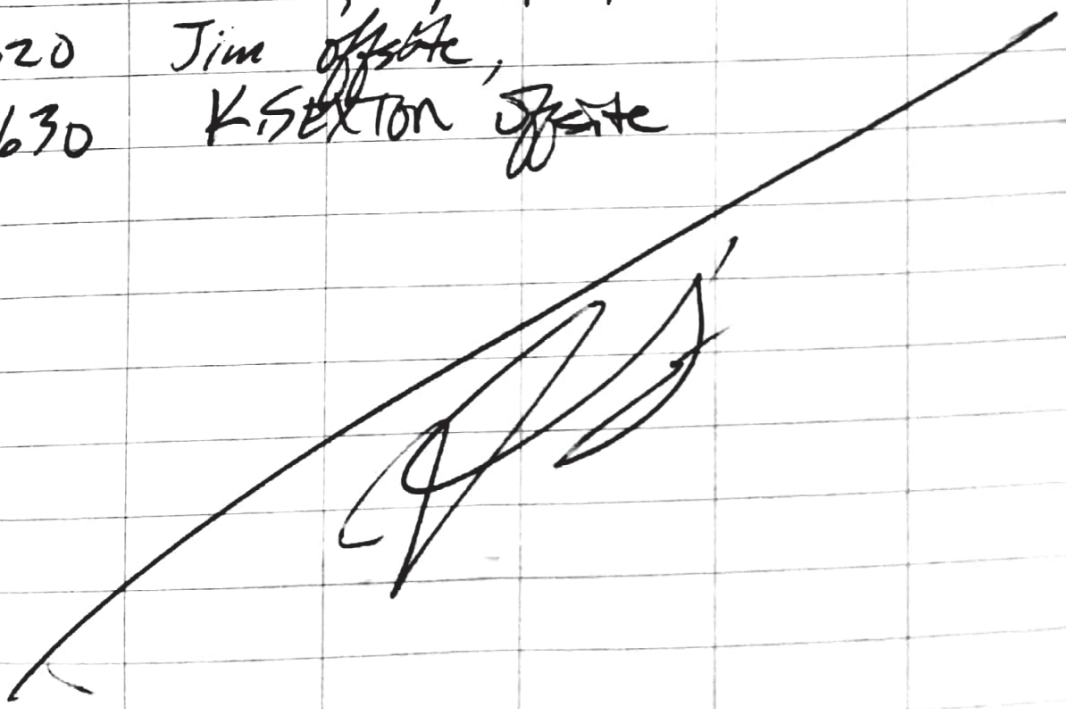
92

Location Belton, SC Date 8-15-18

Project / Client Lewis Dr.

K. SEXTON

1400	~8 gallons left in drum. VAS-52 has >10' logs to grout. Place excess grout into VAS-52
1415	Take water break.
1420	Rig mob to VAS-50. Begin hand auger. Crew decon 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 status of 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 & Tom 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

94

Location Bolton, SC Date 8-16-18

Project / Client Lewis Dr.

K. SEXTON

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

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

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

1445 Caved in to 17.5' bgs

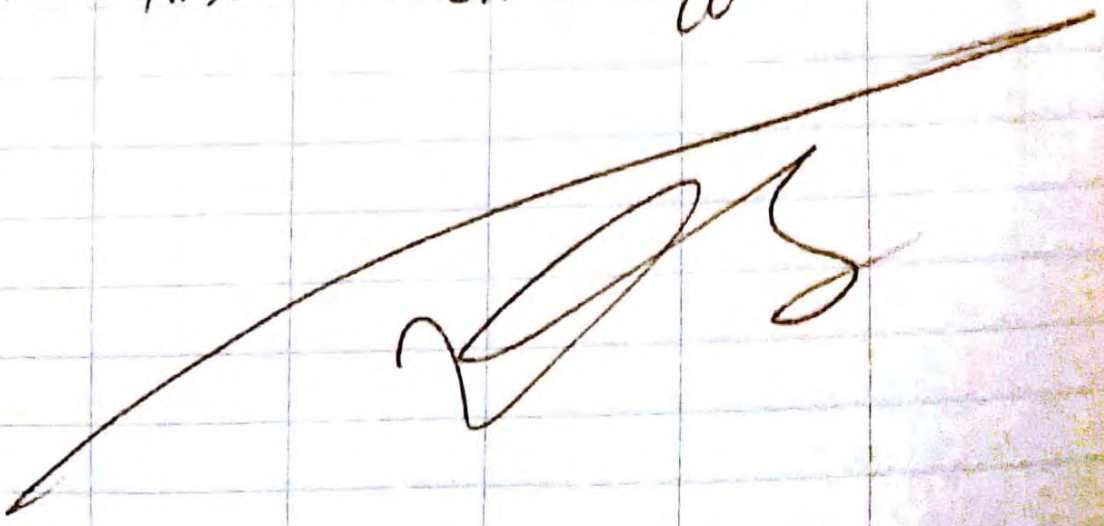
1450 Cover hole, move to decon. Clean equip., go on site walk for trash or housekeeping. Drum one (1) 55-gal drum with decon water from pad (≈50 gal.)

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 demob.
1230 Stored extra drums in 2nd roll off.
1300 2 Decon water drums stored in compound
1345 All equipment loaded
1420 Offsite

Location Belton, SC Date 8-27-18

Project / Client Lewis Dr.

K. SEXTON

0900	Onsite, Held TBT with M. Brown, C. Sloan, & B. Miller. Crew begin decon pad construction, set up for VAS-49047 install
	PID Calibrated # 021597, ISO# BBT-248-100-10
	Cal zero/span = 0.0/100.0
1000	Hand auger for utility check @ VAS-47
1100	Refusal @ 3.4'
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 leftover, mix b~~
1600	Decon augers and mob 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 PTSP, 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 stump. 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/ 3lbs 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

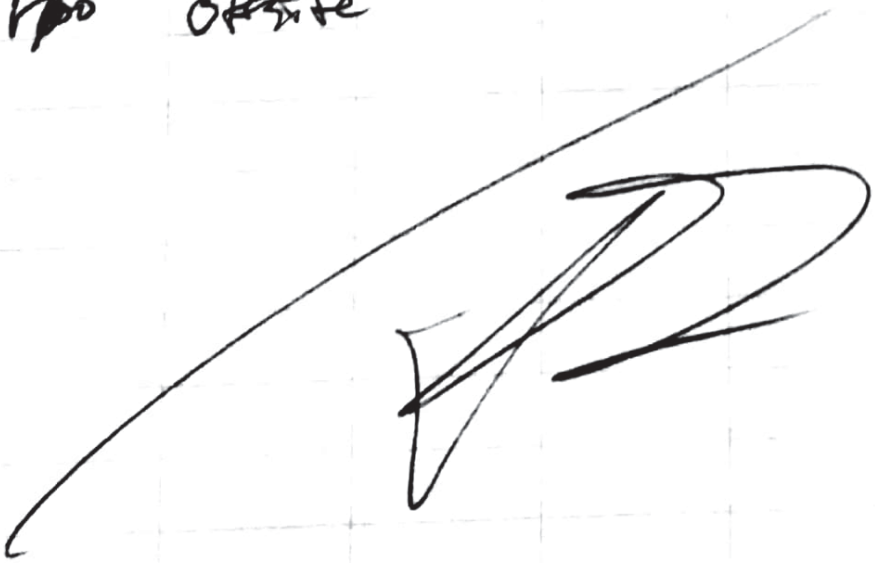
1640 Decon Augers, pump water into drum

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 - 27.0', 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 5' 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 of SMAC onsite. Drill crew to fill tank with city water from compound water source

0940 Assist S. Shwilla 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 up at compound. Set up MW54.
1700	Crew offsite

Location Belton, SC Date 8-30-18

Project / Client Lewis Dt.

K. SEXTON

0700 Hold PTSP, cal PEP(0.0, 1000).
Crew decon equip. Get board tool to carry MW-53 drums to compound. empty settled drums into poly tanks.

0810 Robbie & TJ of AE drilling onsite for well abandonment & parameters

0835 GM groundcrew 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 MW5405Z w/ GM.

1140 Gary of AE drilling onsite. Explain tank for development

Location Betton, SC Date 8-30-18

Project / Client Lewis Dr.

K. SEXTON

Hanna Cal.

Handheld #16855, Sensor #25313

AutoCal Solution # 18044181, Exp Feb 2019

pH ~~[illegible]~~ 4.01

cond 4.51

NTU 0.0

DO(mg/L) 9.07

DO(%) 119.4

1238 Start Gary of AED on VAS development

1240 Continue drilling MW54 (offset #2)

1310 Collect MW54-0809-083018

1430 Stop at 48'. No refusal. Call T. Wiley to assess green placement. Set to 24-9'. Bent. up to 25'. Let bent. but 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 Assist S. Schmidt w/ airgauge shut off

1630 Check on Gary of AED. Has developed VAS-52 + 51, 53 dry

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

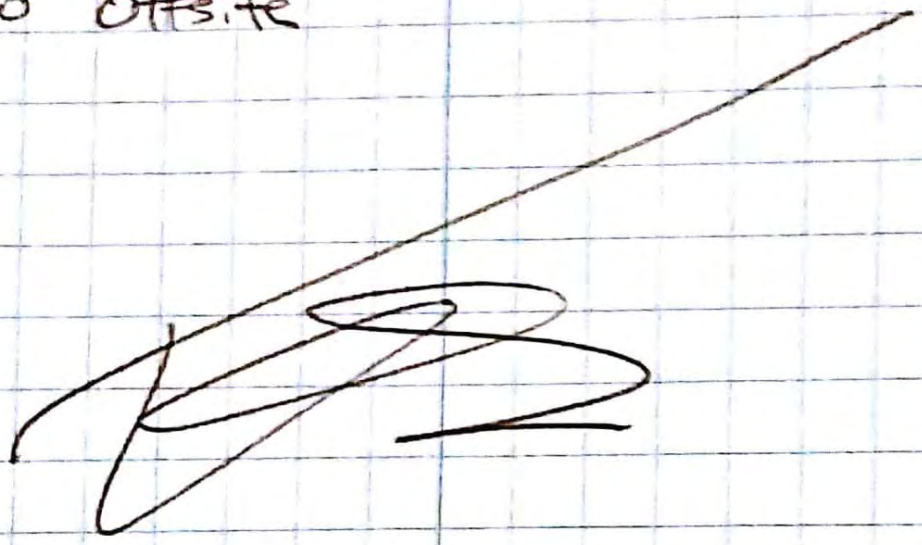
Location Bolton, SC Date 8-30-18

Project / Client Lewis DT

K. SEXTON

1645 Crew to move PDW Rigids to compound for setting overnight. Offset drill rig for install 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
74 -	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 PISP, 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 pins off MW54 offsets and of revised 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 Kanetz/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 Kanetz onsite - AE Drilling Crew onsite

1215 H&S / PTSP Tailgate

1217 T. Wiley onsite

1220 Calibrate Horiba U-52 Pine IN1C85 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 [MW52-2305-090418] for BTEX & Naphth. 1 40z WA & Total Solids 4oz Jar

1425 Set well in MW52 at 28 ft bgs w/ 15 feet of screen

1430 Turley 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

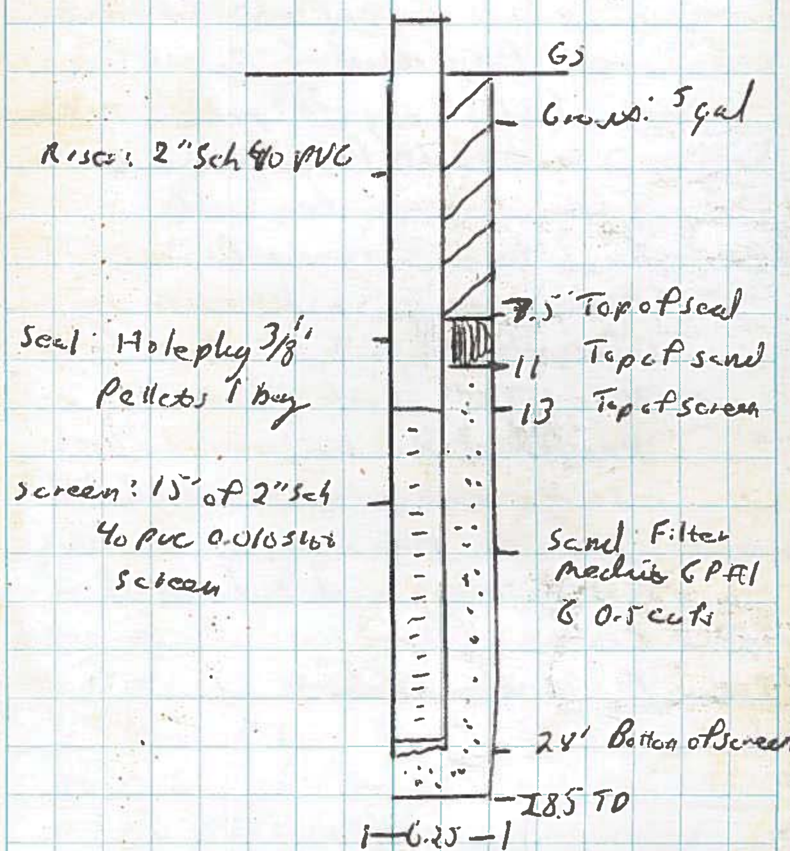
1435 Drillers have silt & mud in augers ≈ 10-12'
- will pull out augers & add a knock out plug & clean out boring for MW ~~25~~ (MW) 52

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 9/4/18

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: Holeplug 3/8" pellets nonhydrated 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 & 54 both points dry pumped clean water into both surge and pumped water out multiple times

- Pump develop water to Frac Tank

1650 Driller offsite

1710 M Kanth offsite

9/4/18

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

Present: M. Kanth / ATC

Weather: P Cloudy Lo 75° Hi 88 T Storms

Objective: Continue well installation

AE onsite: M Bowen, C. Sloan, B. Miller

0645 onsite at equip mgr compound

0650 Load equipment

0700 AE onsite H&S PTSP

0715 Drillers set up for the day

0725 Calibrate PID MiniRae 3000

Rae ID 21579

Fresh air (Zero): 0.0 ppm

Isobutylene 100ppm / 100.0 ppm

0735 Drillers move rig to MW-51 location

- & hand auger to 4' bgs

0800 Drillers start on MW51 see boring log

0840 Drillers hit refusal on MW51 at ≈ 23 ft bgs

0850 Collect soil sample (MW51-0810-090518) for BTEX / Naphthalene (40 ml VOA) & Total Solids (4 oz glass jar)

0905 Drillers install MW51 to 22.5 w/ 15 ft of 2 in sch 40 PVC screen 0.010 slot & 2 in sch 40 PVC riser

Location Belton SC Date 9/4/18

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: Holeplug 3/8" pellets nonhydrated
seal to 7.5 ft bgs

1535 TStorm in area Stop work

1640 Break between storms Drillers
hydrate bentonite & secure rig
- Well Development: checked both
USW 53 & 54 both points dry
pumped clean water into both
surge and pumped water out
multiple times
- Pump develop water to FracTank

1650 Driller offsite

1710 M Kanth offsite

9/4/18

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

Present: M. Kanth / ATL
Weather: P Cloudy Lo 75° Hi 88 TStorms
Objective: Continue well installation
AE onsite: M Bowen, C Sloan, B. Miller

0645 onsite at equip man compound

0650 Load equipment

0700 AE onsite H&S Mtg

0715 Drillers set up for the day

0725 Calibrate PID MiniRae 3000
• Rae ID 21579
Fresh air (Zero): 0.0ppm
Isobutylene 100ppm/100.0ppm

0735 Drillers move rig to MW-51 location
- & hand auger to 4' bgs

0800 Drillers start on MW51 see boring log

0840 Drillers hit refusal on MW51 at
≈ 23 ft bgs

0850 Collect soil sample (MW51-0810-090518)
for BTEX/Naphth (40ml 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

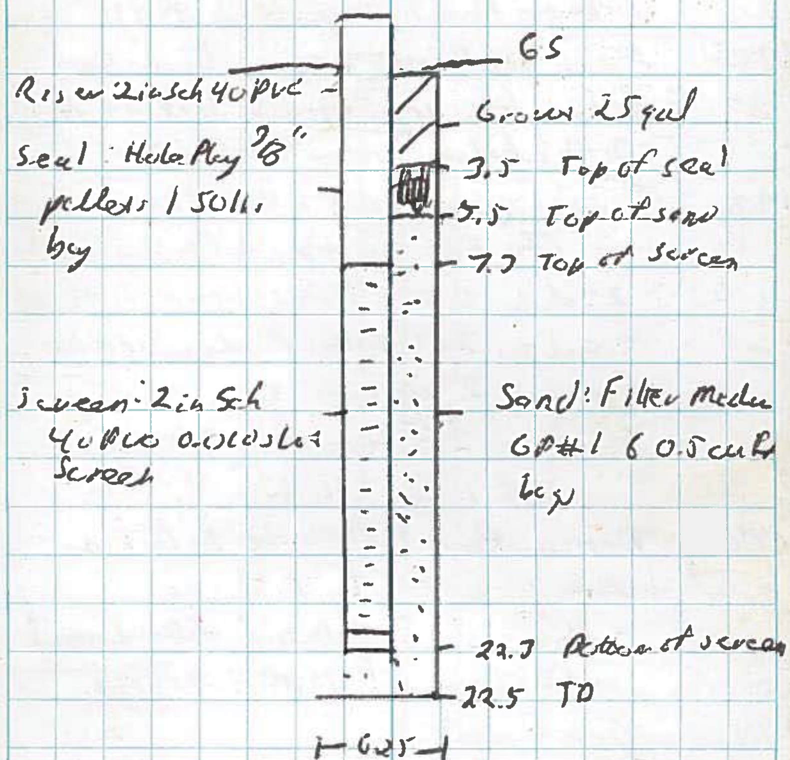
MW51 cont:
Sand to 5.5 ft bgs Filter Media used
6 0.5 cu ft bags
Seal: Holeplug 3/8" pellets uncoated
1 50 lbs bag seal 3.5 - 5.5 ft bgs

0930 Break down rig move off hole
1000 ~~C. Sloan~~ B. Miller offsite to pick up traffic signs
1045 - Drillers hydrate ~~casing~~ seal 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 Ground management onsite cutting grass
1255 Century Link personnel onsite to look at Comm Line & Sflage Locations
- Officially couldn't tell me anything
1305 Century Link offsite

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

MW51 WCD:



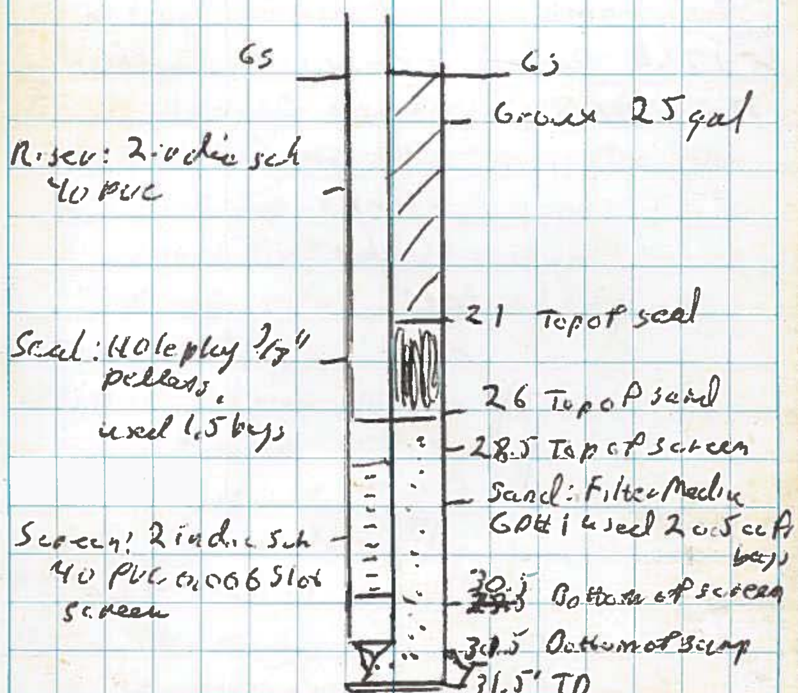
9/5/18

Location Belton SC Date 9/5/13
Project / Client Lewis Dr

1307 Drillers set up on 57 (Spauge & ~~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 lb 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 handauger USW58 to 5 ft bgs
1600 Drillers start on USW58 see boring log
1620 Drillers ~~test~~ hit refusal on USW58 at 32.5 ft bgs.

Location Belton SC Date 9/5/13
Project / Client Lewis Dr

USW ~~58~~ 57 WCD:



166 25-1

9/5/13

Location Belton SC Date 9/5/18

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

1220 Drillers secure site for the day

1235 offsite

a 9/5/18

Location Belton SC Date 9/6/18

Project / Client Lewis Dr

Present: M Karafa / ATL

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

Weather: P Cloudy Lo 74° Hi 88°

Objective: Continue MW (MSW) well installation or development

0640 onsite at field trailer

0655 calibrate PID mini Rae 3000

Pine ID 21579

Fresh Air (zero): 0.0 ppm

Isobutylene 100ppm) 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 PTSP

0730 Drillers set up traffic signs

0735 change batteries on Horiba & recal

pH: 4.0 / 4.01 NTU

Cond: 4.49 / 4.50 ms/cm

Turb: 0.0 / 0.0 NTU

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

114
Location Belton SC Date 9/5/18
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
~~1S~~ 1220 Driller secure site for the day
1235 Offsite

a 9/5/18

115
Location Belton SC Date 9/6/18
Project / Client Lewis Dr

Present: M Karafa / ATL
AE: M Brown, C Sloan, B Miller, G Winborne
Weather: P Cloudy Lo 74° Hi 88°
Objective: Continue MW MSW well installation or development
0640 Onsite at 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 MTSP
0730 Drillers set up traffic signs
0735 change batteries in Horiba + recal
pH: 4.0 / 4.01 NTU
Cond: 4.49 / 4.50 ms/cm
Turb: 0.0 / 0.0 NTU
0745 Drillers set up to develop well
& set USW-5K casing

Location Belton SC Date 9/6/18

Project / Client Lewis Dr

0830 Drillers flush sediment out of Auger

0840 Drillers install casing in USW58 w/ 2 ft 2 in dia sch 40 PVC 0.006 slot screen, 2 in sch 40 riser (screen has 1 ft sump) set 31.3"
sand pack: Sand to 27 Filter Media GP #1 used 267 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 & stand down until issue is resolved - Drillers packing up

0940 seal: to 22 ft bgs - Holeplug 3/8" pellets used 2-50 lbs bags

1040 Drillers have all equip off O'Dell property & site cleaned up

1042 Drillers build pad on MW-54

1125 offsite to Lunch

1145 Onsite from Lunch

1150 Driller cont develop & cleanup

1330 Drillers load drums (empty) & cut off USW points below grade & sand

Location Belton 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 Push 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 1 0.5 cu ft bag
seal: to 1 ft bgs Holeplug 3/8" pellets used

1615 Drillers cut USW59 off 1' bgs & cover w/ sand - seal 1' bgs

1620 Drillers ~~Aso have~~ (Kirks) haul 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
& MW59

1720 offsite,
- M Kavarik ship sampler at FedEx

9/6/18

Location Belton SC Date 9/7/18

Project / Client Lewis Dr

Present: M. Kavarik / ATC
AE: M Brown, C Sloan, B Miller, G Wideborn
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 POSP

0715 Drillers set up traffic signs & decon

0720 Calibrate ~~PID Monitor~~ Horiba U52
Pine ID 25713
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

0725 Auger refusal at USW55 at 30.5' bgs

118
Location Belton SC Date 9/6/18
Project / Client

1700 Driller: Clean up & secure site
Driller helper developed MW53
& MW54
1720 offsite,
- MKearcle ship sampler as FedEx

9/6/18

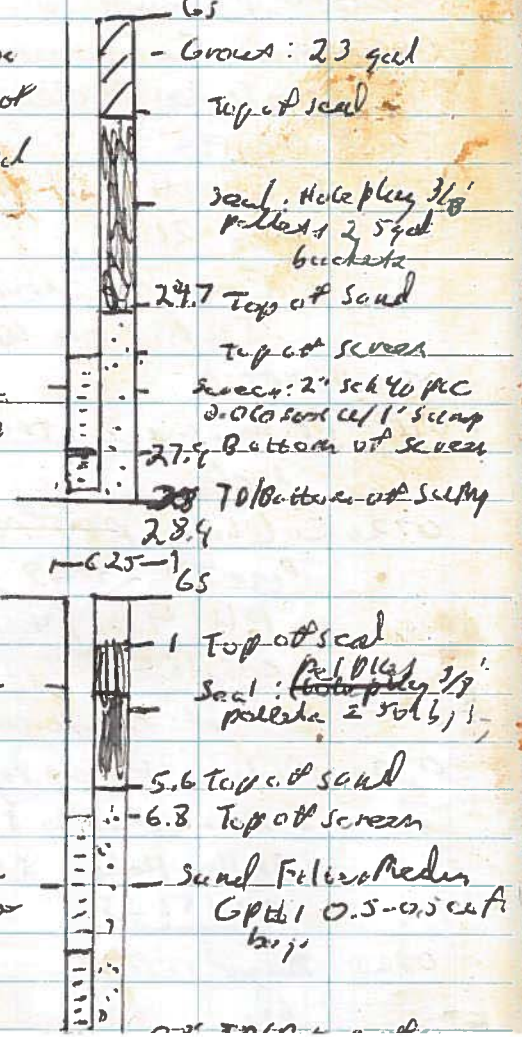
Location Belton SC Date 9/7/18 119
Project / Client Lewis Dr

Present: M. Kearcle/ADC
AE: M Brown, C Sloan, B Miller, G Winborn
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 POSP
0715 Driller set up traffic signs
& decon
0720 Calibrate ~~PID Monitor~~ YSI Horiba U53
Pine ID 25313
pH: 4.00/4.02
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
0725 Auger refusal at USW55 at 30.5'
bgs

Location Belton SC Date 9/7/17

Project / Client Lewis Dr

VSW 55 well:



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

Sand: Filter Media GP#1 20.5 cu ft bags

VSW 56 well

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	Driller set up to set well casing at VSW 55
0930	Drillers have obstruction in bottom of auger & can't set well. - Pulling auger to inspect
0940	Drillers confirm Silica packed in bottom auger
0950	Drillers clean out auger, install plug & 2 pvc augers, back down boring to clean out. ± 4'-5' of sloughed soil in bottom of boring
1015	Drillers install well casing in VSW 55 w/ 2 ft of sch 40 PVC 0.060 slot screen & 1 ft sump to 28.4 ft bgs. Sand to ~~24.7~~ 24 ft Filter Media GP#1 w/ seal @ 24.7 2 - 0.5 cu ft bags
	Seal to 19.4' Pel Plug 3/8" pellets used 2 5 gal buckets
1155	Drillers pull augers
1200	Drillers stop for lunch
1244	Drillers back on site
1300	Drillers set up over VSW 56 & hand auger 4-5' bgs
1330	Drillers stuck on VSW 56 see boring Log

Location Belton SC Date 9/7/18

Project / Client Lewis Dr

1415 Drillers hit refusal at 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 cu ft bags

Seal: seal to used Pel Plug 3/8" pellets. 50 lb bags

1540 Bentonite hydrating

1650 Drillers start grouting USW

1655 USW 55 - grout Vol 23 gal

1705 Move to USW58

1720 USW-58 - 28 gal

1725 Move to USW57

1735 USW 57 - 25 gal

1740 Move to USW 56

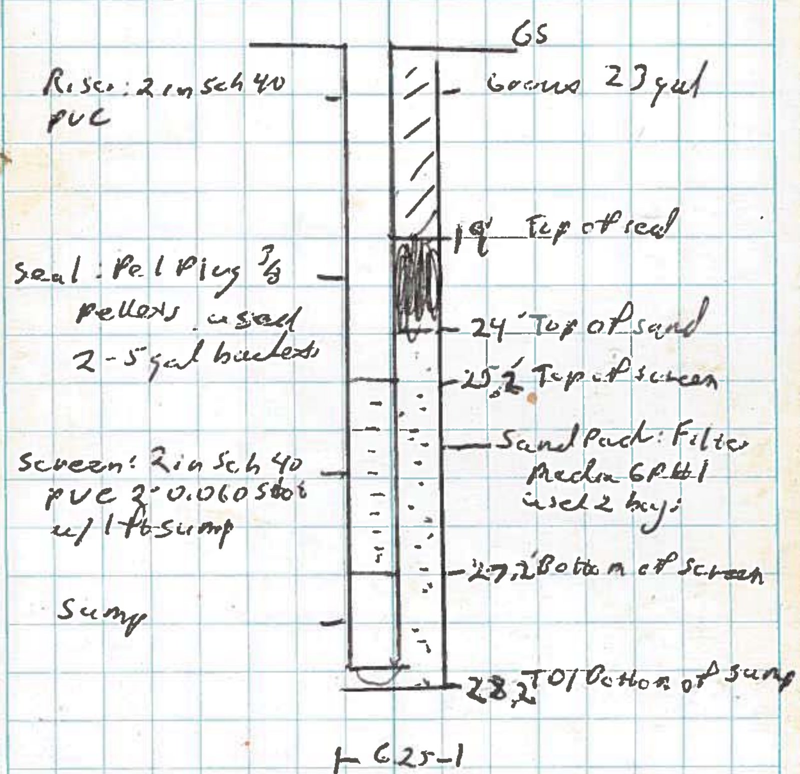
1750 USW56 - 23 gal

1800 Drillers move equip to staging area

Location Belton SC Date 9/7/18

Project / Client Lewis Dr

USW 56 WCD:



1820 Driller load up CME 750 on Lowboy

1845 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 -> 100.0ppm

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 (2)

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 (FTL/B.O), 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. CHENAULT 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	

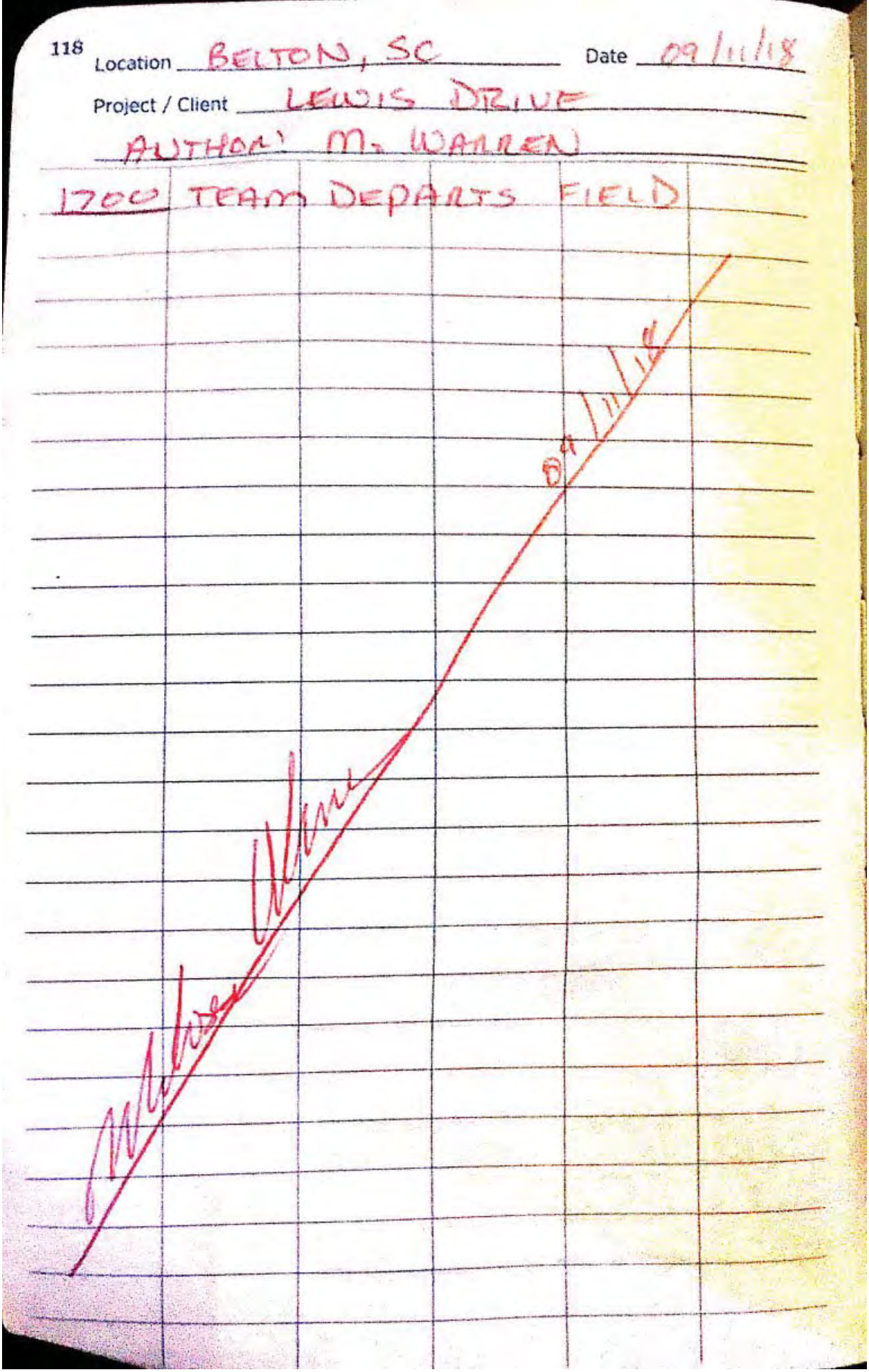
Rite in the Rain

118 Location BELTON, SC Date 09/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1700 TEAM DEPARTS FIELD



Location BELTON, SC Date 09/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER/SURFACE WATER GAUGING/SAMPLING AND PRODUCT RECOVERY

STAFF: M. WARREN (FTL/B.O), 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. CHENAULT 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	

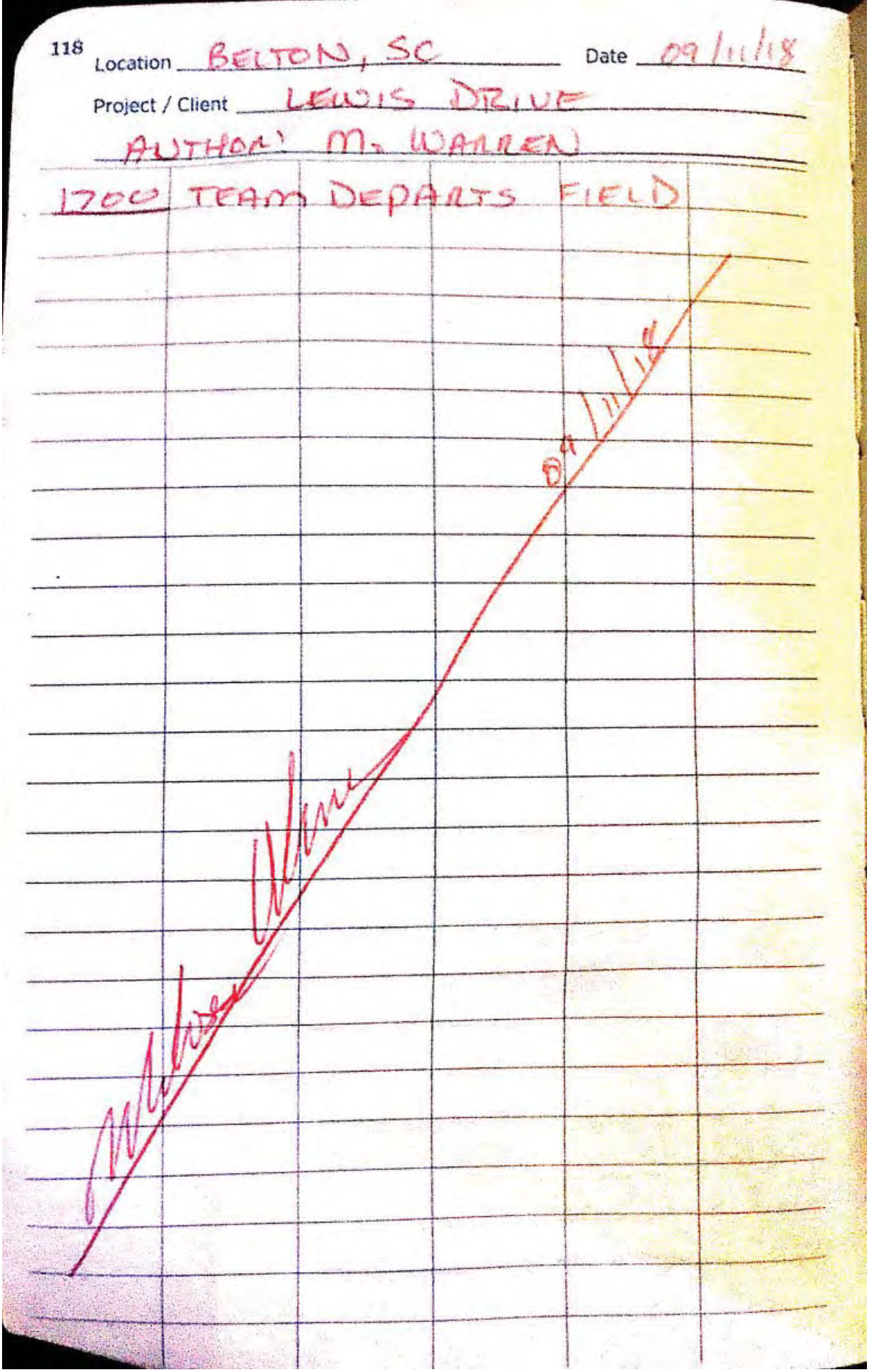
Rite in the Rain

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 THUNDERSTORM, 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

0755 MW-39-091218

0756 MW-39-D-091218

0800 MW-34-091218

0810 MW-15B-091218

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

Insor# 30192, handheld/# 036636

DO	103.7	100.4	—	—
cond	1.22	1.413	#06E038	05/2019
FNU0	2.36	0.0	#1818944	05/2019
FNU124	109.35	124.0	#18B18041411	2/2019
pH4	4.04	4.0	#2581882	03/2020
pH7	7.07	7.0	#1001536	01/2020
pH10	10.01	10.0	#2712940	06/2019
ORP	213.2	240	#3054	06/2023

1335 BEGIN LOW FLOW SETUP FOR MW-19. (M)

1401 WELL PUMPED DRY. WILL MONITOR FOR RECHARGE. (M)

1430 BEGIN LOW FLOW SETUP FOR MW-17 (M)

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

1445 BEGIN LOW FLOW SETUP FOR MW-07. (M)

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

EQUIPMENT SEE PAGE ~~112~~ 114.

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

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.

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

1700 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 09(M

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 ~~AT~~ SW-05. (M)

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~~ (M)

0850 ~~SW07-091418~~ (M)

~~SW03-091418~~ (M)

0735 SW11-091418

~~0730~~ SW10-091418 0731 (M)

(M)

Location BELTON, SC Date 09/14/18 ~~08~~

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.

128

Location BELTON, SC Date FRIDAY 10/05/18

Project / Client LEWIS DRIVE (699847/699858)

AUTHOR: M. WARREN

TASK: PRODUCT RECOVERY / GROUNDWATER SAMPLING

STAFF: M. WARREN (FTL/BIO), M. CHERNOFF (ENV. SCI)

WEATHER: MID 80's / HUMID / SUNNY

EQUIPMENT: SOLINST: 2768 /
MINIRAE: 39588
→ LOT #EBI-248-100-6 EXP: 4/9/22

CALIBRATION: MINIRAE → 100.8 ppm

0700 TEAM ARRIVES ON SITE AND GEARS UP.

0730 TEAM HOLDS PTSP.

1140 TEAM BREAKS FOR LUNCH

1240 TEAM RETURNS FROM LUNCH

1241 TEAM GEARS UP FOR SAMPLING OF NEWLY INSTALLED WELLS. TEAM SWITCHES DI PROBE TO A CLEAN/NEW PELICAN METER SN: 01-6520.

1340 MW-54-100518

1355 MW-53-100518

1356 MW-53-D-100518

1422 READJUST RS-14 DTS = 6.65

1434 READJUST RS-17 DTS = 6.62

MW

Location BELTON, SC Date 10/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1455	MW-51-100518
1505	MW-52-100518
1515	FB01-100518
1525	TB01-100518
1600	REPLACED SOCIL IN RS-08
1610	TEAM DEPARTS FIELD.

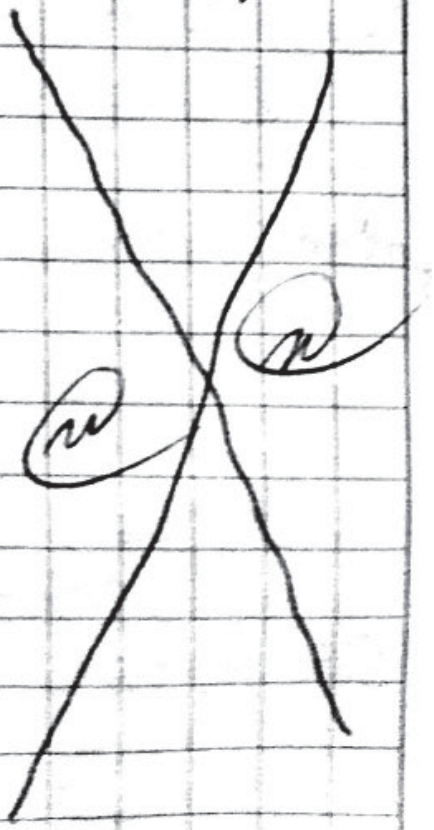
10/05/18

Location BELTON, SC Date 11/01/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TIME	WELL ID	DTP ~~DTP~~	DTW	P.I.D/COMMENTS
1000	RW-11	11.39	11.40	186.7 ppm
1008	RW-12	13.59	13.61	
1024	RS-08	—	12.84	NEEDS NEW CAP SOCK WT = 445 g
1027	MW-20	11.23	12.00	886.7 ppm
1034	RS ~~BS~~-07	—	12.69	
1031	*RT-1A	—	13.12	SOCK WT = 365 g
1032	RT-1B	—	12.54	SOCK WT = 645 g
1033	*RT-1C	—	12.56	BOLT CUTTERS SOCK WT = 645 g
1043	RW-01	—	13.83	NEEDS CAP REPLACED
1046	MW-11	30.66	30.77	399.4 ppm
1051	RW-06	—	26.36	
1058	RW-08	—	16.55	
1102	RW-09	14.28	14.46	
1104	RT-2A	—	0.82	
1105	RT-2B	—	0.91	
1106	RT-2C	—	1.13	
1107	RT-2D	—	1.13	
1108	RT-2E	—	1.15	
1109	RT-2F	—	2.93	
1110	RT-2G	—	3.56	
1111	RT-2I	—	2.84	
1112	RT-2J	—	1.09	
1113	RT-2K	—	0.94	SOCK WT = 750 g



Location BELTON, SC Date 11/01/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

WELL ID ~~TIME~~	TIME @ WELL ID	DTP	DTW	PID/COMMENTS
RT-2L	1114	—	2.38	
RW-14	1119	11.47	12.44	INTERMITTENT SOLID BEEPING BETWEEN DTP->DTW SPARGE SYSTEM ON
MW-15	1612	—	11.70	
RS-20	1256	—	6.62	
RS-04	1300	—	9.77	
RS-06	1303	—	9.99	
* MW-16	~~15:09~~	NO KEY ACCESS		STRIPPED BOLTS
RS-12	13:09	—	7.62	
RS-11	13:13	—	7.28	
RS-09	13:17	—	8.25	
RS-18	13:25	—	9.25	
* MW-18	NO KEY ACCESS			
* MW-08	1450	11.02	19.29	TRIPLE CHECKED AND WITH NEW BATTERY
RS-13	1330	—	5.87	
RS-15	1335	—	5.73	
RS-16	1338	—	6.42	
		SKIMMERS		
* RS-17	1343	5.14	5.16	PR = ALL WATER
* RS-14	1355	5.25	5.27	PR = ALL WATER
RS-10	1403	—	7.28	PR = ALL WATER
RW-10	1412	—	10.97	PR = ALL WATER
RS-05	1420	~~10.12~~ 9.21 @	~~10.34~~ 9.23 @	PR = 0.20Z
RS-01	1458	10.22	10.24	PR = 0.20Z

Location BELTON, SC Date 11/01/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

WELL ID	TIME	DTP	DTW	PID/COMMENTS
RS-02	1510	—	9.80	PR= 0.20Z
RW-15	1518	—	13.08	PR= ALL WATER
RW-02	1545	23.38	23.39	PR= ALL WATER
RW-03	1540	24.11	24.12	PR= DRY
RW-04	1555	29.59	29.70	PR= ALL WATER
RW-05	1608	33.45	33.46	PR= 0.05OZ
RW-07	1624	—	11.70	PR= DRY

1135 TEAM DEPARTS FIELD FOR LUNCH.

1235 TEAM RETURNS FROM LUNCH.

1720 TEAM COMPLETES GAUGING AND PRODUCT RECOVERY AND DEPARTS FIELD.

11/01/18

Location BELTON, SC Date 11/2/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER SAMPLING

STAFF M. WARREN (ETL/BID) K. GHENOFF (ENVSI)

WEATHER MID 60's, HUMID, THUNDERSTORMS IN AFTERNOON.

EQUIPMENT: MINIRAE # 36353
CAL GAS LOT # GB1-248-100-18E
EXPIRATION DATE: 06/21/22
YSI PRO DISPLAY # 41767
HOCH 2100 39526
GEOSUB 04A0145
HONDA GENERATOR

0745 TEAM ARRIVES ON SITE AND HOLDS PTSP. TEAM GEARS UP FOR DAY

0755 BEGIN MINIRAE, YSI PRO AND HOCH2100 CALIBRATIONS

SOLUTION	LOT #	EXP DATE	CAL
1.413 mS/cm	866038	5/19	
pH 10	2804885	2/19	
pH 7	2805406	4/19	SEE time
pH 4	2804882	03/20	8:35
240.0 mV	8C1682	6/19	

MINI RAE # 36353 → 100.0 ppm

Location BELTON, SC Date 11/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

SOLUTION	LOT#	EXP	CAL
10.00 NTU	A8115	08/19	9.52
20.00 NTU	A8113	08/19	20.1
100.00 NTU	A8100	07/19	98.6
800.00 NTU	A8120	08/19	798.0

8333 Calibration

cond standard = 1.413 mS/cm

cond μS/cm

Temp	Before	After
19.4 °C	1454 μS/cm	1.41 mS/cm

GLP

pH 7	7.10	mV	-27.2
pH 4	4.0	mV	143.5
pH 10	10.06	mV	190.1

pH slope 56.72
pH slope % 95.95

cond cell constant
4.7824

ORP

Temp	Before	After	Standard
18.4 °C	245.1 mV	240.0 mV	240.0 mV

DO

Temp	Before	After	Barometer	DO sensor value
16.6 °C	107.0 %	9.72 mg/L	758.8	9.045226

Location BELTON, SC Date 11/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0920 BEGIN PUMP SETUP ON MW-17

1000 START PUMP ON MW-17

1130 HEAVY RAINS WITH RADAR SHOWING LIGHTNING BEGINS. TEAM BREAKS FOR LUNCH

1105 MW-17B-110218

1107 MW-17B-D-110218

1310 TEAM RETURNS FROM LUNCH/ WEATHER DELAY

1315 TEAM BEGINS PUMP SETUP ON MW-23

1335 ~~1345~~ BEGIN PUMP

1345 COLLECT MW-23-110218

1415 TEAM ARRIVES AT MW-46 WITH ALL EQUIPMENT AND BEGINS PUMP SETUP.

1439 ~~1438~~ BEGIN PUMP

1450 COLLECT MW-46-110218

1530 ARRIVE AT MW-40 AND BEGIN PUMP SETUP

1553 BEGIN PUMP

1600 ~~1600~~ COLLECT MW-40-110218

1625 ARRIVE AT MW-34 AND BEGIN PUMP SETUP.

Location BELTON, SC Date 11/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1436 BEGIN PUMP

1657 TBO1 - 110218

1700 FBO1 - 110218

1712 TEAM DEPARTS FIELD

11/02/18

Location BELTON, SC Date 12/3/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER/SURFACE WATER GAUGING AND PRODUCT RECOVERY

STAFF: M. WARREN (FTL/BIO), K. RILL, CHERNOFF (ENV SCI), JAMIE MORGAN (ENV. SCI), EVELYN HARKER (GEO)

WEATHER: MID 60'S, MOSTLY SUNNY

EQUIPMENT: SAINST: 037366
SOLINST: 042848
(A) MINIRAE: 39947
(B) MINIRAE 21579
(A) ISO LOT # JBH-248-100-19
(B) ISO EXP: 10/5/2021
(A) ISO LOT # JBH-248-10099
(B) ISO EXP: 10/5/2021

CALIBRATION MINIRAE (A) 39947
0.0 → 100.2 ppm
MINIRAE (B) 21579
0.0 → 100.2 ppm

0845 TEAM ARRIVES ONSITE AND HOLDS PTSP

1000 TEAM BEGINS GAUGING

1215 TEAM BREAKS FOR LUNCH.

Rite in the Rain

140

Location BELTON, SC Date 12/03/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1315	TEAM RETURNS FROM LUNCH
1730	TEAM DEPARTS FIELD (SUNDOWN).

12/03/18

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR M. WARREN

TASK: GROUNDWATER/SURFACE WATER GAUGING AND PRODUCT RECOVERY. SURFACE WATER SAMPLING AND GROUNDWATER LOW FLOW SAMPLING (2)

STAFF SEE PAGE 139

WEATHER M.O 50's, PARTIAL SUN

EQUIPMENT SEE PAGE 159 (2)

CALIBRATION MINIRAE 39947 → 100.0ppm

MINIRAE 21579 → 100.0ppm

0700 TEAM ARRIVES ONSITE AND GEARS UP FOR FIELD DAY. TEAM HOLDS PTSP. (2)

0735 TEAM BEGINS GAUGING. (2)

0838 RSC RW-17 DEPTH TO SKIMMER (DTS) = 6.79

* DTW WAS ABOVE SKIMMER AT 2.68 ft

0856 RS-14 DTS = 7.03

* DTW WAS ABOVE SKIMMER AT 2.91 ft

0903 DTS = 4.64 RS-10

0909 RS-05 DTS = 6.81 ft

0915 RW-10 DTS = 6.87 ft

0925 RS-01 DTS = 5.88

0930 RS-02 DTS = 5.04 (2)

142

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / J. MORGAN

0933 RW-15 DTS= 11.02

0945 RW-02 DTS = 19.69

0947 RW-03 DTS= 20.65

0949 RW-04 DTS = 30.55.

DTP: 28.01 DTW= 28.31

* DTP AND DTW WERE ABOVE SKIMMER WHILE TAKING DTS. WILL ADJUST SKIMMER.

0952 DTS = 31.40 RW-05

0955 RW-07 DTS = 19.90

1000 TEAM COMPLETES GAUGING, AND SWITCHES GEARS TO LOW FLOW, SURFACE WATER SAMPLES AND HYDRASLEEVE COLLECTION AND QCs DATA

~~SW-11 120418~~

~~1250~~

1250 ~~SW-07 120418~~

1325 ~~SW-11-120418~~

1335 SW-10-120418

1355 SW-09-120418

1410 SW-08-120418

1410 ~~SW-07-120~~ SW-13-120418

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / J. MORGAN

~~1425~~	~~SW-04-120418~~	SAMPLE BROKE
1430	SW-02-120418	
1440	SW-01-120418	collected @ tree by gauge staff
1455	SW-07-120418	
	~~SW-05-120418~~	
	~~SW-14-120418~~	
1505	SW-14-120418	
1530	SW-05-120418	
1540	SW-03-120418	
1550	SW-12-120418	
1555	SW-04-120418	
1600	TB01-120418	

1630 CHECK MW-20 WITH BAILER FOR FORMATION OF PRODUCT. PRODUCT PRESENT.

1640 CHECK MW-08 WITH BAILER FOR FORMATION OF PRODUCT PRODUCT PRESENT, SEE PHOTO

1650 CHECK MW-11 F WITH BAILER FOR FORMATION OF PRODUCT PRODUCT PRESENT

1100 TEAM BREAKS FOR LUNCH

1200 TEAM ARRIVES BACK TO FIELD

1200 TEAM BEGINS CALIBRATION OF

Rate in the Rain

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1200 CONF FOR MW-19 LOW FLOW PARAMETERS, J. MORGAN AND K. CHERNOFF BEGIN SURFACE WATER SAMPLING

CALIBRATION

SOLUTION	EXP	LOT #	CALIBRATON
pH7	8/20	2808E52	6.88 → 7.00
pH4	3/20	2804882	3.91 → 4.00
pH10	3/20	2806E50	9.99 → 10.00
0NTU	5/19	18189441	0.6 → 0.0
126NTU	2/19	18B1804401	1.16 → 126.0
1.413 mS/cm	2/28/19	8GB770	1.406 → 1.413
240.0mV	6/19	8G1682	244.7 → 240.0

1300 ~~1430~~ M. WARREN AND E. HARKER BEGIN LOW FLOW SETUP FOR MW-19

1320 BEGIN PUMP FOR MW-19.

1341 MW-19 PUMPED DRY, WILL RETURN TO SAMPLE.

1400 E. HARKER AND M. WARREN RETURN TO UTV TO ORGANIZE ALL EQUIPMENT FOR TOMORROW

1700 TEAM DEPARTS FIELD,

12/4/18

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR K. CHERNOFF

0715 - BEGIN CALIBRATION

solution	Exp Lot #	Calibration
pH 7	see solutions	7.00 → 7.00
pH 4	on page 144	4.04 → 4.00
pH 10		9.94 → 10.00
0 NTU		24.5 → 0.0
126 NTU		120.8 → 126.0
~~1.413 mS/cm~~		REJECTED
~~240.0~~ 0.0 ~~126~~ NTU		1.1 → 0
126 NTU		118.3 → 126.0
~~1.413 mS/cm~~ DO%		102.1% → 101.0%
1.413 mS/cm		1.415 → 1.413
~~240~~ 0.0 mV		256.3 → 240.0

PID CALIBRATION SERIAL # 039947

ZERO ~~SP~~ CALIB = 0.0

SPAN CALIB = 100.0 ppm

0830 BEGIN LOW FLOW SETUP FOR MW-13

0838 - BEGIN PUMP FOR MW-12

~~0845~~ 0910 - ~~FROM~~ WELL RUN DRY

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER SAMPLING
WEATHER MID 30'S SUNNY
EQUIPMENT MINI RAE #
CALIBRATION → 100.0 ppm
TEAM. EVELYN HANLER, M. WARREN
0715 TEAM ARRIVES ONSITE
0730 TEAM HOLDS PTSP
0815 TEAM BEGINS GROUNDWATER SAMPLING

0820 MW-29-120518
0840 MW-26B-120518
0835 MW-26-120518
0855 MW-23-120518
0856 MW-23D-120518
0910 MW-23B-120518
0920 BOBBI COLEMAN FROM DHEC STOPPED TO ASK ABOUT GROUNDWATER LEVELS. M. WARREN REPLIED THAT I DO NOT KNOW CONSISTENT LEVELS
0935 MW-45B-120518
0940 MW-45-120518
1000 MW-46-120518
1030 MW-21-120518

Rite in the Rain

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1040 MW-17B-120518

1125 MW-44-120518

1135 MW-44B-120518

1150 MW-01-120518 Fe^{2+} 200 mg/L

1205 MW-01B-120518

1220 TEAM ~~DEPARTS~~ BREAKS FOR LUNCH

0920 BOBBI COLEMAN ASKED ABOUT SURFACE WATER LEVELS AND IF I KNEW WHY THEY WERE LOW AND IF I KNEW OF ANY OBSTRUCTIONS TO FLOW. I REPLIED THAT I HAVE NOT WALKED UPSTREAM OF SW03. I ALSO POINTED OUT HOW ACTIVE THE BEAVERS HAVE BEEN. (N)

0940 BOBBI COLEMAN DEPARTED FIELD

1220 TEAM BREAKS FOR LUNCH

1320 TEAM RETURNS FROM LUNCH

1400 MW-27B-120518

1405 MW-27-120518

1420 MW-12-120518 Fe^{2+} 0.0 mg/L

1430 MW-12B-120518

1445 MW-28-120518 Fe^{2+} = 2.25 (N)

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1505	MW-49-120518	
1506	MW-49-D-120518	
1525	MW-35-120518	$Fe^{2+}=0.0\frac{mg}{L}$
1540	MW-25-120518	$Fe^{2+}=0.0\frac{mg}{L}$
1545	MW-25B-120518	
1550	FB01-120518	
1555	TB01-120518	
1440	MW-22-120518	$Fe^{2+}=0.0\frac{mg}{L}$

NOTE: MW-22 COLLECTED BY JM AND KC VIA LOW FLOW AND IS RECORDED IN SECOND FIELD BOOK (2)

1630 MW-19-120518 $Fe^{2+}=0.0\frac{mg}{L}$

NOTE: MW-19 COLLECTED BY JM AND KC VIA LOW FLOW AN IS RECORDED IN SECOND FIELD BOOK (2)

1700: M. WARREN AND E. HARLEY DEPART FIELD. (2)

12/05/18

146

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR K. CHERNOFF

0905 - Bobbie from DHEC observes pumping

0932 - BEGIN SETUP FOR MW30

~~0933~~ 9:55 - BEGIN PUMP

10:33 - ~~Pump~~ WELL RUNS DRY WILL WAIT FOR RECHARGE BEFORE SAMPLE

11:24 BEGIN SETUP FOR 27B

1145 START PUMP

1150 WELL FOUND TO BE MULCH ~~DEEPER~~ LOW FLOW ABANDONED, WILL SAMPLE WITH HYDROSLEEVE DTW = 59.84 TD = 52.82

1343 - BEGIN ~~START~~ SETUP FOR MW-22

1355 - START PUMP FOR MW-22

1435 - FIELD PARAMETERS STABILIZE

1440 - BEGIN SAMPLING MW-22

1440	MW-22-120518	Ferrous = 0.0 mg/L
1630	MW-19-120518	Ferrous = 1.5 mg/L

1713 - CLEANED & COLLECTED TRASH DUMPED BUCKETS INTO COLLECTION BINS & LOCKED COMPOUND

12/5/18

8

Location BELTON, SC Date 12/06/18

Project / Client LEWIS DRIVE

AUTHOR M. WARREN

TASK: GROUNDWATER SAMPLING

WEATHER: MID 40's / SUNNY

TEAM: M. WARREN, E. HARKER, T. MORGAN, K. CHEELNUTT

EQUIPMENT: NONE

0830 TEAM ARRIVES ON SITE AND HOLDS PTSP. (M)

✓0940 MW-33T-120618

✓0955 MW-31-120618

✓1005 MW-47-120618

✓1020 MW-10-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

✓1035 MW-32-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

✓1050 MW-03-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

✓1115 MW-53-120618

✓1120 MW-54-120618

✓1140 MW-04-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

✓1150 MW-05-120618

1210 TEAM BREAKS FOR LUNCH

1310 TEAM RETURNS FROM LUNCH

✓1340 MW-42-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

✓1350 MW-41-120618

✓1351 MW-41-D-120618

✓1400 MW-40-120618 $Fe^{2+}=1.5\ \frac{mg}{L}$

✓1415 MW-39-120618 ✱2-VOC

✓1420 MW-34-120618 ⊕2-VOC

(M)

Location BELTON, SC Date 12/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1430	MW-15-120618	Fe^{2+} = 0.0 mg/L
1435	MW-15B-120618	2-VOC
1457	MW-13 DTW = 20.68	
1505	MW-24MBB-120618	2-VOC
1515	MW-24-120618	2-VOC
1520	MW-43-120618	2-VOC
1525	MW-43B-120618	2-VOC
1540	MW-37-120618	2 VOC
1545	MW-38-120618	2 VOC
1425	MW-36D-120618	
1325	MW-07-120618	
1040	MW-09B-120618	
1505	MW-13B-120618	
1415	MW-36-120618	
1515	MW-14B-120618	
1150	MW-06-120618	
1525	MW-14-120618	
1135	MW-06B-120618	
1545	MW-50B-120618	
1435	MW-36B-120618	
0945	MW-02B-120618	
1345	MW-16-120618	Fe^{2+} = 0.0 mg/L
1005	MW-02-120618	Fe^{2+} = 0.0 mg/L
1055	MW-09-120618	Fe^{2+} = 0.0 mg/L

10

Location BELTON, SC Date 12/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1400	FB01 - 120618
1405	TB01 - 120618
1406	TB02 - 120618
1555	MW - 48B - 120618
1610	MW-51 - 120618
1620	MW-52-120618

1630 TEAM COMPLETES SAMPLING FOR DAY AND BEGINS COC AND SHIPPING PREPARATION.

1700 TEAM DEPARTS FIELD.

12/06/18

Location BELTON, SOUTH CAROLINA Date 12/07/18

Project / Client LEWIS DRIVE

AUTHOR: KIRILL CHERNOFF

TASK: GROUNDWATER SAMPLING

WEATHER: MID 30'S / INTERMITTENT SHOWERS CLOUDY

08:30 TEAM ARRIVES

0921 MW-30-120718

0924 MW-30-D-120718

1004 MW-13-120718

1135 AW-528-120718

PURGED AW-528 3 minutes and recieved 1.5 gallons H_2O Full Flow, no purge necessary

11:40 : PURGE unnecessary AS WELL FLOWS 1 gallon / 3 seconds

1150 AW-8392017-120718

1205 - TEAM BREAKS FOR LUNCH

1305 - TEAM RETURNS,

RS 17 readjusted skimmer to 1.74ft

1335 RS-14 - readjusted to 2.9ft

Location BELTON, SC Date 12/07/18

Project / Client LEWIS DRIVE

AUTHOR: KIRILL CHERNOFF

1348 - RS-10 Readjusted to 7.59ft BGS SKIMMER

1355 - RS 05 READJUSTED SKIMMER TO 8.95 ft BGS

1411 RS 01 READJUSTED SKIMMER TO 7.85 ft BGS

1425 RS 02 READJUSTED SKIMMER TO 5.18 ft

1435 RS 15 READJUSTED SKIMMER TO 11.20 ft BGS

1445 READJUSTED SKIMMER RW03 TO 22.09 ft BGS

1450 READJUSTED SKIMMER RW02 TO 21.02 ft BGS

1455 READJUSTSKIMMER RW04 TO 27.52 ft BGS

15:10 READJUSTED SKIMMER RW07 TO 20.42 ft BGS

1920 READJUSTED SKIMMER RW-10 TO 12.52

Rite in the Rain

Location BELTON, SC Date 12/07/18

Project / Client LEWIS DRIVE

AUTHOR: KIRIN SHERROFF

1545 CLEANED RW-10 SCREEN FROM BLOCKAGE W/ SOFT BRISTLE PAINT BRUSH & GASOLINE

1610 TB01-120718

1615 FB01-120718

1620 TB02-120718

1630 TEAM BEGINS MATERIALS ORGANIZATION AND PACKS COOLERS FOR SHIPMENT.

1700 TEAM DEPARTS FIELD.

12/07/18

Location Date

Project / Client

Location Lewis Drive Date 12/12/2018

Project / Client PPL SMHOA

O&M / System Expansion Oversight

0820 (cont) Fence replacement near Calhoun Rd / Lewis Drive intersection.

1145 silt fence in Calhoun Rd area replace. A&D break for lunch

1215 resume work on Brown's Creek area. Begin plumbing in wellheads

- A&D glues up all wellhead fittings for brown's Creek area wells. Once glued they begin to set up welder / fuser to install the glued fittings and weld to HDPE lines. Find that ISCO (rental) did not send correct fittings for 3/4" pipe for the machine.
- Chris Hallmon makes several calls and finds ISCO shop in Spartanburg that may have the correct fittings.

1415 A&D depart site to Spartanburg, SC. Chris to let me know status once they get to the ISCO facility.

- I contact Lydia Ross to let her know

Rite in the Rain

Location Lewis Drive Date 12/12/18

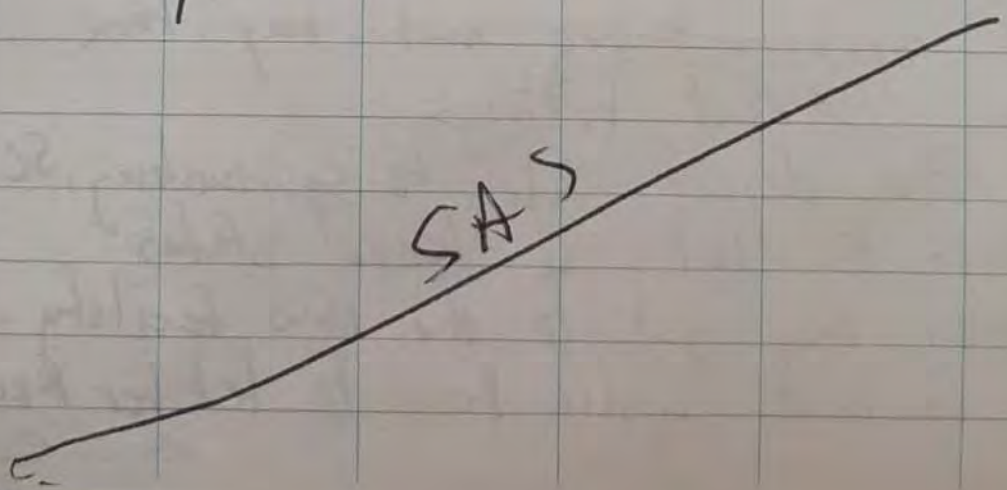
Project / Client PPL SWIDA

0am / System Expansion Oversight

1415 (cont) what the situation is.
- There is a chance that pairs will need to be over-lighted.
- Lydia Ross instructed to pair VAS wells 47 + 49 and 50 + 53 together to the 6 lines at Brown's Creek junction area.

VAS 47 - paired (49)
VAS 48 - single
VAS 49 - paired (47)
VAS 50 - paired (53)
VAS 51 - single
VAS 52 - single
VAS 53 - paired (50)
VAS 54 - single

1515 depart site.



Location Lewis Drive Date 12/13/2018

Project / Client PPL SMLOA

O&M/System Expansion

objective: Oversight System expansion activities

personnel: Scott Smith / Jacobs
Chris Hallman, Dresden Hallman / A&D

weather: high 55°F, mostly cloudy

0730 Arrive onsite. Complete PTSP/SWP and inspect site while waiting for A&D arrival.

- Found site looking ok. No issues to report.

0830 A&D onsite. Review today's scope, PTSP/SWP.

0845 ~~Re~~sume work plumbing well heads in Brown's Creek area after picking up missing parts for HDPE fusing equipment yesterday afternoon.

- While they get started Brown's creek, I begin identify lines in junction area and what parts of manifold they corresponded to.

1015 A&D approximately 1/2 done w/ well head connections.

1200 Well heads @ Brown's Creek all tied in. A&D Break for Lunch

Rite in the Rain

Location Lewis Drive Date 12/15/2010
Sunset

Project / Client PR

GWM / System Expansion

1300 A&D resume work @ Brown's Creek.

- Began by clearing out junction area w/ mini ex so well lines can be plumbed to spares
- Coupler fittings for damaged line repair aren't in, shipment was to be here on Tuesday. The line repair will be delayed until shipment arrives

1430 Once junction area cleared more, found that there were 8 spare lines, not 6 as originally thought, no need to pair wells. Wells connected in following order:

G7-1 → VAS 47
G7-2 → VAS 48
G7-3 → VAS 49
G7-4 → VAS 50
G7-5 → VAS 51
G7-6 → VAS 52
G7-7 → VAS 53
G7-8 → VAS 54

Location Lewis Drive Date 12/13/2018

Project / Client PPL SMIOA

O&M / System Expansion

1430 (Cont) HDPE welding begins -
- I place IDS on manifold for G7 and on individual trunk lines.

1632 Begin pressure Test for Group 7 wells. Set each to 50 psi, will check for 10 minutes <

- ADED 50 psi to each well, well head valve closed, once 50 psi reached, turned off pressure regulator, back to 0 psi and closed discharge valve on each trunk line.

1642 pressure Test passes, no issues. AED begin cleanup for the night

1700 AED off site. I open all well head valves VAS 47-54 and all open and ready to go.

1745 depart site

SAS

TUESDAY

Location BELTON, SC Date 1/22/19

Project / Client LEWIS DRIVE

· AUTHOR: MIWARREN

TASK: PRODUCT RECOVERY / GAUGING

WEATHER: MID 20'S SUNNY

0830 TEAM ARRIVES ON SITE AND HOLDS PTSP.

0840 BEGIN MINIRAE 2000 CALIBRATION

MINI RAE SN: 10421

ISO LOT #: BB1-248-100-10

CALIBRATION → 101 PPM

0845 TEAM GEARS UP FOR PRODUCT RECOVERY GAUGING

0945 BEGIN GAUGING

1151 TEAM BREAKS FOR LUNCH

1250 TEAM RETURNS FROM LUNCH

1254	MW-29	DTW = 1.39
1257	MW-~~24~~ 19	DTW = 6.36
1304	TW-67	DTW = 4.77
1300	TW-73	DTW = 3.45
1305	MW-12	DTW = 10.86
1312	MW-12B	DTW = 10.12
1348	MW-15B	DTW = 13.66
1331	MW-25	DTW = 6.42
1333	MW-25B	DTW = 3.16
1320	MW-28	DTW = 17.92
1327	MW-35	DTW = 6.52

Rite in the Rain

16

Location BELTON, SC Date 1/22/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1345	MW-39	DTW = 4.27
1356	MW-41	DTW = 3.60
1323	TW-59	DTW = 9.16
1342	TW-60	DTW = 0.0
1338	TW-66	DTW = 0.0
1630	BAIL MW-08 FOR PRODUCT. NO PRODUCT OBSERVED. NO ODOR, NO RESIDUE	
1642	BAIL MW-18 FOR PRODUCT NO PRODUCT OBSERVED. ODOR, NO RESIDUE	
1745	TEAM DEPARTS FIELD	

1/22/19

Location BELTON, SC Date 1/23/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: PRODUCT RECOVERY / GAUGING
SURFACE WATER SAMPLING

WEATHER: LOW 30's / CLOUDY

0850 TEAM ARRIVES ON SITE AND HOLDS PTSP.

0852 BEGIN MINIRAE CALIBRATION
SEE PAGE 15 FOR LOT # AND MINIRAE ID.
CALIBRATION => 100 PPM

0910 BEGIN GAUGING

0940 TEAM COMPLETES GAUGING AND RETURNS TO COMPOUND TO BEGIN PRODUCT RECOVERY

0950 BEGIN PRODUCT RECOVERY

1110 RAIN BEGINS, TEAM BREAKS FOR LUNCH

1210 TEAM RETURNS FROM LUNCH AND RESUMES PRODUCT RECOVERY

1330 SW12 - 012318

1335 TB01 - 012318

1400 REPLACE LINE AND CAP ON RW-03, REPLACE CAP ON RW-01, REPLACE CAP ON RBS-20

Rite in the Rain

18

Location BELTON, SC Date 1/23/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1415 TEAM RETURNS TO COMPOUND TO BEGIN COC AND INVENTORY

1445 TEAM DEPARTS FIELD TO SHIP SAMPLES.

1/23/18

MONDAY

Location BELTON, SC Date 2/18/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER GAUGING AND PRODUCT RECOVERY

WEATHER: MID 40'S, RAINY, CLOUDY, HUMID

0850 TEAM (M. WARREN/EFL, K. CHERNOFF ENV SCI, A. DENNIS GEO) ARRIVE ON SITE AND HOLD PTSP

EQUIPMENT: SOLINST: 033622
MINIRAE # 18124
LOT # GBI-248-100-18 EXP: 6/21/22

0855 BEGIN MINICALIBRATION → 100.0ppm

0910 BEGIN GAUGING

TIME	WELL	PID	DTP	DTW	
0943	MW-29	0.0	—	2.37	
0946	TW-73	0.0	—	3.72	
0949	MW-19	170.8	—	6.09	
0952	RW-11	1800.0	—	10.4	
0955	RW-12	457.0	—	8.60	new cap sock 7.74
10:00	RS-08	5.90	~~—~~ kg	~~0.740~~ kg	0.740
10:04	MW-20	47.5	—	6.39	
10:12	RS-07	6002.0	—	8.72	
1016	RT-1A	62.3	—	7.12	sock 0.690
1018	RT-1B	75.2	—	7.14	sock 0.680
1020	RT-1C	3.0	—	7.72	sock 0.635
1022	TW-67	0.4	—	6.54	

Rite in the Rain

Location BELTON, SC Date 2/18/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / K. CHERNOFF

TIME	WELL	PID	DTP	DTW
1029	MW-26	0.0	—	1.21
1032	MW-23	0.0	—	4.24
1035	MW-46	1.9	—	3.83
1037	SW-05	—	—	0.39
1040	MW-17B	260.9	—	8.80
1045	RW-01	1432.0	—	8.31
1049	MW-1	133.3	—	24.23
1052	RW-06	11.2	—	22.06
1053	RW-08	145.0	—	12.44
1057	RW-09	18.2	—	9.91
1059	MW-12	0.2	—	10.99
1100	MW-12B	1.7	—	10.68
1101	TW-59	10.5	—	10.26
1108	MW-28	0.0	—	18.21
1111	MW-35	0.0	—	6.82
1113	MW-25	0.0	—	6.33
1114	MW-25B	0.0	—	3.04
1116	MW-41	0.0	—	3.58
1117	TW-66	0.0	—	0.0
1118	TW-60	~~0.2~~ 0.6	—	~~0.0~~ 5.8 KL
1314	RT-2A	~~13.2~~ KL	—	0.42
1315	RT-2B	9.1	—	0.54
1125	RT-2C	13.2	—	1.14

Location BELTON, SC Date 2/18/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / K. CHERNOFF

TIME	WELL	PID	DTP	DTW	
1127	RT-2D	20.7	—	1.18	
1128	RT-2E	0.0	—	1.28	
1129	RT-2F	0.0	—	1.66	
1129	RT-2G	0.0	—	0.63	
1130	RT-21	0.0	—	0.87	
1131	RT-25	54.6	—	0.33	
1132	RT-2K	0.6	—	0.44	SOLK 0.500
1133	RT-2L	53.6	—	1.02	
	SW12	PHOTO TAKEN			
1137	MW-40	0.0	—	2.21	
1139	RW-14	0.7	—	9.18	
1142	MW-39	0.00	—	4.42	
1144	MW-34	0.0	—	2.83	
1145	MW-15	22.2	—	13.90	
1146	MW-15B	0.8	*Baylor	8.81	
1151	MW-38	1.8	—	1.27	
1153	MW-37	0.0	—	3.08	
1300	SW-02	~~0.0~~ KL		1.80	
1305	SW-01			DRY	
	SW-13			—	
1329	RS-20	0.0	—	2.09	
1337	MW-07	54.4	—	6.15	
1344	RS-04	13.4	—	3.24	
1135	SW-03	—	—	0. Rain in the Rain	

Location BELTON, SC Date 2/18/19

Project / Client LEWIS DRIVE

AUTHOR: K. CHERNOFF, M. WARREN

TIME	WELL	PID	DTP	DTW	PRODUCT RECOVERED
1345	RS-06	82.8	—	3.84	
1349	MW-16	335.7	—	3.12	HEAVY SPARGE
1403	RS-11	6.8	—	2.67	
1404	RS-17 KC	7.2	—	2.89	
1406	RS-09	10.7	—	3.19	
1408	RS-18	11.1	—	3.19	
1410	~~MW-15~~	~~1946.0~~ KC 2128.0 BAYLOR		13.83	
1420	MW-08	10.9	—	7.84	
1428	RS-13	4.5	—	0.79	
1431	RS-15	125.2	—	1.0	
1434	RS-16	4.0	—	1.48	
1446	~~MW36~~	2.7	—	11.97	
1455	RS-17	1264.0	—	1.27	ALL H_2O
1504	RS-14	532.0	—	0.99	0.05 OZ
1511	RS-10	58.1	—	2.91	ALL H_2O
1520	RW-10	187.1	—	5.91	~~0.05~~ KC ALL H_2O
1527	RS-05	2000.0	4.06	4.08	0.05
1535	RS-01	458.8	3.83	~~3.84~~ KC 3.84	0.1
1541	RS-02	13.0	2.78	2.79	0.01
1547	RW-15	1024.0	—	~~6.58~~ KC 6.52	ALL WATER
1602	RW-02	3567	19.22	19.44	0.20 OZ
1614	RW-~~03~~ 02 KC	936.9	18.74	18.75	ALL H_2O
1620	RW-04	1612.0	24.11	24.43	ALL H_2O

Location BELTON, SC Date 2/18/19

Project / Client LEWIS DRIVE

AUTHOR: K. CHERNOFF, M. WARREN

TIME	WELL	PID	DTP	DTW	Product Removed
1630	RW-05	1412	~~28.34~~ + BAYLOR	27.79	0.01 oz
1649	RW-07	528.1	—	19.02	ALL H_2O
1715	BAIL MW-15B FOR PRODUCT, NO PRODUCT				
1725	BAIL RW-07 FOR PRODUCT, NO PRODUCT				
	RW-07	☆ PRODUCT ODOR			
1735	BAIL MW-18 FOR PRODUCT,				
	PRODUCT PRESENT 0.20 mm				
1800	TEAM DEPARTS FIELD.				

2/18/19

Location BELTON, SC Date 02/19/19

Project / Client LEWIS DRIVE

AUTHOR: K. CHERNOFF / M. WARREN

TASK GROUNDWATER AND SURFACE WATER SAMPLING

WEATHER LOW 40'S, RAINY, CLOUDY

TEAM M. WARREN, K. CHERNOFF, A. DENNIS

EQUIPMENT: SOLINST 033622

YSI

MINIRAE 18124

FILM

0840	MW-20-021919
0910	MW-07-021919
0925	MW-15B-021919
0935	MW-37-021919
0940	MW-38-021919
0955	MW-39-021919
0855	MW-26-021919
1000	MW-41-021919
1020	MW-36-021919
1015	~~SW05 021919~~

~~FILM~~ AT TOP

HEAVY IRON FLOCK

0740 TEAM ARRIVES ON SITE AND HOLDS PTSP. TEAM GEARS UP FOR GROUNDWATER SAMPLING

0800 BEGIN YSI CALIBRATION

Location BELTON, SC Date 02/19/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0800	SOLUTION LOT #	EXP	BEFORE	AFTER
	pH4			
	pH7			
	pH10			
	ONTU			
	126NTU			
	1.413 µS/cm			
	ORP			
	DO			
1140	TEAM RETURNS FROM LUNCH			
1040	TEAM BREAKS FOR LUNCH			
~~1140~~	MW-17B-021919			
1351	MW-17B-D-021919			
1425	SW14-021919			
1410	SW05-021919			
1320	SW02-021919			
1325	SW04-021919			
1335	SW13-021919			
1345	SW01-021919			
1350	SW12-021919			
1535	FB01-021919			
1550	TB01-021919			SURFACE WATER
1555	TB02-021919			GROUNDWATER
1630	TEAM DEPARTS FIELD 02/19/19			

Rite in the Rain

Location BELTON, SC Date 02/20/19

Project / Client LEWIS DRIVE

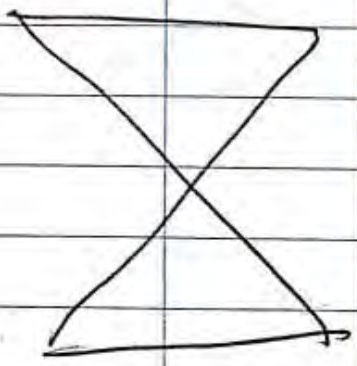
AUTHOR: M. WARREN

TASK GROUNDWATER SAMPLING / GENERAL MAINTENANCE

WEATHER MID 30'S, RAINY, CLOUDY

TEAM A. DENNIS, M. WARREN, K. CHENNOFF

EQUIPMENT SOLINST
MINIRAE
TYPHOON
CONTROLER
YSI HANDHELD
YSI PROBE
GENERATOR



0730 TEAM ARRIVES ON SITE AND HOLDS TSP, TEAM GEARS UP TO COLLECT GROUNDWATER SAMPLES.

0740 TEAM BEGINS CALIBRATION ~~PH~~ SEE PAGE 25 FOR CALIBRATION SOLUTION AND LOT # EXPIRATION.

Location BELTON, SC Date 02/20/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARNER

CALIBRATION:

SOLUTION	BEFORE	AFTER
PH4	3.92	4.00
PH7	6.92	7.00
PH10	10	10
ONTU	0	0
126NTU	120.4	126.0
1.413	1,327	1.413
ORP	245.2	240.0
DO	99.1	100.1

0830 TEAM BEGINS TYPHOON PUMP SETUP FOR MW-23

0900 START PUMP AT MW-23

0915 MW-23-022019

0916 MW-23-D-022019

0945 TEAM BEGINS SETUP FOR MW-46

0955 BEGIN PUMP AT MW-46

1005 MW-46-022019

1200 TEAM BREAKS FOR LUNCH

1200 TEAM PICKS UP GRAVEL

1230 TEAM MOVES TO MW-34 TO SET UP TYPHOON PUMP

1400 ~~1315~~ MW-34-022019

1410 MW-40-022019

Rite in the Rain

28

Location BELTON, SC Date 02/20/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1435 FBO1-022019

1440 TBO1-022019

1445 TEAM BEGINS SPREADING GRAVEL ALONG DAYLIGHTING AREAS NEAR VAS-18. TEAM ORGANIZES MATERIALS.

1600 TEAM DEPARTS FIELD.

02/20/19

Location BELTON, SC Date MONDAY 03/04/19 29

Project / Client LEWIS DRIVE

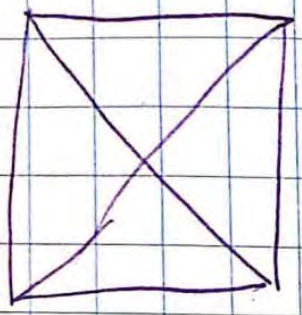
AUTHOR: M. WARREN

TASK GROUNDWATER AND SURFACE WATER GAUGING.

WEATHER MID 40'S, CLOUDY, HUMID

TEAM M. WARREN (FTL), J. MORGAN (SSC), A. DENNIS (GEO), T. HALL

EQUIPMENT: SOLINST (A) 42848



SOLINST (B) 13228

~~YSI~~ MINIRAE 037723

MINIRAE 19891

ISO LOT # GBI-248-100-18

EXP: JUNE 2018

0900 TEAM ARRIVES ON SITE AND HOLDS PTSP.

EQUIPMENT: ODO: #7275

ODO: #7228

1150 TEAM BREAKS FOR LUNCH

1240 TEAM RETURNS FROM LUNCH.

1508 SW-03 WAS DRY. NO DO MEASUREMENT COULD BE TAKEN.

1611 SW-12 WAS DRY. NO DO MEASUREMENT COULD BE TAKEN

1438 SW-01 WAS DRY.

1730 TEAM BAILED MW-08, MW-18 AND MW-12

Rite in the Rain

30

Location BELTON, SC Date 03/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

FOR THE PRESENCE OF PRODUCT. NO PRODUCT WAS ~~DETECTED~~ OBSERVED FOR MW-12 OR MW-08. MW-18 HAD A SMALL AMOUND OF SHEEN (LESS THAN 1.0 MM WITHIN A 1 INCH BAILER).

1800 TEAM DEPARTS FIELD.

03/04/19

Location BELTON, SC Date 03/04/19 31

Project / Client LEWIS DRIVE

AUTHOR: MELISSA WARREN

TASK: GROUND WATER GAUGING AND PRODUCT RECOVERY

WEATHER: MID 30'S / CLOUDY / HUMID

TEAM: SEE PAGE 29.

EQUIPMENT: SEE PAGE 29.

0700 TEAM ARRIVES ON SITE AND HOLDS PTSP.

0735 TEAM BEGINS PRODUCT RECOVERY

1100 TEAM BREAKS FOR LUNCH

1150 TEAM PICKS UP GRAVEL TO SPREAD IN DAYLIGHTING AREAS

1220 TEAM RETURNS TO FIELD AND SPREADS GRAVEL ON DAYLIGHTING AREAS

✓1250 MW-29-030519

✓1300 MW-19-030519 $Fe^{2+} = 0.25 \frac{mg}{L}$

✓1320 MW-20-030519 $Fe^{2+} = 1.5 \frac{mg}{L}$

✓1335 MW-26B-030519

✓1340 MW-26-030519

✓1355 MW-23-030519

✓1400 MW-23B-030519

✓1356 MW-23-D-030519

✓1415 ~~MW-45-030519~~ MW-45-030519

✓1420 MW-45B-030519

Rite in the Rain.

Location BELTON, SC Date 03/05/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

✓1435	MW-46-030519
✓1445	MW-21-030519
✓1500	MW-17-030519
✓1505	MW-17B-030519
✓1520	MW-22-030519
✓1540	MW-44-030519
✓1550	MW-44B-030519
✓1600	MW-01-030519
✓1630	MW-01B-030519
✓1620	MW-27-030519
✓1621	MW-27-D-030519
✓1610	MW-27B-030519
✓1605	FB01-030519
✓1615	TB01-030519
1700	TEAM DEPARTS FIELD

$Fe^{2+} = 0.0 \frac{mg}{L}$

$Fe^{2+} = 0.25 \frac{mg}{L}$

03/05/19

Location BELTON, SC Date 03/06/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER SAMPLING AND SURFACE WATER SAMPLING

WEATHER LOW 30'S / SUNNY / HUMO

TEAM SEE PAGE 29

EQUIPMENT SEE PAGE 29

0900 TEAM ARRIVES ON SITE AND HOLDS PTSP. (2)

✓0950	MW-11-030619	$Fe^{2+} = 0.0$ mg/L
✓1055	MW-12-030619	$Fe^{2+} = 0.0$ mg/L
✓1105	MW-12B-030619	
✓1020	MW-28-030619	$Fe^{2+} = 0.5$ mg/L
✓1035	MW-49-030619	
✓1030	MW-35-030619	$Fe^{2+} = 0.25$ mg/L
✓1040	MW-25B-030619	
✓1041	MW-25B-D-030619	
✓1055	MW-25-030619	$Fe^{2+} = 0.0$ mg/L
✓1110	MW-42-030619	$Fe^{2+} = 0.0$ mg/L
✓1120	MW-41-030619	
✓1135	MW-40-030619	$Fe^{2+} = 0.0$ mg/L
✓1140	MW-15-030619	$Fe^{2+} = 0.0$ mg/L
✓1345	MW-39-030619	
✓1325	MW-31-030619	
✓1355	MW-15B-030619	
✓1356	MW-15B-D-030619	

Rite in the Rain

Location BELTON, SC Date 03/06/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1420	MW-24-030619 ✓
1410	MW-24B-030619 ✓
1440	MW-43-030619 ✓
1430	MW-43B-030619 ✓
1450	MW-38-030619 ✓
1445	MW-37-030619 ✓ ☆
1500	MW-5I-030619 ✓
1510	MW-52-030619 ✓
1515	MW-14-030619 ✓
1520	MW-14B-030619 ✓
1525	MW-13-030619 ✓
1530	MW-13B-030619 ✓
1557	FB01-030619 ✓
1558	TB01-030619 ✓
1620	MW-50B-030619 ✓
1630	MW-48B-030619 ✓
1610	MW-33T-030619 ✓
1600	MW-31-030619 ✓
1555	MW-47-030619 ✓

1320 A. DENNIS AND M. WARREN BEGIN MARKING SURFACE WATER LOCATION PATHWAY. TEAM HEARD GUNSHOTS IN THE DISTANCE AND THEN

Location BELTON, SC Date 03/06/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1320 CONT TURNED AROUND AND LEFT THE AREA.

03/06/19

Location BELTON, SC Date 03/07/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / T. HALL

TASK: GROUNDWATER AND SURFACE WATER SAMPLING / FLAG PROPOSED WELLS

WEATHER: MID 40's / SUNNY

TEAM: SEE PAGE 29 ——— (2)

EQUIPMENT: SEE PAGE 29 ——— (2)

0800 TEAM ARRIVE ON SITE AND HOLDS PTSP

0850 MOBE TO HAY FIELD TO BEGIN GW SAMPLING

0900	MW-03-030719	VOC, MNA
0925	MW-30-030719	VOC
0935	MW-54-030719	VOC
0945	MW-53-030719	VOC ✓
1000	MW-04-030719	VOC, MNA ✓
1020	MW-05-030719	VOC ✓
1040	MW-02B-030719	VOC ✓
1100	MW-09B-030719	VOC ✓
1145	MW-09-030719	VOC, MNA
1130	MW-02-030719	VOC, MNA ✓

1145 CREW TO LUNCH

1250 CREW RETURNS FROM LUNCH

1310	MW-06-030719	VOC ✓
1315	MW-06B-030719	VOC ✓
1320	MW-07-030719	VOC ✓

Location BELTON, SC Date 03/07/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / T. HALL

1321	MW-07-D-030719	VOC
1335	MW-16-030719	MNA, VOC
1350	MW-18-030719	VOC, MNA
1405	MW-08-030719	VOC, MNA
1420	MW-10-030719	VOC, MNA
1440	MW-32-030719	VOC, MNA
0930	SW-11-030719	
0940	SW10-030719	
0945	SW09-030719	
0955	SW08-030719	
1005	SW13-030719	
1015	SW04-030719	
1020	SW02-030719	
1021	SW01 WAS DRY IN THE DESIGNATED SAMPLING AREA.	
1030	SW07-030719	
1031	SW12 WAS DRY IN THE DESIGNATED SAMPLING AREA	
1035	SW03 WAS DRY IN THE DESIGNATED SAMPLING AREA	
1040	SW14-030719	
1055	SW05-030719	
1515	MW36-030719	VOC
1520	MW-36B-030719	VOC

Rite in the Rain

Location BELTON, SC Date 03/07/19

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / T. HALL

1521	MW-36B-D-030719	VOC
1545	FB01-030719	
1550	TB01-030719	
1700	TEAM DEPARTS FIELD	

Location BELTON, SC Date 3/12/19

Project Client LEWIS DRIVE/PDL

STAFF. K.TAYLOR (TPA) / AE DRILLING

OBJECTIVE: DRILLING MW's.

WEATHER: CLOUDY / 39° - AM

SUNNY / 65° - PM

DAILY:

0610 - K.TAYLOR OBTAINING FIELD SUPPLIES

0710 - K.TAYLOR ONSITE - LOADING EQUIPMENT

0735 - AE DRILLING ONSITE.

0740 - HSE MEETING - SLIPS/TRIPS/FALLS, WEATHER, VEGETATION.

0755 - AE LOADING UP DRILLING / WELL SUPPLIES.

0810 - MOB TO SITE FROM STOCKYARD

0820 - AE H.A.

CALIBRATE MULTIRAE 6228 - (CLEAN GAS LOT CBJ-413-18-1 EXP: 02/2021

H2S - PASS CO - PASS

VOC - PASS OXY - FAIL

LEL - PASS

0825 H_2S - PASS CO - PASS

VOC - PASS OXY - PASS

LEL - PASS

0830 - VOC SPAN - 100PPM ISOBUTYLENE

LOT 6BI-248-100-18 EXP: 06/2022

✓ PASS

0956- H.A. TO 5.0 FT. BLS @ MW-57
HAD TO MOVE 10' BECAUSE OF BRANCH
0930- DRILL TO 15.0 FT. BLS. CALL W/ T. VOLEY. WILL DECON H.A. & COLLECT SS.
0956- TRIPPING OUT PDT
1010- COLLECT MW57-0.3-0.8-031215
MW57-0.3-0.8-031215-DUP
1015- AE- GATHERING HOLLOW STEM WELL SUPPLIES
1042- DECONTAMINATING TO 13.5 FT FOR HOLLOW STEM WELL INSTALL
1100- DRILLED TO 14.0' BLS
1105- WELL SITTING @ 13.5 FT. BLS - BEGIN TO FILL AUGER W/ WATER
1135- 5 BAGS SAND TO 3.0 FT. BLS; 1/4 BAG OF BENTONITE SEAL TO 2.0 FT. BLS
1143- TRIPPED OUT HOLLOW STEMS.
1248- BACK FROM LUNCH
1306- CLEARING FOR MW-56
1408- MOVING SUPPLIES TO MW-56
1429- H.A. TO WET REFUSAL @ MW-56 - 2.0 FT. BLS. WL = 0.1'
1433- DRILL TO 15.0 FT. BLS
1456- DRILLED TO 15.0 FT. BLS - ~~DRY~~ NO VADOSE ZONE SAMPLE COLLECTED DUE TO COMPLETELY SATURATED CONDITIONS.

Location BELTON, SC Date 3/12/19

Project / Client LEWIS ONSLOW/PPL

1528- HOLLOW STEM AUGER TO 14.0 FT & SET WELL.

1533 - @ 14.0' FT.; SETTING WELL.

1540- WELL SITTING AT 13.8 FT. BLS - ADDING SILICA SAND

1602- 4.5 BAGS SILICA SAND

1618- 0.25 BAG OF 3/8-INCH BENTONITE SEAL

1633- SITE CLEANUP

1709- AE PULLING OFFSITE

1941- K. TAYLOR OFFSITE

3/12/19

Location BELTON, SC Date 3/13/19

Project / Client LEWIS DRIVE/PPL

STAFF: K.TAYLOR (TPA) / AE DRILLING

OBJECTIVE: GROUT/SERVICE COMPLETION MW-57 & 56, TRY TO GAIN ACCESS TO MW-55 TO DRILL.

WEATHER: AM- OVERCAST / 42°
PM- OVERCAST / 67°

DAILY:

0645- ATTEMP TO SCAN PREV. DAYS PAPERWORK VIA OFFSITE.

0750- K-TAYLOR ONSITE.

0817- AE DRILLING ONSITE

0820- AE- DRILLING DECONNING HOLLOW STEM AUGERS

0840- H&S MEETING - COYOTE SIGHTING, WEATHER, UNEVEN TERRAIN

0902- LOADING UP SERVICE COMPLETION SUPPLIES.

0916- @ MW-57 - PREPPING FORM.

0924- WL @ MW-57: 1.2 FT. BLS; SEAL @ 2.0 FT. BLS - SETTING CASING.

0937- (3/4) 80 LB BAG OF HIGH STRENGTH SAKRETE CONCRETE MIX USED TO CEMENT WELL & CASING TO LAND SURFACE.

1010- 4 BOLLARDS INSTALLED TO 32" ALS. BOLLARDS ARE 5 FEET LONG.

Location BELTON, SC Date 3/13/19

Project / Client LEWIS DRIVE/PIL

0900 CONT.- GPM ONSITE - MOBILIZING EROSION CONTROL

0948 - SETTING UP ON MW-56, WILL SETUP CASING & BOLLARDS THEN DO BOTH PASS AT MW-56&57 TOGETHER.

1111 - CASING GROUTED TO L.S. - (3/4) - 80LB SAKRETE BAG. SAND FILLED ON INSIDE

1113 - GOING TO GET BOLLARDS

1136 - BOLLARDS SET TO 36" AGS - GROUTING THEM IN

1150 - LUNCH

1230 - STATUS UPDATE W/ T. WILEY - APPROVAL TO GET ONSITE @ MR. ODELLS PROPERTY

1258 - BACK FROM LUNCH

1303 - AE DRILLING MOBILIZING TO MW-55. GPM INC IS INSTALLING ENVIRO-BARRIERS AROUND MW-57 CURRENTLY.

1350 - AE OFFLOADING DRILL BACK

1402 - FRESH AIR GAS CALIBRATION ON MINIRAE 6228 - EVERYTHING MINUS OXY PASSED; RERUN

1405 - RERUN FRESH GAS CAL - LOT: CBJ-413-18-1 EXP: 02/2021

OXY: PASS LEL: PASS

H2S: PASS CO: PASS

VOC: PASS

1408 - 100.0 PPM - ISOBUTYLENE/VOC SPAN

LOT: GBI-248-100-18 EXP. 06/2022

84.6 PPM - SAYS PASSED - RERUNNING

Location BELTON, SC Date 3/13/19

Project / Client LEWIS DRIVE / PRL

1410 - VOL/ISOBUTYLENE SPAN CAL REMN.
85.4 PPM - PASSED

1413 - GEOPROBE - THROUGH MONCOE TO MW-55 LOCATION

1427 - GEOPROBE SETUP ON MW-55 LOCATION

1435 - H.A. TO 5.0 FT. BLS.

1451 - BEGIN PURGING MW-55

1540 - PULLING CASING TO GET ?

1614 - WL ? STABILIZED @ 12.1 FT. BLS.

1617 - SAMPLED MW-55-1112-031319

1624 - LEAVE SITE.

1710 - RE PURGING & K. TAYLOR OFFSITE

03/18/19

Location BELTON, SC Date 03/14/19

Project Client LEWIS DRIVE/PPL

STAFF: K.TAYLOR & AE DRILLING

OBJECTIVE: INSTALL MW-55; WELL DEVELOPMENT.

WEATHER: AM - 46°/SUNNY
PM - OVERCAST/75°

DAILY:

0750 - K.TAYLOR ONSITE

0815 - AE DRILLING ON SITE H&S MEETING - RAIN

0821 - AE DRILLING @ MW-55 - GOING TO GET SKID STEER BUCKET & COMPLETE WELL PADS ON MW 56-57.

0837 - MW-55 SWL: 11.8 FT. BLS.

0842 - BEGIN DRILLING HOLLOW STEM TO 25.5 FT. BLS

0850 - CALIBRATING EXO YSI # 36635

SPC	1.413 mS/cm	0.018	1.413	A86J1041	10/19
DO	101.3	99.3%	100.0%	N/A	
0 NTU	0.00	-0.75	0.00	18397435	11/19
124 NTU	124.0	120.00	124.00	18H1830HR	08/19
PH 7.0	7.03	7.06		2808E52	08/20
PH 4.0	4.00	3.88		2809F08	09/20
PH 10.0	10.09	10.06		2904E50	03/20
ORP 240.0	239.7	239.8	134.8	96A567	08/19

@ RECAL SPC - 1.826 - CALIBRATED TO 1.413 @ 19.2°C

0902 - SETTING PVC WELL TO 25 FEET BLS - 15 FT SCREEN

0920 - FEEDING #1 SILICA SAND PACK - MATERIAL IS TRYING TO BRIDGE - FLUSHING SAND DOWN W/ FRESH WATER

Location: BELTON, SC   Date: 03/14/19

Project / Client: LEWIS DRIVE / PPL

0949 – SAND PACK TO 7.9 FT. BLS – 7 3/4 BAGS

0953 – 3/8 - BENTONITE CHIPS TO 5.3 FT. BLS

HYDRATE FOR ONE HOUR

0.4 CU. YD OF SOIL CUTTINGS.

1047 – 1 BAG 47LB PORTLAND CEMENT MIXED W/3 GALLONS OF FRESH WATER

1050 – 2ND BAG " "

~~CEMENT~~ (JET) GROUT AT 10" BELOW SURFACE

1118 – MIXING 2 BAGS OF 80LB HIGH STRENGTH CEMENT MIX FOR PAD

1209 – MW-55 PAD COMPLETE

1228 – MOB. EQUIPMENT TO DECON.

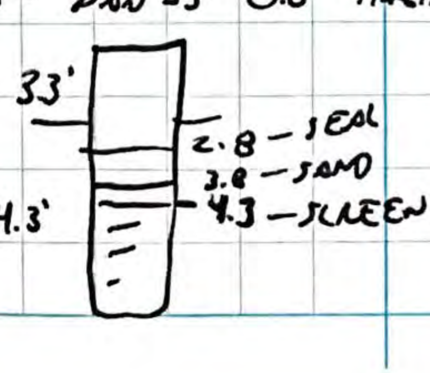
1250 – LUNCH

1335 – LOADING UP RIG – DUMPING CUTTINGS INTO ROLLOFF ~ 0.75 CU. YD TOTAL FROM 3 WELLS.

K.TAYLOR GETS DRUMS FOR DEVELOPMENT.

1352 – MW-56 – K.TAYLOR SETS UP EQUIPMENT.

1415 – PADS FOR MW-56 & 57 WERE BUILT ON TOP OF LANDSURFACE DUE TO WATER. TD OF MW-56 IS 14.3 – PAD IS 0.5' HIGHER THAN LS.



TD: 17.6'

Location BELOIT, IL Date 3/14/19

Project / Client LEWIS DRIVE/PPL

1440- PUMP ON @ MW-56

1443- WELL RUN DRY - PUMP OFF

1454- PUMP BACK ON

1549- DEVELOPMENT OF MW-56 COMPLETE - PURGED 41.3 GALLONS

1552- SETTING UP @ MW-57.

1609- PUMP ON - WIDE OPEN

1611- TURN DOWN FLOW RATE; TURBIDITY VISIBLY CLEANER.

SEE DEVELOPMENT LOG

1705- 58 GALLON PURGED - DEVELOPMENT COMPLETE

1709- SITE CLEANUP

1745- AE DRILLING OFFSITE

1800- K. TAYLOR OFFSITE

3/14/19

Location BELTON, SC Date 3/15/19

Project / Client LEWIS OLIVE / PPL

STAFF: K.TAYLOR / AE DRILLING

OBJECTIVE: WELL DEVELOPMENT / SITE CLEANUP.

WEATHER: AM- 62°/OVERCAST- RAINED EARLY MORNING PM.

DAILY:

0755- K.TAYLOR / AE DRILLING ONSITE.

0810- H+S MEETING- SLIPS/TRIPS/FALLS, FALLING BRANCHES, COMPLACENCY

0825- PUMPING (2) 55 GAL DRUMS WORTH OF YESTERDAYS DEVELOPMENT WATER INTO HOLDING TANKS. ONE IS ALREADY FULL- OTHER IS AT 500 GALLONS FULL.

0847- AT MW-55 SETTING UP.

0850- SWL: 11.65' T.O.C. TD: 25.0' T.O.C.

0906- CALIBRATE YSI EXO # 36635

PARA.	PRE	SET	POST	LOT	EXP	NOTES
SPC	0.806	1.413	0.956	86J1041	10/19	0.956 CLOSE
D.O.	98.6	100.6	100.6	N/A	N/A	✓
ONTU	0.01	0.00	0.00	18397435	11/19	
124NTU	118.90	124.00	124.00	18H1830375Z	08/19	
PH7	7.10	7.02	7.02	2808E52	08/20	
PH4	4.03	4.00	4.00	2809F08	09/20	
PH10	9.87	10.04	10.03	2809E30	03/20	
ORP	235.2	236.1	236.0	96A567	08/19	

138

Location BELTON, SC Date 3/15/19

Project / Client LEWIS DRIVE/PPL

0930- BEGIN WELL DEVELOPMENT @ MW-55
SEE LOG

1102- DEVELOPMENT COMPLETE- HAD TO STOP AFTER FILLING UP TWO FULL 55 GALLON DRUMS

1105- SITE CLEANUP

1118- PUMPING 195 GALLONS FROM DRUMS INTO HOLDING TANK

1132- DEMOBING

1209- LT. RAIN
AE-DRILLING BRINGING OUT WELL LOCKS OVER THE WEEKEND.

1230 - AE DRILLING & K.TAYLOR OFFSITE.

03/15/19

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** 50's-60's SUNNY; HUMID

PN: 699858.LD.MR.GW

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

Technicians: M.WARREN, K.SEXTON, J.MORGAN, D.CROSTICK **Date:** 04/05/18

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.)
Brown's Creek Protection Zone							
MW-12	1637	324	—	11.46	~~21.49~~	7.93	has TROLL TD = 21.03
MW-12B	1642	5.8	—	12.28	~~45.31~~	1.94	TD = 44.31
MW-15	1535	7.9	—	10.88	19.18	PRODUCT IN SKIMMER	has TROLL SKIMMER; PRODUCT IN SKIMMER; SOUNDER DID NOT DETECT PRODUCT
MW-15B	1524	1.0	—	14.62	~~72.50~~	1.17	TD = 80.90
MW-25	1658	0.0	—	7.46	~~17.94~~	5.07	has TROLL TD = 18.08
MW-25B	1653	0.0	—	4.06	~~56.50~~	1.60	TD = 53.13
MW-28	1645	4.9	—	20.68	26.08	0.9	
MW-34	1635	6.3	—	2.25	7.82	--	
MW-35	1654	0.9	—	8.39	~~26.28~~	--	TD = 28.26
MW-38	1592	0.2	—	1.50	11.51	--	
MW-39	1632	1.0	—	4.54	13.03	--	
MW-40	1638	46.1	—	2.32	13.15	--	has TROLL
MW-41	1645	0.1	—	4.0	13.19	--	
MW-43	1557	0.4	—	4.18	10.30	--	
SW-01	0980	--	--	--	--	8.15	1.67'
SW-03	0908	--	--	--	--	6.70	1.76'
SW-12	0930	--	--	--	--	7.90	
SW-13	0950	--	--	--	--	4.60	
TW-59	0925	0.5	12.27	20.55	22.00	10.85	
TW-60	0927	0.7	2.59	40.89	40.50	~~9.10~~9.85	BUBBLING WELL
TW-66	0923	0.6	0.42	23.71	23.70	9.10	
Cupboard Creek Protection Zone							
MW-19	0756	725	—	10.16	12.15	5.60	UNDER PRESSURE
MW-20	0848	1132	9.38	9.37	19.40	—	has TROLL
MW-23	0816	1.8	—	7.52	23.21	--	
MW-26	0807	0.8	—	2.88	17.12	--	
MW-29	0745	14.3	—	5.28	14.95	4.47	
TW-67	1147	9.4	—	5.75	26.46	10.50	
TW-73	1153	0.6	—	3.55	~~12.75~~	11.18	TD = 14.07

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: **Date:** 4/5/18

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.)
Hayfield Zone							
MW-02	1340	34.0	—	4.79	~~23.14~~	1.17	has TROLL TD = 20.58
MW-02B	1336	0.1	—	0	~~81.55~~	2.23	TD = 81.72
MW-03	1015	0.1	—	~15.4	20.28	11.15	BUBBLING OVER CASING. APPX DTW MEASURED
MW-04	0942	0.0	—	7.75	19.56	8.38	FIRE ANT HILL BY WELL
MW-05	0937	1.0	—	11.80	~~19.78~~	—	TD = 19.90
MW-07	0920	180.0	—	11.39	~~13.51~~	—	TD = 14.34
MW-08	1036	0.1	8.92	8.93	~~19.70~~	PRODUCT IN SILVERMER	TD = 19.84
MW-09	1350	0.9	2.20	2.23	20.21	PRODUCT	
MW-10	1028	0.1	—	8.21	23.21	9.46	has BaroTROLL
MW-16	1405	2.7	SURFACE	~1.0	20.58	PRODUCT	PRODUCT PRESENT. ~~HA~~ SPARGE SYSTEM BUBBLING PRODUCT
MW-18	1050	2277	12.45*	16.85*	20.11	PRODUCT	*WATER LEVEL FLUCTUATING W/IN WELL DUE TO SYSTEM
MW-30	1005	0.2	—	11.92	~~14.54~~	5.21	TD = 14.70
MW-31	1317	0.1	—	18.59	28.03	—	
MW-45	0830	0.0	—	11.30	~~14.41~~	—	TD = 14.45
TW-55	1135	23.5	—	~3.0	~~30.78~~	8.96	DTW FLUCTUATING W/IN WELL TD = 27.33
TW-64	1045	0.5	—	15.11	52.85	8.80	
TW-96	1114	0.2	—	3.0	~~28.76~~	10.45	BUBBLING W/IN WELL TD = 27.33
Shallow Bedrock Zone							
MW-01	1420	1.7	—	5.83	15.62	1.67	has BaroTROLL TD = 16.58
MW-01B	1430	0.5	—	16.63	~~42.21~~	1.38	TD = 44.52
MW-11	1516	394	—	27.73	32.40	PRODUCT IN SOCK	SOUNDER DID NOT DETECT PRODUCT, BUT SOCK HAS PRODUCT
MW-22	0908	1.7	—	7.27	10.32	1.70	TD = 10.34

BTOC - below top of casing
ft - feet
PN - Project Number

[1]Total depths collected 3/5/18

ppm - parts per million
SM - Site Manager
~~ - wells historically found to have product

Lewis Drive Monitoring Sheet 1

Name(s): M. WARREN, K. SEXTON, T. MORGAN, J. CLOSTICK
Date: 04/05/18
Weather: 50's - 60's 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	—	8.72	22.48
RS-05	—	Dropped Skimmer	
RT-1A	—	11.31	18.50
RT-1B	—	10.92	17.64
RT-1C	—	10.74	18.75
RT-2A	—	0.7	7.2
RT-2B	—	1.33	9.36
RT-2C	—	1.33	7.21
RT-2D	—	1.43	8.42
RT-2E	—	1.71	9.35
RT-2F	—	1.03	10.05
RT-2G	—	1.04	10.06
RT-2H		damaged	
RT-2I	—	1.04	10.06
RT-2J	—	0.93	10.67
RT-2K	—	0.60	2.02
RT-2L	—	1.33	6.75
RW-02	—	21.69	25.75
RW-04	27.95	28.53	36.14
RW-05	31.70	31.78	32.56
RW-06	—	24.71	38.84
RW-07	—	21.26	40.67
RW-09	—	9.89	40.83
RW-11	—	11.80	31.31
RW-12	—	13.47	16.72
RW-15	—	12.91	40.18

These features only gauged once a month

RS-02	—	8.01	19.41
RS-04	—	9.74	10.05
RS-06	—	9.43	23.33
RS-07	—	10.40	15.61
RS-08	—	10.90	19.06
RS-09	—	9.73	17.22
RS-10	7.76	7.77	~~20.04~~ ~~20.54~~ 17.20
RS-11	—	7.68	~~17.26~~ 20.25
RS-12	—	8.03	~~20.35~~
RS-13	—	7.96	~~14.84~~ 17.60
RS-14	6.24	6.26	19.09
RS-15	—	6.29	17.46
RS-16	—	5.49	18.69
RS-17	—	5.40	19.01
RS-18	—	8.90	19.30
RS-19		damaged	
RS-20	—	5.71	10.49
RW-01	—	12.84	20.76
RW-03	—	23.00	33.46
RW-08	—	13.41	34.14
RW-10	—	9.56	60.65
~~RW-13~~	DO NOT GAUGE		
RW-14	—	6.72	44.64
~~MW-01~~			
~~MW-01B~~			

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-02B~~			
~~MW-03~~			
~~MW-04~~			
~~MW-05~~			
MW-06	—	12.13	19.20
MW-06B	—	11.70	86.22
~~MW-07~~			
~~MW-08~~			
~~MW-09~~			
MW-09B	—	1.82	135.3
~~MW-10~~			
~~MW-11~~			
~~MW-12~~			
~~MW-12B~~			
~~MW-13~~	—	20.35	22.24
MW-13B	—	20.80	57.82
MW-14	—	141.97	22.20
MW-14B	—	16.17	72.94
~~MW-15~~			
~~MW-15D~~			
~~MW-16~~			
~~MW-16B~~			
MW-17	—	10.86	11.83
MW-17B	—	13.71	18.62
~~MW-18~~			
~~MW-18B~~			
~~MW-19~~			
MW-21	—	13.84	20.73
~~MW-22~~			
~~MW-23~~			
MW-23B	—	11.26	32.29
MW-24	—	4.31	15.30
MW-24B	—	5.16	15.54
~~MW-25~~			
~~MW-25B~~			
~~MW-26~~			
MW-26B	—	5.03	42.80
MW-27	—	23.64	30.64
MW-27B	—	30.66	52.60
~~MW-28~~			
~~MW-29~~			
~~MW-30~~			
~~MW-31~~			
MW-31B	—	20.60	77.25
MW-32	—	9.73	29.04
MW-33	—	23.68	28.30
MW-33T	—	24.73	49.52
~~MW-34~~			
~~MW-35~~			
MW-36	—	16.68	23.76
MW-36B	—	16.38	45.50
MW-37	—	3.33	18.10
~~MW-38~~			
~~MW-39~~			
~~MW-40~~			

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	—	4.98	13.39
~~MW-43~~			
MW-43B	—	0.18	34.89
MW-44	—	5.63	10.77
MW-44B	—	10.50	35.30
~~MW-45~~			
MW-45B	—	13.53	21.72
MW-46	—	6.36	17.10
MW-47	—	15.54	20.85
MW-48B	—	16.50	97.30
MW-49	—	16.18	23.31
MW-50B	—	18.43	67.50
TW-04R	—	3.99	5.29
TW-05R	—	cannot	open
TW-14R	—	4.71	4.98
TW-15R	—	DRY	1.95
TW-21	—	2.43	9.81
TW-28	21.65	21.67	28.67
TW-30	—	20.43	23.26
TW-34	—	22.15	22.25
TW-35	—	22.13	22.81
TW-40	—	27.26	31.67
TW-41	—	~~25.13~~	31.78
TW-42	23.82	24.31	27.63
TW-45	25.45	25.57	34.10
TW-46	—	damaged	—
~~TW-55~~	—		
TW-59	—	12.27	20.55
TW-60	—	2.59	40.89 (bubbles)
~~TW-64~~	—		
TW-65	—	19.90	42.62
TW-66	—	0.42	23.71
~~TW-67~~	—		
TW-68	—	22.26	~~40.89 (bubbles)~~ 26.75
TW-69	—	12.51	~~49.64~~ 49.64
TW-70	—	16.90	42.35
~~TW-73~~	—		
TW-76	—	11.92	38.96
TW-81	—	2.55	6.22
TW-82	—	2.42	9.30
TW-83	—	3.06	15.03
TW-84	—	3.93	12.77
TW-85	Fire Ant Hill Covering Mount		
TW-86		5.10	5.63
TW-87		4.68	6.82
TW-90		Bubbling	45.80
TW-94		BUBBLING	34.94
TW-96			
SW-01		1.67'	
SW-02		1.09'	
SW-03		1.76'	
SW-05		DRY	
SW-08	Biosheen	1.04'	
SW-10		0.90'	
~~SW-12~~			
SW-13	Biosheen		

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

[1] gauging not needed, only DO

~~YWHSE~~ DATA ON DO GAUGING SHEET

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: **Date:** 05/02/18

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 locking cap, vault bolted down, water in vault, smell, etc.)
Brown's Creek Protection Zone							
MW-12	1512	438.2	—	10.91	21.03	6.7	has TROLL
MW-12B	1514	11.7	—	10.03	44.31	0.78	
MW-15	1440	48	—	10.48	19.18	9.07	has TROLL
MW-15B	1442	58.7	—	14.31	~~80.90~~	0.93	TD = 85.5
MW-25	1548	0.2	—	7.02	18.08	5.90	has TROLL
MW-25B	1551	0.4	—	3.92	~~53.13~~	0.57	TD = 61.35
MW-28	1503	7.1	—	20.81	~~26.08~~	1.41	TD = 25.58
MW-34	1626	24.3	—	2.31	7.82	--	
MW-35	1531	1.4	—	8.37	~~26.26~~	--	TD = 28.52
MW-38	1611	0.8	—	1.70	11.51 ✓	--	TD = 11.51
MW-39	1616	48.9	—	4.48	13.03	--	
MW-40	1608	3.61	—	2.23	13.15	--	has TROLL
MW-41	1602	1.6	—	3.80	13.19	--	
MW-43	1709	0.7	—	4.26	10.30	--	
SW-01	1044	--	--	--	--	10.05	BIOSHEEN 1.66'
SW-03	1026	--	--	--	--	5.78	1.78'
SW-12	1034	--	--	--	--	8.20	
SW-13	1100	--	--	--	--	5.00	
TW-59	1018	5.4	—	13.17	~~22.00~~	10.05	TD=20.64
TW-60	1010	327	—	8.75	40.50	9.85	
TW-66	1030	0.9	—	1.15	23.70	9.15	
Cupboard Creek Protection Zone							
MW-19	0928	449.1	—	10.98	12.15	1.55	
MW-20	0920	1422	—	9.70	19.40	3.90	has TROLL
MW-23	0845	2.2	—	7.12	23.21	--	
MW-26	0825	3.0	—	2.71	17.12	--	
MW-29	0815	306.2	—	4.72	~~14.05~~	3.10	TD = 14.81
TW-67	0825	6.7	—	8.29	~~20.46~~	10.05	TD = 29.80
TW-73	0815	0.1	—	5.25	~~14.07~~	10.22	TD = 14.76 BOLT STRIPPED

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 80'S / SUNNY

PN: 699858.LD.MR.GW

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

Technicians: M.WARREN, M.TRAMONTE, ~~K.SEIDEL~~ J.MORGAN, C.CARRUBBA **Date:** 05/02/18

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.)
Hayfield Zone							
MW-02	1122	0	—	10.85	~~20.58~~	9.80	has TROLL TD = 19.70
MW-02B	1114	0.3	—	7.16	~~81.72~~	8.08	TD = 80.59
MW-03	1130	0	—	BUBBLING	20.28	10.82	~~DTW NOT DETERMINED DUE TO SPARGING~~
MW-04	1115	0	—	6.94	19.56	8.71	
MW-05	1335	0	—	11.13	19.90	--	
MW-07	1351	610.9	—	10.35	14.34	--	
MW-08	1312	0.3	—	6.40	19.84	10.39	
MW-09	1322	0.5	—	0	20.21	9.26	
MW-10	1055	0	—	6.97	23.21	9.65	has BaroTROLL
MW-16	1254	698.1	0.1	0.1	~~20.58~~	PRODUCT	TD = 20.31
MW-18	1302	2355	15.97	18.01	20.11	PRODUCT	
MW-30	1110	0.2	—	11.49	14.70	4.04	
MW-31	1041	0	—	17.35	28.03	--	
MW-45	0906	0.3	—	10.74	14.45	--	
TW-55	1346	0.3	—	3.89	~~27.33~~	10.30	TD = 39.19
TW-64	1256	0.4	—	15.27	52.85	7.10	
TW-96	1400	0.2	—	BUBBLING	27.33	9.24	~~DTW NOT DETERMINED DUE TO SPARGING~~
Shallow Bedrock Zone							
MW-01	0940	10.3	—	5.20	~~16.58~~	1.44	has BaroTROLL TD = 15.40
MW-01B	0942	1.2	—	6.72	~~44.52~~	0.59	TD = 43.72
MW-11	1000	792.6	—	26.74	32.40	6.15	
MW-22	1715	34.8	—	7.19	10.34	1.42	

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, M. TRAMONTE, J. MORGAN, C. CARRUBBA
Date: 05/02/18
Weather: MID 80's / SUNNY

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	7.60	7.62	22.40
RS-05	8.00	8.50	24.90
RT-1A	—	11.06	24.97
RT-1B	—	10.48	17.64
RT-1C	—	10.50	18.8
RT-2A	—	0.5	7.79
RT-2B	—	0.74	7.25
RT-2C	—	1.20	9.32
RT-2D	—	1.30	7.09
RT-2E	—	1.42	8.36
RT-2F	—	1.72	9.31
RT-2G	—	0.95	10.03
RT-2H	—	damaged	—
RT-2I	—	1.04	10.00
RT-2J	—	0.04	10.00
RT-2K	—	0.82	2.29
RT-2L	—	1.16	5.80
RW-02	20.98	20.99	25.70
RW-04	26.84	27.04	36.96
RW-05	31.14	31.19	37.63
RW-06	—	24.16	39.65
RW-07	—	20.65	41.76
RW-09	—	10.78	41.07
RW-11	10.45	10.45	21.25
RW-12	HIGH PRESSURE LID TOO TIGHT		
RW-15	—	11.98	39.95

These features only gauged once a month

Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
RS-02	—	6.18	19.41
RS-04	—	8.67	10.30
RS-06	—	8.44	23.72
RS-07	—	10.40	15.63
RS-08	—	10.53	19.10
RS-09	—	6.23	17.24
RS-10	6.96	6.98	20.02
RS-11	—	7.36	17.04
RS-12	—	7.67	20.04
RS-13	—	4.75	18.10
RS-14	4.25	4.27	19.09
RS-15	—	4.47	17.45
RS-16	—	3.64	18.54
RS-17	—	3.24	19.03
RS-18	—	6.31	19.30
RS-19	—	damaged	—
RS-20	—	4.30	10.50
RW-01	—	12.18	20.74
RW-03	—	22.00	34.76
RW-08	—	13.34	34.10
RW-10	10.83	10.84	60.80
~~RW-13~~	DO NOT GAUGE		
RW-14	—	10.05	45.35
~~MW-04~~			
~~MW-01B~~			

= locations with skimmers

= locations with socks

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-02B~~			
~~MW-03~~			
~~MW-04~~			
~~MW-05~~			
MW-06	—	~~13.16~~ 11.17	19.19
MW-06B	—	10.90	86.90
~~MW-07~~			
~~MW-08~~			
~~MW-09~~			
MW-09B	—	~~13.27~~ 7.18	135.48
~~MW-10~~			
~~MW-11~~			
~~MW-12~~			
~~MW-12B~~			
MW-13	—	19.21	22.17
MW-13B	—	20.20	57.08
MW-14	—	14.27	22.18
MW-14B	—	15.66	84.60
~~MW-15~~			
~~MW-15B~~			
~~MW-16~~			
MW-17	—	10.89	11.10
MW-17B	—	12.85	24.10
~~MW-18~~			
~~MW-19~~			
~~MW-20~~			
MW-21	—	13.25	20.73
~~MW-22~~			
~~MW-23~~			
MW-23B	—	9.68	53.87
MW-24	—	4.39	15.35
MW-24B	—	5.10	27.30
~~MW-25~~			
~~MW-25B~~			
~~MW-26~~			
MW-26B	—	4.68	41.52
MW-27	—	23.60	29.65
MW-27B	—	29.04	51.85
~~MW-28~~			
~~MW-29~~			
~~MW-30~~			
~~MW-31~~			
MW-31B	—	17.72	~~4~~72.50
MW-32	—	8.60	28.90
MW-33	—	22.70	28.38
MW-33T	—	24.07	99.45
~~MW-34~~			
~~MW-35~~			
MW-36	—	15.95	23.65
MW-36B	—	15.69	45.28
MW-37	—	16.47	18.09
~~MW-38~~			
~~MW-39~~			
~~MW-40~~			

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	—	4.29	13.39
~~MW-43~~			
MW-43B	—	0.45	54.50
MW-44	—	4.79	9.70
MW-44B	—	10.21	34.90
~~MW-45~~			
MW-45B	—	12.83	21.55
MW-46	—	5.88	17.05
MW-47	—	14.48	22.80
MW-48B	—	18.04	97.19
MW-49	—	15.65	27.30
MW-50B	—	19.95	103.25
TW-04R	—	3.39	5.25
TW-05R	SEALED SHUT		
TW-14R	—	4.21	4.98
TW-15R	—	DRY	1.94
TW-21	—	1.87	9.58
TW-28	—	20.60	28.42
TW-30	—	19.55	23.24
TW-34	—	22.14	22.30
TW-35	—	22.67	22.70
TW-40	—	26.49	31.38
TW-41	—	24.56	31.54
TW-42	23.35	23.81	27.64
TW-45	24.88	25.05	33.96
TW-46	—	damaged	—
~~TW-55~~			
~~TW-59~~			
~~TW-60~~			
~~TW-64~~			
TW-65	—	18.94	~~44~~ 42.46
~~TW-66~~			
~~TW-67~~			
TW-68	—	21.13	26.74
TW-69	OVERGROWN W/ POISON IVY		
TW-70	—	16.08	42.08
~~TW-73~~			
TW-76	—	10.79	38.95
TW-81	—	1.94	6.19
TW-82	—	1.75	9.26
TW-83	FIRE ANT MOUND		
TW-84	—	3.39	12.78
TW-85	FIRE ANT MOUND		
TW-86	—	4.55	5.63
TW-87	—	3.98	6.82
TW-90	TOO PRESSURIZED TO GAUGE		
TW-94	—	ND (OVERFLOW)	39.38
~~TW-96~~			
~~SW-01~~			
SW-02	1.76'		
~~SW-03~~			
SW-05	0.36'		
SW-08	1.05'		
SW-10	0.70'		
~~SW-12*~~			
~~SW-13*~~			

DATA ON DO MEASUREMENT LIST

Prepared by Powell Scott/ATL 5/1/2018

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: **Date:** 6/4/18

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)
Hayfield Zone							
MW-02	1255	28.3	-	0	20.58	11.90	has TROLL
MW-02B	1300	1.2	-	4.23	81.72	4.60	TD = 83.08
MW-03	1113	0	-	16.5	20.28	12.34	TD = 20.46,
MW-04	1121	0	-	6.23	19.56	8.64	
MW-05	1134	0.2	-	10.47	19.90	--	
MW-07	1140	661.2	-	9.44	14.34	--	
MW-08	1428	-	-	5.63	19.84	-	has Skimmer, not gauged
MW-09	-	-	-	-	20.21	-	could not open
MW-10	0958	0	-	6.43	23.21	7.68	has BaroTROLL
MW-16	1410	102.5	-	-	20.58	-	pump system on, could not get accurate reading, possible product
MW-18	1444	2058	11.70	12.12	20.11	-	
MW-30	1035	0	-	10.47	14.70	4.43	
MW-31	0926	0	-	17.25	28.03	--	TD = 28.30
MW-45	0935	0	-	24.15	14.45	-	TD = 34.04
TW-55	1330	0.3	-	0	27.33	12.02	
TW-64	0900	0	-	14.44	52.85	7.96	
TW-96	1020	0	-	0	27.33	10.62	TD = 28.50
Shallow Bedrock Zone							
MW-01	1318	35.6	[redacted] -	3.03	16.58	1.24	has BaroTROLL TD = 15.57
MW-01B	13.21	0.3	-	6.47	44.52	1.15	TD = 21.81
MW-11	-	-	-	-	32.40	-	has Sock, not gauged
MW-22	1040	1.7	-	5.72	10.34	1.23	TD = 10.35

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

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** Sunny, 80°F

PN: 699858.LD.MR.GW

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

Technicians: K.Sexton, E.Harker, B.Gurney, C.Carruthers **Date:** 6-4-18

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.)
Brown's Creek Protection Zone							
MW-12	1530	486.1	~~8.20~~ –	9.20	21.03	10.53	has TROLL TD=20.80
MW-12B	1535	9.4	–	9.83	44.31	1.24	TD = 49.12
MW-15	–	–	–	–	19.18	–	has ~~TROLL~~ Skimmer, not gauged
MW-15B	1745	4.6	–	13.84	80.90	3.88	
MW-25	1940	0	–	6.73	18.08	9.20	has TROLL
MW-25B	1945	0	–	3.41	53.13	5.55	TD = 59.65
MW-28	1637	0.8	–	19.52	26.08	4.85	
MW-34	1735	0.8	–	2.34	7.82	--	
MW-35	1950	0.5	–	8.15	26.26	--	TD = 28.25
MW-38	1750	0.2	–	1.20	11.51	--	
MW-39	1730	17.6	–	4.34	13.03	--	has TROLL
MW-40	1726	21.3	–	1.98	13.15	--	has TROLL
MW-41	1720	0	–	3.69	13.19	--	
MW-43	1810	0.1	–	4.28	10.30	--	
SW-01	1820	–	--	–	--	6.53	
SW-03	1620	–	--	–	--	9.50	
SW-12	1613	–	--	–	--	9.34	
SW-13	1605	–	--	–	--	6.09	
TW-59	1650	0.6	–	0	22.00	9.34	TD = 20.85
TW-60	1515	–	–	0	40.50	–	BUBBLING OUT OF CASING, could not obtain stable DO
TW-66	1700	0.2	–	0	23.70	10.33	
Cupboard Creek Protection Zone							
MW-19	0854	1675	–	7.81	12.15	4.20	12.14 - TD
MW-20	–	–	–	–	19.40	–	has ~~TROLL~~ Skimmer, not gauged
MW-23	0925	0.3	~~10.97~~ –	~~23.19~~ 6.33	23.21	–	TD - 23.11
MW-26	0912	1.3	~~2.01~~ –	~~17.122.01~~	17.12	5.77	TD - 17.12
MW-29	1010	7.7	–	3.23	14.95	1.59	TD - 14.87 has TROLL
TW-67	1950	12.1	–	8.14	26.46	~~11.69~~	TD - 24.30
TW-73	1955	23.7	–	13.09	14.07	10.80	TD = 13.74

Lewis Drive Monitoring Sheet 1

Name(s): K. Sexton, B. Gurney, E. Harker, C. Corcuba

Date: ~~6.4.18~~ 6.4.18 8/28/18

Weather: Sunny, 80°F

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	could not open, rusty lock		
RS-05			
RT-1A			
RT-1B			
RT-1C			
RT-2A	–	not there, cut	
RT-2B	–	0.68	2.28
RT-2C	–	0.95	9.30
RT-2D	–	1.20	7.01
RT-2E	–	1.34	8.32
RT-2F	–	1.66	9.32
RT-2G	–	1.08	9.99
RT-2H	–	damaged	–
RT-2I	–	1.02	9.99
RT-2J	–	bubbling out top	
RT-2K			
RT-2L	–	1.03	5.82
RW-02			
RW-04			
RW-05			
RW-06	–	23.38	39.81
RW-07			
RW-09	–	8.95	39.78
RW-11	–	11.55	21.01
RW-12	–	11.95	16.89
RW-15			

These features only gauged once a month

Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
RS-02			
RS-04	–	5.98	9.96
RS-06	–	7.12	23.68
RS-07	–	9.16	15.64
RS-08			
RS-09	–	6.34	17.22
RS-10			
RS-11	–	6.25	17.24
RS-12	–	6.59	20.09
RS-13	–	3.14	17.50
RS-14			
RS-15	–	2.91	17.31
RS-16	–	3.18	18.58
RS-17			
RS-18	–	6.36	19.29
RS-19		damaged	
RS-20	–	3.80	10.80
RW-01	–	11.05	20.72
RW-03			
RW-08			
RW-10	–	8.95	58.61
~~RW-13~~	DO NOT GAUGE		
RW-14	–	9.97	44.56
MW-01			
MW-01B			

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-02B			
MW-03			
MW-04			
MW-05			
MW-06	–	10.32	19.26
MW-06B	–	10.15	57.63
MW-07	–	9.44	13.60
MW-08	–	–	–
MW-09**	–	–	–
MW-09B	–	5.70	138.0
MW-10			
MW-11	–	–	–
MW-12			
MW-12B			
MW-13	–	18.80	22.24
MW-13B	–	19.56	58.20
MW-14	–	13.48	22.24
MW-14B	–	15.09	67.34
MW-15	–	–	–
MW-15B			
MW-16			
MW-17	–	10.80	11.20
MW-17B	–	12.05	23.95
MW-18	11.70	12.12	20.12
MW-19			
MW-20	–	–	–
MW-21	–	12.43	20.69
MW-22			
MW-23			
MW-23B	–	6.06	53.59
MW-24	–	4.45	15.32
MW-24B	–	5.12	43.10
MW-25			
MW-25B			
MW-26			
MW-26B	–	3.66	41.29
MW-27	–	22.55	29.82
MW-27B	–	28.42	50.48
MW-28			
MW-29			
MW-30			
MW-31			
MW-31B	–	17.72	72.70
MW-32	–	11.16	28.85
MW-33	–	22.35	29.69
MW-33T	–	23.56	100.20
MW-34			
MW-35	–	8.15	28.25
MW-36	–	15.21	23.67
MW-36B	–	14.94	56.0
MW-37	–	3.26	18.11
MW-38			
MW-39			
MW-40			

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	–	3.60	13.18
MW-42	–	5.37	13.38
MW-43			
MW-43B	–	0.9	55.70
MW-44	–	3.16	9.76
MW-44B	–	9.50	34.49
MW-45	–	24.15	34.04
MW-45B	–	25.13	31.42
MW-46	–	5.20	17.10
MW-47	–	13.92	22.83
MW-48B	–	15.91	78.29
MW-49	–	14.95	23.35
MW-50B	–	18.36	108.65
TW-04R	–	1.64	5.25
TW-05R	–	1.40	7.60
TW-14R	–	2.85	5.00
TW-15R	–	1.02	1.95
TW-21	–	0.25	9.81
TW-28	–	20.09	28.46
TW-30	–	18.95	23.26
TW-34	–	22.14	22.24
TW-35	–	22.67	22.73
TW-40	–	25.83	31.45
TW-41	–	23.46	31.59
TW-42	22.14	22.79	27.85
TW-45	–	24.15	34.04
TW-46		damaged	
TW-55			
TW-59			
TW-60	bubbling out of casing		
TW-64			
TW-65	–	18.54	42.72
TW-66			
TW-67	–	8.14	24.30
TW-68		20.70	26.82
TW-69		11.38	49.40
TW-70	–	16.39	42.05
TW-73	–	13.09	13.74
TW-76	–	10.32	38.92
TW-81	–	0.03	6.22
TW-82	–	0.6	9.30
TW-83	–	0.67	14.96
TW-84	–	1.99	3.75
TW-85	–	0	39.30
TW-86	–	3.10	5.62
TW-87	–	3.30	6.83
TW-90	–	0	46.0
TW-94	–	0	39.37
TW-96			
SW-01		0.90	
SW-02	–	1.74	
SW-03		Dry	
SW-05	–	no water (dry)	
SW-08	–	0.86	
SW-10	–	0.44	
SW-12*			
SW-13*			

DO 10.80 / 11.69

= locations with skimmers

= locations with socks

Red ID needs DO measurement

**well plug blown out last month, use caution

*gauging not needed, only DO

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. Bexton, M. Warren, E. Harker **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.)
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	—	27.22 = 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	8.00	
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 L 73°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. HARILER **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	—	5.88	~~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	—	6.27	~~19.56~~	7.01	TD = 19.45
MW-05	0922	0.20	—	11.70	~~19.90~~	--	TD = 19.50
MW-07	0910	9161.00	—	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	~~NA~~	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	

Thin layer of product noted during sampling, see summary email.

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 (FTL), K SCITON (LEO), E. HALKER (LEO), J. MORGAN (ENT SCI)
Date: 07/11/18
Weather: HIGH 93°F (REALFEEL 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	25.97
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

Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
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~~			

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	20.70
~~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	22.58
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	—	5.16	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*~~			

[blue] = locations with skimmers

[yellow] = locations with socks

Red ID needs DO measurement

" ~~WELL ID DATA~~ " DATA ON DO GAUGING SHEET

☆ NEEDS WELL STOPPER AND LOCK REPLACED

☆☆ NEEDS 1 BOLT AND TWO WASHES

Prepared by Powell, Scott/ATL 7/10/2018

Lewis Drive Monitoring Sheet 1

Name(s): Kyle Sexton; Jessa Brown

Date: 8/1/2018

Weather: overcast

Contractor	# Personnel
Jacobs	
A&D/ECS	
Kinder Morgan	

This column only gauged once per month

Time	Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
	CC			
09:23a	MW-29		7.18	14.89
9:28am	MW-26		3.78	17.15
9:29	MW-26B		6.18	41.28
9:33	MW-23		7.56	23.16
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	26.30
11:08	MW-33T		24.83	49.90
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	22.15
11:47	MW-10		12.12	23.26
11:49	MW-32		12.90	28.70
11:55	MW-03		13.00(SS)	20.10
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		12.96	19.12
12:17	MW-06B		10.58	25.82
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		16.04	~~16.64~~ 96 19.75
	~~MW-38~~			
	~~MW-38B~~			

1259 SW - ~~0~~ - 0.3 05@

This column only gauged once per month

Time	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		
2:28	RS-08		11.24	19.10	685 g	NR
2:39	RT-1A		10.80	18.00	750 g	R. 115(g)
2:53	RT-1B		10.78	17.73	690 g	NR
2:31	RT-1C		11.39	18.59	285 g	NR
	~~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	17.48		
3:12	RS-14	3.84	3.85	19.00	<1 oz	
	~~RS-13~~					
	~~RS-09~~					
3:15	RS-10		6.16	20.03	<1 oz	
3:23	RS-11		5.89	16.90		
3:26	RS-12		6.21	20.10		
3:30	RW-10		10.4	57.8	<1 oz	
	~~RS-18~~					
3:41	RS-05	8.51 ~~26.62~~	8.56	27.77	~3 oz	
3:48	RS-01	7.87	8.88	22.54	~2 oz	
3:55	RS-02		6.71	19.51	2.0 oz	
	~~RS-06~~					
	~~RS-04~~					
3:57	RW-15		11.39	40.43	All water	

"—" denotes well data located in log book.

RW-10 – Product on outside of skimmer.

RS-17 – Strong product odor

RT-1C – Product line on sock at bottom fuel mark, sock halfway out of cage upon gauging; 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

* (SS) – Sparge system on

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.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-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	--	—	4.41 ~~7.32~~ (2nd)	16.57	--	DTW = 4.41
RW-12	0946	--	—	12.68	24.22	--	
RS-08	0950	--	—	10.35	17.79	--	Sock Weight = 545 g
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	—	4.07 ~~6.72~~ (2nd)	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	—	2.20	✓ 26.08	1.99	
MW-49	1205	-	—	18.28	23.28	-	
MW-35	1208	0.4	-	9.14	26.26	-	TD = 28.22
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	—	4.76	61.52 ~~53.13~~	1.95	.
MW-42	1221	-	—	4.96	13.39	-	
MW-41	1223	0.1	—	4.25	✓ 13.19	-	
TW-~~60~~ 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	-	—	0.8	7.13	-	
RT-2C	1349	-	-	1.46	9.52	-	
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 **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Project: Monthly Monitoring **Date:** 09/10/18 (MW-10, 32 AND TW-96 GAUGED ON 9/11/18)

Technicians: M. WARREN, K. SEXTON, K. CHERNOFF

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	—	11.55	19.18	6.20	
MW-15B	1419	3.1	—	15.19	~~80.90~~	2.49	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	-	WET THUNDER
MW-13	1553	-	—	21.85	22.13	-	
MW-13B	1553	-	—	21.81	55.05	-	
MW-14	1557	-	—	16.64	22.22	-	
MW-14B	1557	-	—	17.59	85.34	-	
~~SW-13~~	~~—~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~—~~
TW-64	1603	0.4	—	19.80	✓ 52.85	2.72	DO= 3.53
MW-50B	1604	-	—	23.28	102.20	-	
MW-48B	1607	-	—	17.45	74.07	-	
MW-33	1614	-	—	26.75	~~[illegible]~~	-	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	-	—	19.42	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 SD

NEED SD

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. SEATON, 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	—	13.31	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	0750	1.2	—	~~12.10~~	20.58	~~8.10~~	has TROLL DO = 6.90
MW-02B	0750	1.2	—	18.65	81.72	8.16	
MW-09	0808	2.7	—	~~10.37~~	20.21	10.57	DTW = 10.56
MW-09B	0809	–	—	18.50	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 SOLINST	TD = 19.97 PAGE END
MW-08	0855	0.9	—	16.85	19.84	9.07	
RS-13	0859	–	—	15.42	17.20	–	
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	32.53	--	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

[1]Total depths collected 4/5/18

ppm - parts per million

ft - feet

SM - Site Manager

PN - Project Number

WL - Water Level

Prod. Rec = Product Recovered

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** _____

PN: 699858.LD.MR.GW

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

Technicians: M. Warren, ~~K. Seton~~, K. Chernoff **Date:** 10/05/18

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-11	0743	—	—	12.50	16.57	--	
RW-12	0745	—	—	13.03	24.22	--	
RS-08	1316	—	—	12.97	17.79	--	Sock Weight = 690g *REPLACED SOCK
MW-20	0754	0.0	—	11.22	19.40	--	POTENTIAL INCONSISTENT SOLID BEEP AT SURFACE
RS-07	0756	—	—	12.68	15.75	--	
RT-1A	0800	—	—	12.64	18.60	--	Sock Weight = 595g
RT-1B	0800	—	—	12.63	17.62	--	Sock Weight = 620g
RT-1C	0800	—	—	13.22	18.50	--	Sock Weight = 355g
RW-01	0814	—	—	16.12	20.75	--	
MW-11	0817	0.0	29.56	29.62	32.40	--	
RW-06	0826	—	—	26.31	38.80	--	
RW-08	0820	—	—	16.22	34.39	--	
RW-09	0825	—	—	13.88	38.02	--	
RT-2A	0836	—	—	0.70	7.35	--	
RT-2B	0836	—	—	0.60	7.13	--	
RT-2C	0839	—	—	1.50	9.32	--	
RT-2D	0840	—	—	1.66	7.28	--	
RT-2E	0841	—	—	1.74	8.38	--	
RT-2F	0842	—	—	2.10	9.30	--	
RT-2G	0845	—	—	2.68	10.05	--	
RT-2I	0847	—	—	2.44	10.00	--	
RT-2J	0848	—	—	0.92	10.00	--	
RT-2K	0850	—	—	1.18	2.20	--	Sock Weight = 690g
RT-2L	0852	—	—	2.61	5.82	--	
RW-14	1523	—	9.88	10.49	51.12	--	INCONSISTENT SOLID BEEP B/W 9.88-10.49, SPARGE ON
MW-15	0905	—	11.41	11.42	19.18	--	
RS-20	0917	—	—	9.40	10.44	--	
RS-04	0920	—	—	9.72	10.12	--	
RS-06	0921	—	—	10.50	24.31	--	

	TIME	PID	DTP	DTW	TD	DO	COMMENTS
MW-16	0947	0.0	—	6.20	20.58	--	
RS-12	0935	—	—	8.20	29.10	--	
RS-11	0937	—	—	7.86	16.82	--	
RS-09	0940	—	—	10.19	16.11	--	
RS-18	0945	—	—	10.20	19.25	--	
MW-18	0948	1460.0	16.11	18.57	20.11	--	
MW-08	0958	0.0	13.10	13.11	19.84	--	
RS-13	1000	0.0	—	10.01	17.70	--	
RS-15	1006	—	—	8.37	17.55	--	
RS-16	1004	16.9	—	7.88	18.46	--	
Skimmers					--	--	-
RS-17	1025	—	—	8.19	18.97	--	Prod. Rec = DRY *READJUST DTS TO 6.62'
RS-14	1030	—	—	8.50	19.04	--	Prod. Rec = DRY *READJUST DTS TO 6.65
RS-10	1032	—	—	8.19	19.99	--	Prod. Rec = 0.05oz
RW-10	1040	—	—	9.95	57.46	--	Prod. Rec = DRY *MUD AROUND CASING
RS-05	1045	—	9.85	9.98	24.97	--	Prod. Rec = 0.5 oz
RS-01	1047	—	—	11.10	22.46	--	Prod. Rec = DRY
RS-02	1052	—	—	11.25	19.38	--	Prod. Rec = DRY
RW-15	1058	—	—	13.61	38.67	--	Prod. Rec = 0.05oz
RW-02	1117	—	—	23.38	26.50	--	Prod. Rec = DRY
RW-03	1111	—	23.97	23.99	33.81	--	Prod. Rec = 0.05oz
RW-04	1125	—	25.59	29.70	38.65	--	Prod. Rec = 0.05oz
RW-05	1130	—	33.06	33.09	37.53	--	Prod. Rec = 65.0 oz
RW-07	1138	—	—	23.18	42.78	--	Prod. Rec = DRY
MWs to Sample					--	--	-
MW-51	1455	0.0	—	18.84	25.34	--	
MW-52	1515	0.0	—	16.90	33.43	--	
MW-53	1355	0.0	—	11.54	21.32	--	
MW-54	1340	0.0	—	11.57-11.78	25.58	--	BUBBLING IN WELL, APPX. DTW

-- 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

Data entered by Kirill Chernoff on 11/1/18 QCd by Melissa Warren 11/1//18

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** Mis 70's, humid, cloudy

PN: 699847.LD.PR

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

Technicians: M. Warren, K. Chernoff **Date:** 11/1/2018

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.)
RW-11	10:00	**186.7**	**11.39**	**11.40**	16.57	--	
RW-12	10:08		**13.59**	**13.61**	24.22	--	
RS-08	10:24		-	**12.84**	17.79	--	**Sock Weight = 445g, needs new cap**
MW-20	10:27	**886.7**	**11.23**	**12.00**	19.40	--	
RS-07	10:34		-	**12.69**	15.75	--	
RT-1A	10:31		-	**13.12**	18.60	--	**Sock Weight = 365g**
RT-1B	10:32		-	**12.54**	17.62	--	**Sock Weight = 645g**
RT-1C	10:33		-	**12.56**	18.50	--	**Sock Weight = 645g, bolt cutters to change lock**
RW-01	10:43		-	**13.83**	20.75	--	needs cap replaced
MW-11	10:46	**399.4**	**30.66**	**30.77**	32.40	--	
RW-06	10:51		-	**26.36**	38.80	--	
RW-08	10:58		-	**16.55**	34.39	--	
RW-09	11:02		**14.28**	**14.46**	38.02	--	
RT-2A	11:04		-	**0.82**	7.35	--	
RT-2B	11:05		-	**0.91**	7.13	--	
RT-2C	11:06		-	**1.13**	9.32	--	
RT-2D	11:07		-	**1.13**	7.28	--	
RT-2E	11:08		-	**1.15**	8.38	--	
RT-2F	11:09		-	**2.93**	9.30	--	
RT-2G	11:10		-	**3.56**	10.05	--	
RT-2I	11:11		-	**2.84**	10.00	--	
RT-2J	11:12		-	**1.09**	10.00	--	
RT-2K	11:13		-	**0.94**	2.20	--	**Sock Weight = 750g**
RT-2L	11:14			**2.38**	5.82	--	
RW-14	11:19		**11.47**	**12.44**	51.12	--	intermittent solid beeping between DTP to DTW, sparge system on
MW-15	16:12		-	**11.70**	19.18	--	
RS-20	12:56		-	**6.62**	10.44	--	
RS-04	13:00		-	**9.77**	10.12	--	

RS-06	13:03		**-**	**9.99**	24.31	**--**	
MW-16	no	**key**	**access**		20.58	**--**	stripped bolts
RS-12	13:09		**-**	**7.62**	29.10	**--**	
RS-11	13:13		**-**	**7.28**	16.82	**--**	
RS-09	13:17		**-**	**8.25**	16.11	**--**	
RS-18	13:25		**-**	**9.25**	19.25	**--**	
MW-18	no	**key**	**Access**		20.11	**--**	
MW-08	14:50		**11.02**	**19.29**	19.84	**--**	tiriple checked with new battery; however, water level tape and probe did not confirm product in well.
RS-13	13:30		**-**	**5.87**	17.70	**--**	
RS-15	13:35		**-**	**5.73**	17.55	**--**	
RS-16	13:38		**-**	**6.42**	18.46	**--**	
Skimmers					**--**	**--**	**--**
RS-17	13:43		**5.14**	**5.16**	18.97	**--**	**Prod. Rec = All Water**
RS-14	13:55		**5.25**	**5.27**	19.04	**--**	**Prod. Rec = All Water**
RS-10	14:03		**-**	**7.28**	19.99	**--**	**Prod. Rec = All Water**
RW-10	14:12		**-**	**10.97**	57.46	**--**	**Prod. Rec = All Water**
RS-05	14:20		**9.21**	**9.23**	24.97	**--**	**Prod. Rec = 0.2oz**
RS-01	14:58		**10.22**	**10.24**	22.46	**--**	**Prod. Rec = 0.2oz**
RS-02	15:10		**-**	**9.80**	19.38	**--**	**Prod. Rec = 0.2oz**
RW-15	15:18		**-**	**13.08**	38.67	**--**	**Prod. Rec = All Water**
RW-02	15:45		**23.38**	**23.39**	26.50	**--**	**Prod. Rec = All Water**
RW-03	15:40		**24.11**	**24.12**	33.81	**--**	**Prod. Rec = Dry**
RW-04	15:55		**29.59**	**29.70**	38.65	**--**	**Prod. Rec = All Water**
RW-05	16:08		**33.45**	**33.46**	37.53	**--**	**Prod. Rec = 0.05oz**
RW-07	16:24		**-**	**11.70**	42.78	**--**	**Prod. Rec = Dry**

-- Locations with Socks

-- Locations with skimmers

- wells historically found to have product

BTOC - below top of casing

[1]Total depths collected 4/5/18

ppm - parts per million

ft - feet

SM - Site Manager

PN - Project Number

WL - Water Level

Prod. Rec = Product Recovered

Table 2 - DO Measurement List

SM: Tom Wiley
Client: Plantation Pipe Line
Weather: Sunny, clear H 66°F / L 36°F; rain in previous 48 hours
PN: 699858.LD.MR.GW
Project: Monthly Monitoring
Measuring Method: YSI proODO, Oil/Water Interface Probe
Technicians: JM & KC
Date: 12/3/2018

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.)
MW-29	1000	0.1	–	3.11	14.95	7.35	has TROLL
TW-73	1015	0.0	–	4.36	14.07	0.96	one bolt broken
MW-19	1025	220.6	–	9.94	12.15	5.45	Strong odor on probe, no odor detected
RW-11	1035	–	–	10.33	19.37	--	strong odor on probe, no odor detected
RW-12	1040	--	–	11.59	16.65	--	
RS-08	1045	--	–	11.51	19.32	--	Sock Weight = 0.5 kg NEW SOCK = 0.1 kg, odor on probe
MW-20	1050	44.8	–	9.99	19.40	0.91	sheen on collected water above cap & odor
RS-07	1105	--	–	11.74	15.62	--	no odor
RT-1A	1110	--	–	11.26	18.81	--	Sock Weight = 0.705 kg NEW SOCK= 0.09 kg, Odor on probe
RT-1B	1115	--	–	11.24	17.66	--	Sock Weight = 0.705 kg NEW SOCK= 0.08 kg
RT-1C	1120	--	–	11.82	18.94	--	Sock Weight = 0.46 kg NEW SOCK= 0.09 kg, odor on probe
TW-67	1135	0.7	–	10.47	26.46	7.48	water above cap; no odor
MW-26	1155	0.3	–	2.36	17.12	--	no odor
MW-26B	1200	--	–	5.55	43.66	--	no odor
SW-06	1205	--	–	–	–	--	DRY NO WATER
MW-23	1145	0.2	–	6.97	23.21	--	no odor
MW-23B	1150	--	–	8.73	56.34	--	no odor
MW-46	1330	--	–	5.25	17.18	--	Slight odor on probe, no product
SW-05	1335	--	–	–	--	4.10	WL= 0.39
MW-45	1325	0.0	–	10.94	14.45	--	no odor
MW-45B	1320	--	–	13.13	41.74	--	no odor
MW-21	1345	--	–	13.41	20.17	--	no odor
MW-17	~~1400~~ 1405	--	~	10.85	11.24 ~~11.34~~ ~~18.71~~	--	odor while opening well
MW-17B	1400	--	~~12.23~~ –	13.22 ~~18.71~~	18.74 ~~18.41~~ ~~11.24~~	--	odor while opening well
MW-22	~~1405~~ 1415	0.0	–	7.37	10.34	1.23	slight odor on probe
MW-44	~~1415~~ 1430	--	–	3.22	9.78 ~~20.17~~	--	no odor on probe
MW-44B	~~1430~~ 1425	--	–	11.36	35.36 ~~18.71~~	--	
MW-01	~~1405~~ 1435	0.3	–	3.91	16.58	2.40	has BaroTROLL, no odor on probe
MW-01B	1440	0.2	–	7.62	44.52	0.92	no odor
RW-01	1445	--	8.51	8.72	21.11	--	intermittent solid beeps at 8.51-8.72, broken cap
MW-27	1500	--	–	24.96	29.72	--	Strong odor when opening, silverish sheen on top inside casing

Table 2 - DO Measurement List

SM: Tom Wiley Client: Plantation Pipe Line Weather:

PN: 699858.LD.MR.GW

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

Technicians: JM & KC Date: 12/3/18

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	1505	–	–	~~29.27~~	~~30.07~~	–	no odor TD = 52.82 DTW = 29.34
MW-11	1510	513.9	–	28.17	32.40	N/A	strong odor but no product detected, NO DO b/c assumed product
RW-06	1530	–	–	24.79	39.99	–	no odor
RW-08	1535	–	–	14.27	36.37	–	slight odor on probe
RW-09	1540	–	–	14.46	37.21	–	slight odor
MW-12	1545	6.9	–	12.02	21.03	1.26	has TROLL
MW-12B	1550	9.7	–	12.49	44.31	1.02	no odor
TW-59					22.00		
MW-28	1600	0.1	–	2.17	26.08	0.89	no odor
MW-49	1630	–	–	17.49	23.42	–	
MW-35	1620	0.0	–	3.45	28.26	–	
SW-03	1625	–	–	–	–	9.50	WL= 0.58
MW-25	1610	0.0	–	7.13	18.08	8.86	has TROLL, no odor
MW-25B	1615	0.1	–	3.70	53.13	1.15	
MW-42	1635	–	–	4.37	13.39	–	
MW-41	1640	0.0	–	3.66	13.19	–	
TW-60					40.50		
TW-~~68~~ 56	1645	0.3	–	0.3	23.70	8.75	no odor
RT-2A	1655	–	–	0.5	7.00	–	no odor
RT-2B	1700	–	–	0.8	6.61	–	
RT-2C	1702	–	–	1.17	9.45	–	
RT-2D	1705	–	–	~~1.17~~ 1.18	7.24	–	
RT-2E	1706	–	–	1.28	8.37	–	
RT-2F	1707	–	–	1.79	9.34	–	
RT-2G	1708	–	–	1.30	10.07	–	
RT-2I	1710	–	–	1.29	10.07	–	
RT-2J	1711	–	–	0.40	10.08	–	
RT-2K	1713	–	–	0.60	2.13	–	Sock Weight =
RT-2L	1715	–	–	1.08	5.79	–	
SW-12		–	–	–	–		
MW-40					13.15	–	has TROLL

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: JM & KC **Date:** 12/3/18

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		–	–			–	
MW-39			–		13.03	–	has TROLL
MW-34			–		7.82	–	
MW-15			–		19.18		
MW-15B			–		80.90		
MW-38	1650		–	1.12	11.51	–	
MW-37	1646	–	–	~~1.12~~ 3.01	18.11	–	
SW-02	1712	–	–	–	–		WL= 1.86
SW-08	1640	–	–	–	–		WL= 0.40
SW-10	1620	–	–	–	–		WL= 0.50
MW-24	1658	–	–	4.78	15.33	–	
MW-24B	1655	–	–	5.59	46.23	–	
SW-01	1701	–	–	–	–	N/A	WL= Dry
MW-43	1709		–	4.24	10.30	–	
MW-43B	1706	–	–	2.30	56.06	–	
MW-13	1544	–	–	20.87	22.20	–	
MW-13B	1547	–	–	21.69	~~20.77~~ 22.20	–	
MW-14	1538	–	–	14.88	22.22	–	
MW-14B	1540	–	–	16.60	69.54	–	
MW-51	1530		–	17.38	25.38	4.33	
MW-52	1527		–	15.80	32.93	4.05	
~~MW-53~~							
~~MW-54~~							
SW-13	1651	–	–	–	–	4.21	
TW-64	1515		–	18.59	52.85	8.80	
MW-50B	1456	–	–	28.06	45.65	–	
MW-48B	1500	–	–	16.40	97.36	–	
MW-33	1451	–	–	~~26.29~~ 28.39	28.40	–	
MW-33T	1449	–	–	26.29	99.67	–	
MW-31	1442		–	19.47	28.03	–	
MW-31B	1443	–	–	20.52	70.95	–	
MW-54	1353	0.2	–	12.95	25.55	9.15	
MW-53	1400	0.7	–	6.81	21.12	6.90	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 60'S / MOSTLY SUNNY

PN: 699858.LD.MR.GW

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

Technicians: M. WALKER, E HAKER, J MORGAN, K. CHERNOFF **Date:** 12/3/18

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-47	14:38	--	--	18.88	~~22.90~~	--	
MW-10	1425	0.2	--	~~7.35~~	23.21	9.72	has BaroTROLL
TW-96	1420	0.2	--	~~2.79~~	27.33	9.78	
MW-32	1415	--	--	~~14.85~~	~~28.70~~	--	
MW-03	1405	0.1	--	14.00	20.28	9.46	
MW-30	1352	0.3	--	12.77	14.70	6.90	ADD MW-54 BEFORE THIS CELL THEN MS53
MW-04	1345	0.3	--	~~7.55~~	19.56	8.80	
MW-05	1341	1.3	--	12.39	19.90	--	
RS-20	1335	--	--	2.73	~~10.34~~	--	
MW-02	1332	0.4	--	3.58	~~17.97~~ ~~20.58~~	9.48	has TROLL
MW-02B	1325	0.6	--	12.92	81.72	9.58	
MW-09	1319	8.2	--	0.0	~~19.85~~ ~~20.21~~	9.00	
MW-09B	1208	--	--	3.90	~~128.32~~	--	REPLACE WELL CAP
TW-55	1200	0.4	--	0.0	27.33	9.60	
MW-06	1150	--	--	11.24	~~19.40~~	--	
MW-06B	1152	--	--	11.34	~~88.25~~	--	
MW-07	1141	547.8	--	10.99	~~13.82~~ ~~14.34~~	--	
RS-04	1140	--	--	~~6.33~~	~~8.05~~ ~~8.85~~	--	
RS-06	1135	--	--	~~8.19~~	~~23.75~~	--	
MW-16	1119	189.2	--	~~4.98~~	~~2003~~ ~~20.58~~	8.62	AIR SPARGING ON, APPX DTW GIVEN
RS-12	1110	--	--	~~8.41~~	~~20.10~~	--	
RS-11	1107	--	--	~~7.30~~	~~16.50~~	--	
RS-09	1105	--	--	~~5.69~~	~~15.80~~	--	REPLACE LOCK
RS-18	1100	--	--	~~3.61~~	~~19.10~~	--	
MW-18	1045	2110	17.83	17.85	~~19.10~~ ~~20.11~~	PRODUCT	
MW-08	1036	0.0	9.40	19.18	~~20.89~~ ~~19.84~~	PRODUCT	PRODUCT CONFIRMED WITH BAILER
RS-13	1025	--	--	1.46	~~17.54~~	--	~~PRODUCT CONFIRMED WITH BAILER~~
RS-15	1021	--	--	2.18	~~15.34~~	--	BIO SHEEN AT TOP OF WATER
RS-16	1015	--	--	1.87	~~19.10~~	--	~~BIO SHEEN AT TOP OF WATER~~
MW-36		--				--	
MW-36B		--				--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: JM & KC **Date:** 12/3/18

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					14.95		has TROLL
TW-73					14.07		
MW-19					12.15		
RW-11		--				--	
RW-12		--				--	
RS-08		--				--	Sock Weight =
MW-20					19.40		
RS-07		--				--	
RT-1A		--				--	Sock Weight =
RT-1B		--				--	Sock Weight =
RT-1C		--				--	Sock Weight =
TW-67					26.46		
MW-26					17.12	--	
MW-26B		--				--	
SW-06		--				--	
MW-23					23.21	--	
MW-23B		--				--	
MW-46		--				--	
SW-05		--			--		WL=
MW-45					14.45	--	
MW-45B		--				--	
MW-21		--				--	
MW-17		--				--	
MW-17B		--				--	
MW-22					10.34		
MW-44		--				--	
MW-44B		--				--	
MW-01					16.58		has BaroTROLL
MW-01B					44.52		
RW-01		--				--	
MW-27		--				--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: JM & KC **Date:** 12/3/18

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, smelt, etc.)
MW-27B		–				–	
MW-11					32.40		
RW-06		–				–	
RW-08		–				–	
RW-09		–				–	
MW-12					21.03		has TROLL
MW-12B					44.31		
TW-59	0739	0.0	—	12.29	20.30 ~~22.68~~	9.71	
MW-28					26.08		
MW-49		–				–	
MW-35					26.26	–	
SW-03		–	–	–	–		WL=
MW-25					18.08		has TROLL
MW-25B					53.13		
MW-42		–				–	
MW-41					13.19	–	
TW-60	0754	5.1	—	7.00	40.70 ~~40.68~~	3.42	
TW-66					23.70		
RT-2A		–				–	
RT-2B		–				–	
RT-2C		–				–	
RT-2D		–				–	
RT-2E		–				–	
RT-2F		–				–	
RT-2G		–				–	
RT-2I		–				–	
RT-2J		–				–	
RT-2K	0810	–				–	Sock Weight = 0.760 kg reduced = 0.095 kg
RT-2L		–				–	
SW-12	0802	–	–	–	–	7.17	
MW-40	0805	—	—	2.27	13.15	–	has TROLL

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: **Date:** 12/4/2018

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.)
RW-14	0605	--	—	10.18	51.22	--	no odor
MW-39	0755	0.9	—	4.45	13.03	--	has TROLL no odor
MW-34	0800	6.1	—	2.87	7.82	--	no odor
MW-15	0740	0.0	—	10.37	19.18	7.54	no odor
MW-15B	0745	62.7	—	1444	80.90	1.24	no odor
MW-38					11.51	--	
MW-37		--				--	
SW-02		--	--	--	--		WL=
SW-08		--	--	--	--		WL=
SW-10		--	--	--	--		WL=
MW-24		--				--	
MW-24B		--				--	
SW-01		--	--	--	--		WL=
MW-43					10.30	--	
MW-43B		--				--	
MW-13		--				--	
MW-13B		--				--	
MW-14		--				--	
MW-14B		--				--	
MW-51							
MW-52							
MW-53							
MW-54							
SW-13		--	--	--	--		
TW-64					52.85		
MW-50B		--				--	
MW-48B		--				--	
MW-33		--				--	
MW-33T		--				--	
MW-31					28.03	--	
MW-31B		--				--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

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

Technicians: JM & KC **Date:** 12/4/18

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-47		–				–	
MW-10					23.21		has BaroTROLL
TW-96					27.33		
MW-32		–				–	
MW-03					20.28		
MW-30					14.70		
MW-04					19.56		
MW-05					19.90	–	
RS-20		–				–	
MW-02					20.58		has TROLL
MW-02B					81.72		
MW-09					20.21		
MW-09B		–				–	
TW-55					27.33		
MW-06		–				–	
MW-06B		–				–	
MW-07					14.34	–	
RS-04		–				–	
RS-06		–				–	
MW-16					20.58		
RS-12		–				–	
RS-11		–				–	
RS-09							
RS-18		–				–	
MW-18					20.11		
MW-08					19.84		
RS-13		–				–	
RS-15		–				–	
RS-16		–				–	
MW-36	0820	–	–	16.65	23.70	–	Some odor while venting
MW-36B	0825	–	–	16.32	46.38	–	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 50's, PARTIAL SUN

PN: 699858.LD.MR.GW

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

Technicians: M. VALLEN, K. CHERNOFF, E. HARKER, J MORGAN **Date:** 12/4/18

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	0842	--	—	2.74	19.14	--	Prod. Rec = ALL WATER IN CANNISTER, ODOR PRESENT
RS-14	0856	--	3.89	3.90	19.04	--	Prod. Rec = ALL WATER IN CANNISTER, ODOR PRESENT
RS-10	0903	--	—	8.59	20.06	--	Prod. Rec = SLICK CANNISTER, CANNISTER WAS OPEN, DRY
RW-10	0915	--	—	13.53	51.30	--	Prod. Rec = 0.2, CHANGE SKIMMER, SEDIMENT STUCK
RS-05	0913	--	9.4	9.95	25.0	--	Prod. Rec = 0.2 oz
RS-01	0925	--	8.83	8.85	22.50	--	Prod. Rec = DRY
RS-02	0930	--	6.17	6.18	19.43	--	Prod. Rec = CANNISTER WAS WARM, EMPTY, PRODUCT VISIBLE ON SIDE OF CANNISTER
RW-15	0935	--	12.20	12.20	40.15	--	Prod. Rec = POSSIBLE POCKET OF PRODUCT DETECTED
RW-02	0943	--	—	22.02	5.70	--	Prod. Rec = 0.2 oz
RW-03	0947	--	—	23.09	33.88	--	Prod. Rec = DRY
RW-04	0949	--	28.34	28.52	37.38	--	Prod. Rec = ~~20.0 oz~~ DRY
RW-05	0952	--	31.75	31.81	38.72	--	Prod. Rec = 20.0 oz
RW-07	0955	--	—	21.42	41.66	--	Prod. Rec = SMALL AMOUNT OF WATER IN SKIMMER

– Locations with Socks

– Locations with skimmers

- wells historically found to have product

BTOC - below top of casing

ft - feet

PN - Project Number

WL - Water Level

[1]Total depths collected 4/5/18

ppm - parts per million

SM - Site Manager

Prod. Rec = Product Recovered

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 20'S / SUNNY

PN: 699858.LD.MR.GW

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

Technicians: M. WARREN, A. DENNIS (BREATHING ZONE) **Date:** 1/22/19

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-11	0945	829	—	9.79	16.57	--	
RW-12					~~24~~.22	--	CANNOT OPEN / BROKEN CAP
RS-08	0955	0.0	—	7.97	17.79	--	Sock Weight = 850g (REPLACED SOCK = 100g)
MW-20	1025	0.0	—	7.42	19.40	--	
RS-07	1025	0.0	—	7.47	15.75	--	
RT-1A	1010	0.0	—	7.22	18.60	--	Sock Weight = 725g (REPLACED SOCK = 100g)
RT-1B	1005	0.0	—	7.25	17.62	--	Sock Weight = 780g (REPLACED SOCK = 95g)
RT-1C	1020	0.0	—	7.85	18.50	--	Sock Weight = 725g (REPLACED SOCK = 100g)
RW-01	1035	0.0	—	8.67	20.75	--	~~REPLACE CAP~~ ✡
MW-11	1055	0.0	—	24.71	32.40	--	
RW-06	1105	0.0	—	22.97	38.80	--	
RW-08	1010	0.0	—	12.11	34.39	--	
RW-09	1115	0.0	—	9.26	38.02	--	
RT-2A	1117	0.0	—	0.40	7.35	--	
RT-2B	1120	0.0	—	0.78	7.13	--	
RT-2C	1121	0.0	—	0.17	9.32	--	
RT-2D	1122	0.0	—	1.19	7.28	--	
RT-2E	1120	0.0	—	1.31	8.38	--	
RT-2F	1122	0.0	—	1.64	9.30	--	
RT-2G	1125	0.0	—	0.62	10.05	--	
RT-2I	1129	0.0	—	1.01	10.00	--	
RT-2J	1131	0.0	—	0.00	10.00	--	WELL OVERFLOWING WITH WATER
RT-2K	1134	0.0	—	0.49	2.20	--	Sock Weight = 745g (REPLACED SOCK = 95g)
RT-2L	1136	0.0	—	1.06	5.82	--	
RW-14	1140	0.0	—	9.12	51.12	--	
MW-15	1147	0.0	—	8.61	19.18	--	
RS-20	1358	0.0	—	2.69	10.44	--	~~CAP NEEDS REPLACEMENT~~ ✡
RS-04	1411	0.0	—	3.96	10.12	--	
RS-06	1413	0.0	—	4.64	24.31	--	

✡ REPLACED ON 1/23/19

(BREATHING ZONE)

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-16	1417	0.0	—	0.0	20.58	--	SPARGE SYSTEM ON, WELL OVERFLOWING
RS-12	1421	0.0	—	3.84	29.10	--	
RS-11	1424	0.0	—	3.52	16.82	--	
RS-09	1426	0.0	—	5.86	16.11	--	
RS-18	1430	0.0	—	4.04	19.25	--	
MW-18	1437	435	~~16.75~~ @	16.76	20.11	--	BAILED FOR PRODUCT, NO PRODUCT
MW-08	1445	0.0	— NM	4.59	19.84	--	NO ODOR / BAILED FOR PRODUCT, NO PRODUCT
RS-13	1450	0.0	—	2.41	17.70	--	
RS-15	1500	0.0	—	1.86	17.55	--	
RS-16	1502	0.0	—	1.89	18.46	--	
Skimmers					--	--	-
RS-17	1549	0.0	—	1.81	18.97	--	Prod. Rec = ALL WATER
RS-14	1556	0.0	1.63	1.64	19.04	--	Prod. Rec = ALL WATER
RS-10	1609	0.0	—	3.96	19.99	--	Prod. Rec = ALL WATER
RW-10	1616	5.2	7.78	7.79	57.46	--	Prod. Rec = ALL WATER
RS-05	1649	0.0	4.95	4.96	24.97	--	Prod. Rec = ALL WATER
RS-01	1653	10.7	4.71	4.72	22.46	--	Prod. Rec = ALL WATER
RS-02	1657	0.0	—	3.30	19.38	--	Prod. Rec = ALL WATER
RW-15	1701	0.0	—	8.05	38.67	--	Prod. Rec = ALL WATER
RW-02	1715	17.8	20.80	21.00	26.50	--	Prod. Rec = ALL WATER
RW-03	1729	7.4	19.61	19.62	33.81	--	Prod. Rec = 7.0 OZ
RW-04					38.65	--	Prod. Rec = ALL WATER
RW-05					37.53	--	Prod. Rec = ALL WATER
RW-07					42.78	--	Prod. Rec = ALL WATER
SWs to Sample					--	--	-
SW-12	1330	--	—	—	--	--	Collect Photo BIOSHEEN ALONG WATERLINE

-- Locations with Socks

-- Locations with skimmers

- wells historically found to have product

BTOC - below top of casing
ft - feet
PN - Project Number
WL - Water Level
NM - NOT MEASURED

[1]Total depths collected 4/5/18

ppm - parts per million
SM - Site Manager
Prod. Rec = Product Recovered

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: D3159800/D2161400

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

Technicians: M. Warren, A. Dennis, K. Chernoff **Date:** 2/18/19

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	9:43	**0**	**n/a**	**2.37**	14.95	--	has TROLL
TW-73	9:46	**0**	**n/a**	**3.72**	14.07	--	
MW-19	9:49	**170.8**	**n/a**	**6.09**	12.15	--	
RW-11	9:52	**1800**	**n/a**	**10.40**	16.57	--	
RW-12	9:55	**457**	**n/a**	**8.60**	24.22	--	
RS-08	10:00	**5.5**	**n/a**	**7.74**	17.79	--	**Sock Weight = 740 g**
MW-20	10:04	**47.5**	**n/a**	**6.39**	19.40	--	
RS-07	10:12	**6002**	**n/a**	**8.72**	15.75	--	
RT-1A	10:16	**62.3**	**n/a**	**7.12**	18.60	--	**Sock Weight = 690 g**
RT-1B	10:18	**75.2**	**n/a**	**7.14**	17.62	--	**Sock Weight = 690 g**
RT-1C	10:20	**3**	**n/a**	**7.72**	18.50	--	**Sock Weight = 654 g**
TW-67	10:22	**0.4**	**n/a**	**6.54**	26.46	--	
MW-26	10:29	**0**	**n/a**	**1.21**	17.12	--	
MW-23	10:32	**0**	**n/a**	**4.42**	23.21	--	
MW-46	10:35	**1.9**	**n/a**	**3.83**	17.08	--	
SW-05	10:37	**0**	**n/a**	**0.39**	--	--	**WL= 0.39**
MW-17B	10:40	**260.9**	**n/a**	**8.80**	27.42	--	
RW-01	10:45	**1432**	**n/a**	**8.31**	20.75	--	
MW-11	10:49	**133.3**	**n/a**	**24.23**	32.40	--	
RW-06	10:52	**11.2**	**n/a**	**22.06**	38.80	--	
RW-08	10:53	**145**	**n/a**	**12.44**	34.39	--	
RW-09	10:57	**18.2**	**n/a**	**9.91**	38.02	--	
MW-12	10:59	**0.2**	**n/a**	**10.49**	21.03	--	has TROLL
MW-12B	11:00	**1.7**	**n/a**	**10.68**	44.31	--	
TW-59	11:01	**10.5**	**n/a**	**10.26**	22.00	--	
MW-28	11:08	**0**	**n/a**	**18.21**	26.08	--	
MW-35	11:11	**0**	**n/a**	**6.82**	26.26	--	
MW-25	11:13	**0**	**n/a**	**6.33**	18.08	--	has TROLL
MW-25B	11:14	**0**	**n/a**	**3.04**	53.13	--	

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-41	11:16	**0**	**n/a**	**3.58**	13.19	--	
TW-66	11:17	**0**	**n/a**	**0.00**	23.74	--	
TW-60	11:18	**70.6**	**n/a**	**5.80**	40.55	--	
RT-2A	13:14	**0**	**n/a**	**0.42**	7.35	--	
RT-2B	13:15	**9.1**	**n/a**	**0.54**	7.13	--	
RT-2C	11:25	**13.2**	**n/a**	**1.14**	9.32	--	
RT-2D	11:27	**20.7**	**n/a**	**1.18**	7.28	--	
RT-2E	11:28	**0**	**n/a**	**1.28**	8.38	--	
RT-2F	11:29	**0**	**n/a**	**1.66**	9.30	--	
RT-2G	11:29	**0**	**n/a**	**0.63**	10.05	--	
RT-2I	11:30	**0**	**n/a**	**0.87**	10.00	--	
RT-2J	11:31	**54.6**	**n/a**	**0.33**	10.00	--	
RT-2K	11:32	**0.6**	**n/a**	**0.44**	2.20	--	**Sock Weight = 500 g**
RT-2L	11:33	**53.6**	**n/a**	**1.02**	5.82	--	
SW-12			**n/a**		--	--	
MW-40	11:37	**0**	**n/a**	**2.21**	13.15	--	has TROLL
RW-14	11:39	**0.7**	**n/a**	**9.18**	51.12	--	
MW-39	11:42	**0**	**n/a**	**4.42**	13.03	--	has TROLL
MW-34	11:44	**0**	**n/a**	**2.83**	7.82	--	
MW-15	11:45	**22.2**	**n/a**	**13.90**	19.18	--	
MW-15B	11:46	**0.8**	**bail**	**8.81**	80.90	--	no product in bailer
MW-38	11:51	**1.8**	**n/a**	**1.27**	11.51	--	
MW-37	11:53	**0**	**n/a**	**3.08**	18.03	--	
SW-02	13:00	**0**	**n/a**	**1.8**	--	--	**WL=**
SW-01	13:05	**0**	**n/a**	**dry**	--	--	**WL=**
SW-13			**n/a**		--	--	
RS-20	13:29	**0**	**n/a**	**2.09**	10.44	--	
MW-07	13:37	**54.4**	**n/a**	**6.15**	14.34	--	
RS-04	11:35	**0**	**n/a**	**3.24**	10.12	--	
RS-06	13:45	**82.8**	**n/a**	**3.84**	24.31	--	
MW-16	13:49	**335.7**	**n/a**	**3.12**	20.58	--	Heavy Sparge
RS-12	14:04	**7.2**	**n/a**	**2.89**	29.10	--	
RS-11	14:03	**6.8**	**n/a**	**2.67**	16.82	--	
RS-09	14:06	**10.7**	**n/a**	**3.19**	16.11	--	
RS-18	14:08	**11.1**	**n/a**	**3.19**	19.25	--	
MW-18	14:10	**2128**	**bail**	**13.83**	20.11	--	bailer = 0.20mm in 0.5" bailer
MW-08	14:20	**10.9**	**n/a**	**7.84**	19.84	--	
RS-13	14:28	**4.5**	**n/a**	**0.79**	17.70	--	

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.)
RS-15	14:31	**125.2**	**n/a**	**1.00**	17.55	--	
RS-16	14:34	**4**	**n/a**	**1.48**	18.46	--	
MW-36	14:46	**2.7**	**n/a**	**11.97**	23.84	--	
Skimmers					--	--	--
RS-17	14:55	**1264**	**n/a**	**1.27**	18.97	--	**Prod. Rec = all H2O**
RS-14	15:04	**1532**	**n/a**	**0.99**	19.04	--	**Prod. Rec = 0.05oz**
RS-10	15:11	**58.1**	**n/a**	**2.91**	19.99	--	**Prod. Rec = all H2O**
RW-10	15:20	**187.1**	**n/a**	**5.91**	57.46	--	**Prod. Rec = all H2O**
RS-05	15:27	**2000**	**4.06**	**4.08**	24.97	--	**Prod. Rec = 0.05oz**
RS-01	15:35	**498.8**	**3.83**	**3.81**	22.46	--	**Prod. Rec = 0.01oz**
RS-02	15:41	**13**	**2.78**	**2.79**	19.38	--	**Prod. Rec = 0.01oz**
RW-15	15:47	**1024**	**n/a**	**6.57**	38.67	--	**Prod. Rec = all H2O**
RW-02	16:02	**3567**	**19.22**	**19.44**	26.50	--	**Prod. Rec = 0.20oz**
RW-03	16:14	**936.9**	**18.74**	**18.75**	33.81	--	**Prod. Rec = all H2O**
RW-04	16:20	**1612**	**24.11**	**24.43**	38.65	--	**Prod. Rec = all H2O**
RW-05	16:30	**1412**	**n/a**	**27.79**	37.53	--	**Prod. Rec = 0.01oz**
RW-07	16:49	**528.1**	**bail**	**19.02**	42.78	--	**Prod. Rec = all H2O**
SWs to Sample							
SW-01		--	--	--	--	--	**Collect Photo**
SW-02		--	--	--	--	--	**Collect Photo**
SW-04		--	--	--	--	--	**Collect Photo**
SW-05		--	--	--	--	--	**Collect Photo**
SW-12		--	--	--	--	--	**Collect Photo**
SW-13		--	--	--	--	--	**Collect Photo**
SW-14		--	--	--	--	--	**Collect Photo**

-- 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

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: D3159800/D2161400

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

Technicians: M. Warren, A. Dennis, K. Chernoff **Date:** 3/4/2019

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.)
MW-29	3/4/2019 10:00	**0**		**0.71**	14.95	**4.53**	has TROLL
TW-73	3/4/2019 10:05	**0**		**2.68**	14.07	**0.83**	
MW-19	3/4/2019 10:10	**118.5**		**5.67**	12.15	**11.43**	
RW-11	3/4/2019 10:15	**1470**		**8.41**	16.57	--	Strong odor; heavy bubling but steady detect
RW-12	3/4/2019 10:20	**409.4**		**8.93**	24.22	--	cap very difficult to remove, use caution
RS-08	3/4/2019 10:50	**67.7**		**6.24**	17.79	--	**Sock Weight = 810 g Replaced Weight = NA**
MW-20	3/4/2019 10:55	**8.6**		**5.94**	19.40	**0.15**	
RS-07	3/4/2019 11:00	**1681**		**6.74**	15.75	--	
RT-1A	3/4/2019 11:05	**63.4**		**6.74**	18.60	--	**Sock Weight = 830 g Replaced Weight = 62 g**
RT-1B	3/4/2019 11:15	**1134**		**6.13**	17.62	--	**Sock Weight = 870 g Replaced Weight = NA**
RT-1C	3/4/2019 11:20	**264.4**		**6.06**	18.50	--	**Sock Weight = 810 g Replaced Weight = 62 g**
TW-67	3/4/2019 11:25	**2.7**		**6.16**	26.46	**13.39**	sparge active and bubbling
MW-26	3/4/2019 11:36	**0.4**		**0.61**	17.12	--	
MW-26B	3/4/2019 11:35	**0.1**		**0.00**	41.05	--	at surface
MW-23	3/4/2019 11:40	**0.6**		**2.83**	23.21	--	
MW-23B	3/4/2019 11:42	**0.2**		**6.69**	53.45	--	
MW-46	3/4/2019 11:45	**1.4**		**2.67**	17.08	--	
SW-05	3/4/2019 11:48	--	--	--	--	**10.34**	**WL= 0.39 Collect Photo**
MW-45	3/4/2019 13:00:00 PM	**0.1**		**5.64**	14.45	--	
MW-45B	3/4/2019 13:05:00 PM	**0.1**		**9.17**	21.96	--	
MW-21	3/4/2019 13:10:00 PM	**0.1**		**8.84**	20.66	--	
MW-17	3/4/2019 13:15:00 PM	**112.2**		**6.81**	11.22	--	
MW-17B	3/4/2019 13:20:00 PM	**726.3**		**7.18**	27.42	--	
MW-22	3/4/2019 13:25:00 PM	**0.4**		**3.41**	10.34	**0.68**	
MW-44	3/4/2019 13:40:00 PM	**0.1**		**1.41**	9.76	--	
MW-44B	3/4/2019 13:42:00 PM	**0.2**		**5.97**	34.54	--	
MW-01	3/4/2019 13:44:00 PM	**0**		**2.79**	16.58	**1.61**	has BaroTROLL
MW-01B	3/4/2019 13:45:00 PM	**0.1**		**4.02**	44.52	**0.13**	
RW-01	3/4/2019 13:51:00 PM	**857.2**		**12.11**	20.75	--	
MW-27	3/4/2019 13:59:00 PM	**656.2**		**18.01**	29.58	--	
MW-27B	3/4/2019 14:02:00 PM	**0.9**		**24.49**	50.50	--	
MW-11	3/4/2019 14:05:00 PM	**1109**		**23.01**	32.40	**0.18**	strong odor; no product detected
RW-06	3/4/2019 14:15:00 PM	**68.8**		**20.47**	38.80	--	
RW-08	3/4/2019 14:21:00 PM	**222.8**		**10.19**	34.39	--	

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-09	3/4/2019 14:26:00 PM	**27**		**6.47**	38.02	--	
MW-12	3/4/2019 14:30:00 PM	**1.3**		**5.05**	21.03	**9.2**	has TROLL; bailed, no product detected.
MW-12B	3/4/2019 14:31:00 PM	**1.1**		**7.05**	44.31	**0.15**	
TW-59	3/4/2019 14:44:00 PM	**0.3**		**0.00**	22.00	**NM**	Water overflowing at casing and around well
MW-28	3/4/2019 14:50:00 PM	**0.2**		**16.42**	26.08	**0.72**	
MW-49	3/4/2019 14:58:00 PM	**0**		**9.88**	23.80	--	
MW-35	3/4/2019 15:00:00 PM	**0**		**5.39**	26.26	--	
SW-03	3/4/2019 15:08:00 PM	--	--	--	--	**NM**	**WL= 0 Dry Collect Photo**
MW-25	3/4/2019 15:13:00 PM	**0.1**		**5.03**	18.08	**9.63**	has TROLL
MW-25B	3/4/2019 15:16:00 PM	**0**		**2.72**	53.13	**0.34**	
MW-42	3/4/2019 15:25:00 PM	**0**		**4.06**	13.39	--	
MW-41	3/4/2019 15:28:00 PM	**0**		**3.33**	13.19	--	
TW-66	3/4/2019 15:31:00 PM	**0**		**0.00**	23.74	**10.91**	Tag labeled TW-56; removed tag
TW-60	3/4/2019 15:38:00 PM	**0**		**4.29**	40.55	**9.69**	
RT-2A	3/4/2019 16:00:00 PM	**0**		**0.38**	7.35	--	biosheen
RT-2B	3/4/2019 16:02:00 PM	**0**		**0.61**	7.13	--	biosheen
RT-2C	3/4/2019 16:04:00 PM	**0**		**1.02**	9.32	--	biosheen
RT-2D	3/4/2019 16:05:00 PM	**0**		**1.11**	7.28	--	
RT-2E	3/4/2019 15:53:00 PM	**0**		**2.18**	8.38	--	
RT-2F	3/4/2019 15:55:00 PM	**0**		**2.65**	9.30	--	biosheen
RT-2G	3/4/2019 15:52:00 PM	**0**		**0.35**	10.05	--	biosheen
RT-2I	3/4/2019 16:05:00 PM	**0**		**0.37**	10.00	--	
RT-2J	3/4/2019 16:07:00 PM	**9**		**0.00**	10.00	--	bubbling at surface of well
RT-2K	3/4/2019 16:08:00 PM	**0.1**		**0.37**	2.20	--	**Sock Weight = 770 g Replaced Weight = NA**
RT-2L	3/4/2019 16:09:00 PM	**171.5**		**0.98**	5.82	--	some odor
SW-12	3/4/2019 16:11:00 PM	--	--	--	--	**NM**	**Collect Photo**
MW-40	3/4/2019 16:10:00 PM	**0**		**1.82**	13.15	--	has TROLL
RW-14	3/4/2019 16:28:00 PM	**0.6**		**7.98**	51.12	--	
MW-39	3/4/2019 16:34:00 PM	**0**		**3.99**	13.03	--	has TROLL
MW-34	3/4/2019 16:31:00 PM	**0**		**2.66**	7.82	--	
MW-15	3/4/2019 16:40:00 PM	**0.1**		**7.07**	19.18	**9.28**	
MW-15B	3/4/2019 16:37:00 PM	**3.1**		**13.14**	80.90	**0.13**	
MW-38	3/4/2019 15:54:00 PM	**0.5**		**0.72**	11.51	--	
SW-13	3/4/2019 15:51:00 PM	--	--	--	--	**8.7**	**Collect Photo**
MW-37	3/4/2019 15:47:00 PM	**0.1**		**2.90**	18.03	--	
SW-02	3/4/2019 16:02:00 PM	--	--	--	--	--	**WL= 1.88; Algae Growth Collect Photo**
SW-04	3/4/2019 16:00:00 PM	--	--	--	--	--	
SW-08	3/4/2019 15:13:00 PM	--	--	--	--	--	**WL= 0.74 No sheen Collect Photo**
SW-09	3/4/2019 15:19:00 PM	--	--	--	--	--	**No sheen Collect Photo**

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.)
SW-10	3/4/2019 15:29:00 PM	--	--	--	--	--	**WL= 0.56; No sheen; Heavy water flow Collect Photo**
SW-11		--	--	--	--	--	**Collect Photo**
MW-24	3/4/2019 14:36:00 PM	**0.1**		**5.07**	15.50	--	
MW-24B	3/4/2019 14:35:00 PM	**0.1**		**5.70**	42.49	--	
SW-01	3/4/2019 14:36:00 PM	--	--	--	--	**NM**	**WL= Dry Collect Photo**
MW-43	3/4/2019 14:41:00 PM	**0.1**		**4.36**	10.30	--	
MW-43B	3/4/2019 14:39:00 PM	**0**		**0.97**	56.55	--	suspended white particles
SW-07	3/4/2019 14:44:00 PM	--	--	--	--	--	**Collect Photo**
MW-13	3/4/2019 14:18:00 PM	**135**		**15.23**	22.15	--	
MW-13B	3/4/2019 14:17:00 PM	**52**		**16.37**	55.05	--	
MW-14	3/4/2019 14:20:00 PM	**0.1**		**9.49**	22.22	--	
MW-14B	3/4/2019 14:20:00 PM	**0**		**11.53**	85.34	--	
MW-51	3/4/2019 14:26:00 PM	**0.1**		**15.86**	25.38	--	
MW-52	3/4/2019 14:23:00 PM	**0**		**14.43**	32.93	--	
TW-64	3/4/2019 14:01:00 PM	**0.1**		**11.06**	52.85	**8.85**	
MW-50B	3/4/2019 14:07:00 PM	**0.3**		**15.33**	102.20	--	
MW-48B	3/4/2019 14:00:00 PM	**0.1**		**13.75**	74.07	--	
MW-33	3/4/2019 13:58:00 PM	**0**		**19.41**	28.30	--	
MW-33T	3/4/2019 13:57:00 PM	**0.1**		**20.72**	99.89	--	
MW-31	3/4/2019 13:52:00 PM	**0.1**		**13.42**	28.03	--	
MW-31B	3/4/2019 13:53:00 PM	**0.1**		**14.03**	67.18	--	
MW-47	3/4/2019 13:48:00 PM	**0.1**		**10.27**	22.86	--	
MW-10	3/4/2019 13:37:00 PM	**0.1**		**2.02**	23.21	**8**	has BaroTROLL; monument unstable/Ants
TW-96	3/4/2019 13:26:00 PM	**0.1**		**0.00**	27.33	**10.3**	Sparging over casing/ ants
MW-32	3/4/2019 13:16:00 PM	**0.1**		**5.22**	28.85	--	
MW-03	3/4/2019 13:15:00 PM	**0.2**		**6.70**	20.28	**10.15**	monument unstable; strong sparge
MW-30	3/4/2019 13:00:00 PM	**0.3**		**6.16**	14.70	**5.08**	stripped
MW-54	3/4/2019 13:02:00 PM	**0.4**	**5.48**	**5.50**	25.55	--	Confirm with bailer
MW-53	3/4/2019 13:07:00 PM	**0.2**		**2.02**	21.12	--	
RS-20	3/4/2019 11:33			**1.54**	10.44	--	
MW-04	3/4/2019 11:34	**0.3**		**6.23**	19.56	**8.2**	replace bolts/ drill and tap
MW-05	3/4/2019 11:43	**0.3**		**2.91**	19.90	--	
MW-02	3/4/2019 11:26	**1.6**		**0.00**	20.58	**10.2**	has TROLL, water bubbling out of casing
MW-02B	3/4/2019 11:22	**0.4**		**3.74**	81.72	**10.47**	
MW-09	3/4/2019 11:14	**4.1**		**8.00**	20.21	**10.51**	ant hill/ sparge system affecting depth of water
MW-09B	3/4/2019 11:10	**0.4**		**4.07**	151.00	--	
TW-55	3/4/2019 11:03	**0.5**		**0.00**	27.33	**10.95**	replace lock and tighten
MW-06	3/4/2019 10:58	**50.3**		**3.57**	19.39	--	
MW-06B	3/4/2019 10:56	**1.2**		**3.99**	85.61	--	Ant hill
MW-07	3/4/2019 9:57	**57.1**		**4.72**	14.34	--	
RS-04	3/4/2019 10:10			**2.60**	10.12	--	

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.)
RS-06	3/4/2019 10:13			**2.67**	24.31	--	
MW-16	3/4/2019 10:16	**170.8**		**2.00**	20.58	**10.42**	well bubbling over casing
RS-12	3/4/2019 10:29			**1.97**	29.10	--	
RS-11	3/4/2019 10:30			**1.64**	16.82	--	
RS-09	3/4/2019 10:31			**1.97**	16.11	--	
RS-18	3/4/2019 10:32			**1.92**	19.25	--	
MW-18	3/4/2019 10:35	**854.7**	**15.90**	**15.90**	20.11	**product**	confirmed product with bailer. <1.0 mm film in bailer.
MW-08	3/4/2019 10:39	**1.7**	**NM**	**7.45**	19.84	**10.8**	ant hill
RS-13	3/4/2019 10:46			**0.89**	17.70	--	
RS-15	3/4/2019 10:47			**0.88**	17.55	--	
RS-16	3/4/2019 10:50			**1.42**	18.46	--	daylighting around casing
MW-36	3/4/2019 16:33:00 PM	**37.9**		**10.40**	23.84	--	
MW-36B	3/4/2019 16:34:00 PM	**0**		**10.02**	42.81	--	
SW-14	3/4/2019 10:00	--	--	--	--	--	**Collect Photo**
Skimmers	3/4/2019 10:00	--	--	--	--	--	--
RS-17	3/4/2019 10:00			**1.27**	18.97	--	**Prod. Rec = 0.01 oz**
RS-14	3/4/2019 10:00			**1.06**	19.04	--	**Prod. Rec = 0.01 oz, some product sheen around casing**
RS-10	3/4/2019 10:00			**2.20**	19.99	--	**Prod. Rec = 0.01 oz**
RW-10	3/4/2019 10:00			**4.86**	57.46	--	**Prod. Rec = 0.01 oz**
RS-05	3/4/2019 10:00		**3.00**	**3.05**	24.97	--	**Prod. Rec = 0.02 oz**
RS-01	3/4/2019 10:00			**2.60**	22.46	--	**Prod. Rec = 0.00 oz**
RS-02	3/4/2019 10:00		**1.95**	**1.98**	19.38	--	**Prod. Rec = 0.00 oz**
RW-15	3/4/2019 10:00			**6.42**	38.67	--	**Prod. Rec = 0.01 oz**
RW-02	3/4/2019 10:00		**17.56**	**17.57**	26.50	--	**Prod. Rec = 0.00 oz**
RW-03	3/4/2019 10:00		**18.06**	**18.90**	33.81	--	**Prod. Rec = 18.0 oz, air sparge system heard**
RW-04	3/4/2019 10:00		**22.77**	**22.79**	38.65	--	**Prod. Rec = 0.01 oz, need to replace cable**
RW-05	3/4/2019 10:00		**26.61**	**26.62**	37.53	--	**Prod. Rec = Canister Dry**
RW-07	3/4/2019 10:00			**16.78**	42.78	--	**Prod. Rec = 0.00 oz**

Locations with Socks

Locations with skimmers

Wells historically found to have product

Collect DO at SW Location

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
699858.LD.MR.GW	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-19
Field Crew: K. Sexton
Well Depth (ft): 12.15
DTW (ft): 10.04
Water Column (ft): 2.11
Well Diameter (in): ~~2~~ 2"
Gal. Per ft: ~~.653~~ .163
Well volume (gal): .343
Depth of Screen (ft):

Purge Methodology: low flow

Site: Lewis Drive Site, Belton, SC
Date: 6-5-18

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, Solinst
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034906

PID reading: opening well ~ after venting, if initially high 134 middle of sampling 1202 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
1192	10.04	150		6.85	21.34	.206	81.2	3.57	244	brown, murky, strong
1127	10.41	150	.2	5.76	19.07	.190	76.7	2.78	188	"
1132	10.87	150	.4	5.66	19.07	.171	84.3	5.03	116.78	
1137	11.25	150	.6	5.56	18.84	.168	100.7	4.41	86.11	
1139	12.15	—							—	dry

Remarks: well purged dry with 2 well volumes purged - will sample after recovery on 6-6-18, Fe^{+2} = 2.0 mg/L

SAMPLING INFORMATION:

Depth to Water Before Sampling: 7.45 Depth sample was acquired: 12'
Sample Methodology: Straw
Sample Date/Time: 6-6-18, 0747
Signed Sampler: [signature]
Filtered Metals Collected: Y / (N) Filter Size: ~
Sample Observations: sparge system very active, pushed water level back up
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:
alk., nitrate, Ferrous Iron, Methane

ch2m.

PROJECT NUMBER	WELL NUMBER MW30
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number:	MW30	Site:	Lewis Dr.
Field Crew:	K. Sexton	Date:	7.12.18
Well Depth (ft):	14.70	Purge Methodology:	low flow
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		

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	0.81	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	20.14	.028	84.4	3.49	5.24	dry

Remarks:
could not purge slow enough to maintain water level, purge dry, wait for recharge (~.05'/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:	CH
Filtered Metals Collected: Y / N	Filter Size: —
Sample Observations:	clear, slight gas odor
Parameters (please circle):	(VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER 699858.LD.MR.GW

WELL NUMBER MW-17B

SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-17B
Field Crew: M. WARREN, K. SEXTON
Well Depth (ft): 27.55
DTW (ft): 12.85
Water Column (ft): 14.70
Well Diameter (in): 4
Gal. Per ft: 0.653
Well volume (gal): 9.59
Depth of Screen (ft): 17.0 ft → 27.0
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: 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~~ 6.8 NEW
0921	13.54	32	8.50	5.83	19.0	0.104	-29.9	0.43	10.6	2.7 GAL → 3.5 0.0
0924	13.59	32	9.50	5.79	19.0	0.101	-35.9	6.43	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							

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:
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 INCREAD TO 103 ppm DURING PUMPING

JACOBS

PROJECT NUMBER 699858.LD.MR.GW

WELL NUMBER MW-23

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
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

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
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
1138	7.97	22	1.5	5.06	17.4	0.050	70.3	4.66	30.6	INCREASED FLOW RATE TO 33 UNITS
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 = +7 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
GENELATOR # GAAJ-11425W

43 UNITS = 1.0 GAL/MIN

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
699858.LD.MR.GW	MW-46
	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
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: 029227

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	1.9 2.5	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~~ 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

1062: INCREASED SPEED TO ~~15~~ 31 (2nd) 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
699858.LD.MR.GW	MW-40
	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	IN	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	~~5.5~~	COLLECT	MW-40-080218					

08/02/18

Remarks:
1 WELL VOL = 1.74 CONTROL #031997 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
DTW (ft): 2.44
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
PID reading: 0.3 opening well

Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 08/02/16

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
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]									

08/02/16

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: 08/02/16 @ 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 1 OF 1

SAMPLING LOG

Well Number: MW-07
Field Crew: M. WARREN, K. SEXTON, K. CHENAL
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 Methodology:
DTW (ft): 12.13
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 ~~0.5~~ 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	22.488	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	4.53	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	0.8~~7~~	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	4.4~~8~~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, M. SEXTON, K. CHEAIRS
Well Depth (ft): 20.00
DTW (ft): 17.30 * WITHOUT SPARGE ON
Water Column (ft): 2.70
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.4401
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: 27661
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	29.97	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 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. SERTON, 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 150.3 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 @ 09+3+8
Signed Sampler:
Filtered Metals Collected: Y (N)
Filter Size:
Sample Observations: YELLOW, ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other) MNA

JACOBS

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

SAMPLING LOG

Well Number:	MW-40	Site:	Lewis Drive Site, Belton, SC
Field Crew:	M. WARREN, K. CHENOFF	Date:	11/02/18
Well Depth (ft):	13.16	Purge Methodology:	
DTW (ft):	2.64		
Water Column (ft):	10.52		
Well Diameter (in):	2		
Gal. Per ft:	0.163		
Well volume (gal):	1.71		
Depth of Screen (ft):			

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: HELON M2280

Pump type (please circle): (TYPHOON) Peristaltic Bladder

Pump serial number: 0140145

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

Field Parameters

Time	DTW (toc)	Flow Rate (GAL/MIN) ~~(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
1551	2.29	← DTW BEFORE PUMP IS ON W/ ALL EQUIPMENT IN WELL								
1553	BEGIN PUMP	1	5.14	19.3	0.046	151.9	3.51	49.9		
1555	8.6	0.25	1.5	4.78	19.1	0.047	138.	0.46	18.6	INCREASED ~~REDUCED~~ SPEED
1557	10.38	1.00	3.5	4.87	19.7	0.046	128.3	0.47	58.9	
1559	10.95	1.00	~~5.0~~ 5.5	4.90	19.7	0.046	10.5	0.47	45.7	
1600 ~~1560~~	COLLECT	MW-40-110218								

Remarks:

1 WELL VOL = 1.71
3 WELL VOL = 5.14
5 WELL VOL = 8.56

★ 1601 RECHARGE TO 9.45 FT

★ TOTAL PURGED = 5.5 GAL

SAMPLING INFORMATION:

Depth to Water Before Sampling:	10.95	Depth sample was acquired:	12.75
Sample Methodology:	Pump		
Sample Date/Time:	11/02/18 @ 1560	MW-40-110218	
Signed Sampler:			
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-23
Field Crew: M. WALKEN, K. CHERNOFF
Well Depth (ft): 23.11
DTW (ft): 9.19
Water Column (ft): 13.92
Well Diameter (in): 2"
Gal. Per ft: 0.163
Well volume (gal): 2.27
Depth of Screen (ft):
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

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: HERON # 2280
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 040145

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

Field Parameters

Time	DTW (toc)	Flow Rate (~~ml/min~~ GAL/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	START PUMP									
1337	9.96	.6	1.25	4.87	18.6	0.050	170.7	2.99	59.9	CLEAR/NO ODOR
1340	10.04	1.295	5.0	4.70	18.6	0.050	168.4	3.08	22.2	CLEAR/NO ODOR
1343	10.07	0.9	7.25	4.66	18.4	0.055	162.5	3.02	8.13	CLEAR/NO ODOR
1345	10.07	1.2	9.0	COLLECT SAMPLE MW-23-110218						

Remarks:
1 WELL VOL = 2.27
3 WELL VOL = 6.8
* SAMPLE COLLECTED AFTER PURGING 4 WELL VOLUMES
* FAST RECHARGE RATE, DTW MEASURED AT 1346 TO BE 9.86 ft

SAMPLING INFORMATION:

Depth to Water Before Sampling: 10.07 Depth sample was acquired:
Sample Methodology: Pump
Sample Date/Time: 11/02/18 @ 1345 MW-23-110218
Signed Sampler:
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-17B
Field Crew: M. WARREN K. CHERNOFF
Well Depth (ft): 29.55
DTW (ft): 14.67
Water Column (ft): 14.88
Well Diameter (in): 4"
Gal. Per ft: 0.653
Well volume (gal): 9.72
Depth of Screen (ft): —

Purge Methodology

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

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: HERON # 2280
Pump type (please circle): (TYPHOON) Penstaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 173.0 after venting, if initially high 7.5 middle of sampling 7.5 closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate ~~(ml/min)~~ GAL/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
1000	BEGIN	PUMP AT	MW-17B	★GENERATOR	OUTPUT	INCREASED	FOR CONTROLLER ★			
1008	START	PUMP	—							— (1)
1014	15.49	0.4	2	6.51	19.8	0.115	21.8	0.77	34.0	— (2)
1019	15.49	0.4	4	6.00	19.9	0.110	14.5	0.22	34.0	— (3)
1024	15.37	0.4	6	5.77	19.9	0.103	5.2	0.18	9.08	— (4)
1029	15.45	0.4	8	5.62	19.9	0.097	-14.6	0.11	9.08	INCREASED PUMP
1039	15.60	0.6	14	5.55	19.9	0.095	-29.5	0.07	6.11	INCREASED PUMP
1049	15.90	1.0	28	5.47	19.9	0.095	-33.8	0.07	4.63	— (5)
1059	16.20	1.0	38	5.45	19.9	0.095	-38.0	0.00	3.92	— (6)
1105	16.25	1.0	48	COLLECT SAMPLE: MW-17B-110218						— (7)
1107	—	—	—	COLLECT SAMPLE: MW-17B-D-110218						— (8)

11/02/18

Remarks:
1105 COLLECT SAMPLE MW-17B-110218
MW-17B-D-110218

SAMPLING INFORMATION:

Depth to Water Before Sampling: 16.25
Depth sample was acquired: 25.0 ft
Sample Methodology: PUMP
Sample Date/Time: 11/02/18 MW-17B-110218 @ 1105 / MW-17B-D-110218 @ 1107
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size
Sample Observations: CLEAR / 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: MW-34-110218
Field Crew: M. WARREN, K. CHERNOFF
Well Depth (ft): 7.80
DTW (ft): 2.90
Water Column (ft): 4.9
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.798
Depth of Screen (ft):
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

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: HERON #2280
Pump type (please circle): (TUBING) Peristaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 1.2 after venting, if initially high middle of sampling 0.0 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
1436	BEGIN PUMP									(W)
1436	WELL PUMPED DRY, WATER WAS A LIGHT STRAW COLOR, NO ODOR									
1444	COLLECT [MW-34-110218]									
	DURING SAMPLE COLLECTION, SAMPLE WAS COLLECTED IN THE ORDER OF a, b, c DURING RECHARGE. LABELS ARE LISTED AS MW-34-110218a, b, c. SAMPLES WERE COLLECTED APPX 1 MIN APART AND COMPLETED AT 1444.									

11/2/18

Remarks:
1 WELL VOL = 0.798 gal
3 WELL VOL = 2.396 gal
5 WELL VOL = 4.00 gal
* SEE NOTES ABOVE

SAMPLING INFORMATION:

Depth to Water Before Sampling: ~~0.2~~ ~~7.60~~ 7.60* Depth sample was acquired: 7.60
Sample Methodology: Pump
Sample Date/Time: 1444 @ 11/02/18 [MW-34-110218]
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: MW-46
Field Crew: K. CHERNOFF, M. WARREN
Well Depth (ft): 17.03 — Purge
DTW (ft): 7.95 — Methodology:
Water Column (ft): 9.08
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 1.48
Depth of Screen (ft):

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

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: HERON # 2280
Pump type (please circle): (TYPHOON) Peristaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 0.0 after venting, if initially high middle of sampling 0.0 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
1439	8.97	BEGIN PUMP								
1440	9.89	1.0	1.0	4.60	19.0	0.028	181.5	1.63	18.4	CLEAR/NO ODOR
1443	10.92	0.9	3.5	4.53	19.0	0.029	171.7	0.73	3.8	CLEAR NO ODOR
1446	11.19	1.0	6.5	4.52	19.0	0.030	164.9	0.24	1.71	
1449	11.24	0.8	8.75	4.54	19.0	0.030	160.2	0.17	1.40	
1450	11.30	0.9	9.5	COLLECT SAMPLE			MW-46-110218			

Remarks:
1 WELL VOLUME = 1.48 GAL
3 WELL VOLUME = 4.44 gal
5 WELL VOLUME = 7.40 GAL

@ AT 1451, DTW RECHARGED TO 9.25 ft

SAMPLING INFORMATION:

Depth to Water Before Sampling: 11.30 — Depth sample was acquired: 17.00 ft
Sample Methodology: PUMP
Sample Date/Time: 11/02/18 @ 1450 MW-46-110218
Signed Sampler:
Filtered Metals Collected: Y (N) — Filter Size:
Sample Observations: CLEAR NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER:

SHEET | OF |

SAMPLING LOG

Well Number: MW-19
Field Crew: M. WARREN, E. HARKER
Well Depth (ft): 12.15
DTW (ft): 9.71
Water Column (ft): 2.44
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.39
Depth of Screen (ft): 4.5 - 9.5

Purge Methodology: LOW FLOW

Site: Lewis Drive Site, Belton, SC
Date: 12/04/18

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: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

PID reading: opening well 218.4 after venting, if initially high middle of sampling 32.7 closing well 5.2

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 (N)
1320	START PUMP									
1325	10.39	100	0.0	6.43	18.3	0.369	6.2	1.26	244.1	LIGHT GREY/ODOR
1330	10.87	100	0.25	6.39	18.2	0.363	12.1	0.38	140.6	LIGHT GREY/ODOR
1335	11.46	100	0.50	6.25	18.3	0.307	39.8	0.38	153.3	LIGHT GREY/ODOR
1340	12.10	100	0.75	6.18	18.5	0.263	57.7	0.38	400.2	LIGHT GREY/ODOR
1341	WELL PURGED DRY									

12/4/18

Remarks: TEAM PURGED WELL DRY, WILL RETURN TOMORROW TO COLLECT SAMPLE.

SAMPLING INFORMATION:

Depth to Water Before Sampling: N/A
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:

(1)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-29

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/5/18	Well Depth (ft): ~~MW-29~~	14.95
Well Number:	MW-29	DTW (ft):	3.11
Field Crew:	EH, MW	Water Column (ft):	11.84

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 11-13 ft

Sample Date/Time: 12/5/18 @ 0820

Signed Sampler:

Sample Observations:

Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other: ~~MNA~~ (N)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-19

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/5/18	Well Depth (ft):	12.15
Well Number:	MW-19	DTW (ft):	9.99
Field Crew:	MW, EH	Water Column (ft):	

Remarks:

LOW FLOW SAMPLE

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time: 12/5/18

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-26

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/5/18	Well Depth (ft):	17.2
Well Number:	MW-26	DTW (ft):	2.36
Field Crew:	MW, EH	Water Column (ft):	14.84

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 12-15

Sample Date/Time: 12/5/18 @ 0835

Signed Sampler:

Sample Observations:

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

(2)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-26B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 43.66
Well Number: MW-26B	DTW (ft): 5.55
Field Crew: MW, EH	Water Column (ft): 38.11

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 35-38 ft

Sample Date/Time: 12/5/18 @ 0840

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-23

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 23.21
Well Number: MW-23	DTW (ft): 6.97
Field Crew: MW, EH	Water Column (ft): 16.24

Remarks:

DUP COLLECTED AT 0856 [MW-23-D-120518]

SAMPLING INFORMATION:

Depth sample was acquired: 18-21

Sample Date/Time: 12/5/18 @ 0855

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-23B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 56.34
Well Number: MW-23B	DTW (ft): 8.73
Field Crew: MW, EH	Water Column (ft): 47.61

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: ~~12/5/18~~ 47-50

Sample Date/Time: 12/5/18 @ 0910

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-45

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 14.45
Well Number: MW-45	DTW (ft): 10.94
Field Crew: MW, EH	Water Column (ft): 3.51

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 2-14

Sample Date/Time: 12/5/18 @ 0940

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-45B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 41.74
Well Number: MW-45B	DTW (ft): 13.13
Field Crew: MW, EH	Water Column (ft): 28.61

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 35-37

Sample Date/Time: 12/5/18 @ 0935

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-21

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 20.17
Well Number: MW-21	DTW (ft): 13.41
Field Crew: MW, EH	Water Column (ft): 6.76

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 17-20

Sample Date/Time: 12/5/18 @ 1030

Signed Sampler:

Sample Observations:

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

(4)

JACOBS

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

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): ~~18.71~~ 27.00
Well Number: MW-17B	DTW (ft): 13.22
Field Crew: MW, EH	Water Column (ft): 13.78
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: ~~15-18~~ @ 17-20
Sample Date/Time: 12/5/18 @ 1040
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-22

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 10.34
Well Number: MW-22	DTW (ft): 7.37
Field Crew: MW, EH	Water Column (ft): 2.97
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired:
Sample Date/Time: 12/5/18
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-46

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/05/18	Well Depth (ft): 14.00 FT
Well Number: MW-46	DTW (ft): 5.25
Field Crew: EH, MW	Water Column (ft): 8.75
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 11-14
Sample Date/Time: 12/05/18 @ 1000
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

5

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-44

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 9/5/18	Well Depth (ft): 9.78
Well Number: MW-44	DTW (ft): 3.22
Field Crew: MW, EH	Water Column (ft): 6.56
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 6-9

Sample Date/Time: 12/05/18 @ 1125

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-44B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/05/18	Well Depth (ft): 35.36
Well Number: MW-44B	DTW (ft): 11.36
Field Crew: MW, EH	Water Column (ft): 24.00
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 30-33

Sample Date/Time: 12/05/18 @ 1135

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-01

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/5/18	Well Depth (ft): 16.58
Well Number: MW-01	DTW (ft): 3.91
Field Crew: MW, EH	Water Column (ft): 12.67
Remarks: MNA	$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 10-13

Sample Date/Time: 12/5/18 @ 1150

Signed Sampler:

Sample Observations:

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

(6)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-01B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/05/18	Well Depth (ft):	7.61 44.52
Well Number:	MW-01B	DTW (ft):	~~44.52~~ 7.61
Field Crew:	MW, EH	Water Column (ft):	36.91

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 30 - 33

Sample Date/Time: 12/05/18 @ 1205

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-27

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/05/18	Well Depth (ft):	29.72
Well Number:	MW-27	DTW (ft):	24.96
Field Crew:	MW, EH	Water Column (ft):	4.76

Remarks: ODOR FROM WELL

SAMPLING INFORMATION:

Depth sample was acquired: ~~23-25~~ 27 - 30 (MW)

Sample Date/Time: 12/05/18 @ 1405

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	~~12~~ MW-27B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/05/18	Well Depth (ft):	46.00
Well Number:	MW-27	DTW (ft):	29.23
Field Crew:	MW, EH	Water Column (ft):	16.77

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 36 - 39

Sample Date/Time: 12/05/18 @ 1400

Signed Sampler: [signature]

Sample Observations:

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

(5)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-12

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/05/18	Well Depth (ft): 21.03
Well Number: MW-12	DTW (ft): 12.02
Field Crew: MW, EH	Water Column (ft): 19.01

Remarks:

MNA

$Fe^{2+} = 0.0$ mg/L

SAMPLING INFORMATION:

Depth sample was acquired: 17-20

Sample Date/Time: 12/05/18 @ 1420

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-12B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/05/18	Well Depth (ft): 44.31
Well Number: MW-12B	DTW (ft): 13.49
Field Crew: MW, EH	Water Column (ft): 31.92

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 35-38

Sample Date/Time: 12/05/18 @ 1430

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-25

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/05/18	Well Depth (ft): 26.08
Well Number: MW-25	DTW (ft): 21.17
Field Crew: MW, EH	Water Column (ft): 4.91

Remarks:

MNA

$Fe^{2+} = 2.25$ mg/L

SAMPLING INFORMATION:

Depth sample was acquired: 22-25

Sample Date/Time: 12/05/18 @ 1445

Signed Sampler: [signature]

Sample Observations:

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

(8)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-49

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/05/18
Well Number: MW-49
Field Crew: MW, EH
Well Depth (ft): 23.42
DTW (ft): 17.49
Water Column (ft): 5.93
Remarks:
DUP @ 1506 MW-49-D-120518

SAMPLING INFORMATION:

Depth sample was acquired: 18-21
Sample Date/Time: 12/05/18 @ 1505
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-35

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/05/18
Well Number: MW-35
Field Crew: MW, EH
Well Depth (ft): 26.26
DTW (ft): 7.45
Water Column (ft): 18.81
Remarks:
MNA
$Fe^{2+} = 0.0$ mg/mL

SAMPLING INFORMATION:

Depth sample was acquired: ~~12/05/18~~ 22-25
Sample Date/Time: 12/05/18 @ 1525
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-25

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/05/18
Well Number: MW-25
Field Crew: MW, EH
Well Depth (ft): 18.08
DTW (ft): 7.13
Water Column (ft): 10.95
Remarks:
MNA
MW-25-120518
$Fe^{2+} = 0.0$

SAMPLING INFORMATION:

Depth sample was acquired: 12-15
Sample Date/Time: 12/05/18 @ 1540
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other: MNA

(9)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-25B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/05/18	Well Depth (ft): 53.13
Well Number: MW-25B	DTW (ft): 3.70
Field Crew: MW, EH	Water Column (ft): 49.43

Remarks:

MW-25B-120518

SAMPLING INFORMATION:

Depth sample was acquired: 50-53

Sample Date/Time: 12/05/18 @ 1545

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	Well Depth (ft):
Well Number:	DTW (ft):
Field Crew:	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	Well Depth (ft):
Well Number:	DTW (ft):
Field Crew:	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

Smm = .5L .1L x

JACOBS

PROJECT NUMBER	WELL NUMBER MW-13
699858.LD.MR.GW	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-13		Site: Lewis Drive Site, Belton, SC	
Field Crew: JM + KC		Date: 12/05/18	
Well Depth (ft): 22.20	Purge	Diameter / Gal. Per Foot: (2") (0.163); 3" 0.367; 4" 0.653	Diameter / Gal. Per Foot: 5" 1.02; 6" 1.469; 8" 2.611
DTW (ft): 20.77	Methodology: Low Flow		
Water Column (ft): ~~20.77~~ 1.43			
Well Diameter (in): 2			
Gal. Per ft: 0.163		Water level indicator, serial number: 042848	
Well volume (gal): 0.233		Pump type (please circle): (Peristaltic) Bladder	
Depth of Screen (ft): 4.0 - 19.0		Pump serial number: R7582	
PID reading: ~~0.3~~ 659.6 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
0838	Began	pump	DTW	= 20.77						
0840	21.44	100	0.2	5.82	12.9	0.241	42.2	0.89	13.7	slight odor
0845	21.53	↓	0.4	5.77	13.8	0.166	50.5	0.47	18.1	
0850	21.52		0.5	5.71	13.5	0.143	63.5	0.30	11.0	sun on WQ meter
2L 0855	21.93		0.6	5.79	15.0	0.165	50.1	0.23	13.2	well going dry - bubbles present
0900	22.17	100	0.7	5.69	14.5	0.139	63.3	0.14	137.1	bubbles causing turbidity
0905	22.18	100	0.8	—	13.4	0.124	72.2	0.09	114.2	issues @ bottom of well
0910	well	ran	dry,	will	let	recharge	before	sample		

Remarks: Bobby Caldwell on site - regulator from DHEC @0905
- Well dry before stabilization

Total Gal purged = 0.8 gal

SAMPLING INFORMATION:

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

Scanned with CamScanner

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-30
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-30
Field Crew: KC & JM
Well Depth (ft): 14.70
DTW (ft): 11.97
Water Column (ft): 2.73
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.445
Depth of Screen (ft): 5-15
Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/06/18

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: OH2848
Pump type (please circle): Peristaltic Bladder
Pump serial number: R7582

PID reading: 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) within 0.2 mg/L	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV		±10% or < 10	NA
0955	Began purging	100								
~~0955~~ 1000	12.47	100	0.12	4.90	15.9	0.030	199.0	1.20	2.0	clear, no odor
1005	12.78	100	0.17	4.95	16.1	0.028	187.9	2.30	3.0	clear, no odor
1010	13.08	100	0.25	4.90	16.0	0.025	198.2	4.79	0.8	clear, no odor
1015 ~~1020~~	13.42	100	0.70	4.88	16.1	0.025	214.5	5.16	0.4	clear, no odor
1020	13.76	100	1.0	4.91	16.1	0.025	225.2	5.56	0.4	clear, no odor
1025 ~~1030~~	14.14	100	1.15	~~4.95~~ 4.93	16.2	0.025	232.3	6.05	0.8	clear, no odor
1030 ~~1035~~	14.44	100	1.25	4.95	16.1	0.025	236.6	6.46	2.0	clear, no odor
1032 ~~1035~~		WELL	RAN	DRY						well going dry Bubbles

Remarks:
~~Well dry~~
- WELL DRY BEFORE STABILIZATION AT 10:35
- INCREASES IN DO LIKELY DO TO BUBBLES, RISE IN TURBIDITY LIKELY DUE TO SEDIMENT

1.25 GALLONS TOTAL PURGED

SAMPLING INFORMATION:

Depth to Water Before Sampling: ~~11.49~~ N/A
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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-22
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-22
Field Crew: JM & KC
Well Depth (ft): 10.34
DTW (ft): ~~7.37~~ 7.18
Water Column (ft): 3.16
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.515
Depth of Screen (ft):

Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/05/18

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: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

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
1350	Opened	well	cap							
1355	Began	purging								
1400	7.18	100		~~6.26~~	~~0.185~~	~~0~~				
14:05	7.34	100	0.01	6.55	18.0	0.185	128.4	2.37	2.8	~~cloudy, no odor~~ ~~strong odor~~
14:10	7.47	100	~~0.20~~	5.80	18.9	0.187	157.9	1.97	2.2	clear, no odor
14:15	7.53	100	0.25	5.74	19.2	0.167	168.7	2.02	2.3	clear, no odor
14:20	7.59	100	~~0.52~~	5.65	19.5	0.159	184.9	2.22	1.5	clear, no odor
14:25	7.65	100	0.56	5.57	19.6	0.153	199.7	2.18	1.0	clear, no odor
14:30	7.70	100	0.65	5.51	19.7	0.149	214.3	2.32	0.8	clear, no odor
14:35	7.77	100	0.80	5.41	19.7	0.146	225.8	2.13	0.7	clear, no odor
1440	SAMPLES	COLLECTED								

Remarks:
PARAMETERS STABILIZE AT 14:35
Ferrous = 0.0 mg/L
MW-22-120518

SAMPLING INFORMATION:

Depth to Water Before Sampling: 7.77
Depth sample was acquired: 10.00
Sample Methodology: Low Flow
Sample Date/Time: N/A 12/5/18 @ 1440
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: Clear, no odor
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other MNA / Fe 2+

JACOBS

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

LOW FLOW SAMPLING LOG

Well Number: MW-19
Field Crew: JM & KC
Well Depth (ft): 12.15
DTW (ft): 9.54
Water Column (ft): 2.61
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 1.254
Depth of Screen (ft):

Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/5/18

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: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

PID reading: 232.2 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
—	PARAMETERS		COLLECTED		ON	12/4				
1020	9.54	Checked recharge								strong odor
~~1040~~										
1030	Collected samples									

Remarks: Fe^{+2} = 1.5 ppm

SAMPLING INFORMATION:

Depth to Water Before Sampling: 9.54 Depth sample was acquired: 10.50
Sample Methodology: LOW FLOW - PERISTALTIC PURGED
Sample Date/Time: 12/5/18
Signed Sample: R. [illegible]
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: SLIGHTLY TURBID @ BEGINNING, SOME SEDIMENT, STRONG ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other MNA/Fe^{+2}

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-33T

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18	Well Depth (ft): 99.6
Well Number: MW-33T	DTW (ft): 26.29
Field Crew: MW, EH	Water Column (ft): 73.31

Remarks:

ODOR DETECTED

SAMPLING INFORMATION:

Depth sample was acquired: 84-87

Sample Date/Time: 12/06/18 @ 0940

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	Well Depth (ft):
Well Number:	DTW (ft):
Field Crew:	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 84-

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	Well Depth (ft):
Well Number:	DTW (ft):
Field Crew:	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

(9)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-31

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18
Well Number: MW-31
Field Crew: MW, EH
Remarks: SLIGHT ODOR

Well Depth (ft): 28.03
DTW (ft): 19.47
Water Column (ft): 8.56

SAMPLING INFORMATION:

Depth sample was acquired: 21 - 24
Sample Date/Time: 12/06/18 @ 0955
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-47

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18
Well Number: MW-47
Field Crew: MW, EH
Remarks: GO TO BOTTOM
ODOR DETECTED

Well Depth (ft): 22.90
DTW (ft): 18.88
Water Column (ft): 4.02

SAMPLING INFORMATION:

Depth sample was acquired: 20 - 22
Sample Date/Time: 12/06/18 @ 1005
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-10

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18
Well Number: MW-10
Field Crew: MW, EH
Remarks: MNA

Well Depth (ft): 23.21
DTW (ft): 7.35
Water Column (ft): 15.86

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 16 - 18
Sample Date/Time: 12/06/18 @ 1020
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other: MNA)

(10)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-32

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18
Well Number: MW-32
Field Crew: MW, EH
Remarks:

Well Depth (ft): 28.70
DTW (ft): 11.85
Water Column (ft): 16.85

MNA

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 17-20
Sample Date/Time: 12/06/18 @ 1035
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-03

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18
Well Number: MW-03
Field Crew: MW, EH
Remarks:

Well Depth (ft): 20.28
DTW (ft): 14.00
Water Column (ft): 6.28

MNA

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 17-20
Sample Date/Time: 12/06/18 @ 1050
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other: MNA)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-30

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18
Well Number: MW-30
Field Crew: MW, EH
Remarks:

Well Depth (ft): 14.70
DTW (ft): 12.72
Water Column (ft): 1.98

LOW FLOW

SAMPLING INFORMATION:

Depth sample was acquired: N/A
Sample Date/Time:
Signed Sampler:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

(11)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-04

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/6/18	Well Depth (ft):	19.56
Well Number:	MW-04	DTW (ft):	7.55
Field Crew:	MW, EH	Water Column (ft):	12.01

Remarks: MNA $Fe^{2+} = 0.0$ mg/L

SAMPLING INFORMATION:

Depth sample was acquired: 16-19

Sample Date/Time: 12/6/18 @ 1140

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-05

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/6/18	Well Depth (ft):	19.90
Well Number:	MW-05	DTW (ft):	12.39
Field Crew:	MW, EH	Water Column (ft):	7.51

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 16-19

Sample Date/Time: 12/6/18 @ 1150

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-53

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/6/18	Well Depth (ft):	21.12
Well Number:	MW-53	DTW (ft):	6.81
Field Crew:	12/06/18	Water Column (ft):	14.31

Remarks: COLLECT AFTER MW-30

SAMPLING INFORMATION:

Depth sample was acquired: 18-21

Sample Date/Time: 12/6/18 @ 1115

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-54

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/06/18	Well Depth (ft):	25.55
Well Number:	MW-54	DTW (ft):	12.95
Field Crew:	MW, EH	Water Column (ft):	12.6

Remarks: COLLECT AFTER MW-53

SAMPLING INFORMATION:

Depth sample was acquired: 21-24

Sample Date/Time: 12/6/18 @ 11/20/18 1120

Signed Sampler:

Sample Observations:

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

(6)

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-14

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-14-120618
Field Crew: KC TM
Remarks:

Well Depth (ft): 22.22
DTW (ft): 14.88
Water Column (ft): 7.34

SAMPLING INFORMATION:
Depth sample was acquired: ~~16-19~~ 17-20
Sample Date/Time: 12/6/18 at 1525
Signed Sampler: KCuny
Sample Observations: clear, no odor
Parameters (please circle): VOCs SVOCs Dissolved Metals Other

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-14B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-14B-120618
Field Crew: KC & JM
Remarks:

Well Depth (ft): 69.84
DTW (ft): 16.60
Water Column (ft): 53.24

SAMPLING INFORMATION:
Depth sample was acquired: ~~73-76~~ 66-69
Sample Date/Time: ~~12/06/18~~ 12/06/18 at 1515
Signed Sampler: KCuny
Sample Observations: Clear, no odor
Parameters (please circle): VOCs SVOCs Dissolved Metals Other

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-51

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-51-
Field Crew: KC & JM
Remarks:

Well Depth (ft): 25.38
DTW (ft): 17.38
Water Column (ft): 8.00

SAMPLING INFORMATION:
Depth sample was acquired: ~~19~~ 20-23
Sample Date/Time: 12/06/18 1610
Signed Sampler: KCuny
Sample Observations: ~~clear, no odor~~
Parameters (please circle): VOCs SVOCs Dissolved Metals Other

(5)

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-43B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-43B
Field Crew: MW, EH
Remarks:

Well Depth (ft): 56.04
DTW (ft): 2.3
Water Column (ft): 53.76

2 BOTTLE SET

SAMPLING INFORMATION:
Depth sample was acquired: 45-48
Sample Date/Time: ~~1503~~ 1525
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other

(8)

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-50B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18

Well Number: MW-50B-120618

Field Crew: KC & JM

Well Depth (ft): 45.65

DTW (ft): 26.06

Water Column (ft): 19.59

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 100-103 42-45

Sample Date/Time: 12/6/18 at 1545

Signed Sampler: [illegible]

Sample Observations: clear, no odor

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

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-48B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18

Well Number: MW-48B

Field Crew: KC & JM

Well Depth (ft): 97.36

DTW (ft): 16.40

Water Column (ft): 80.96

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 75-78

Sample Date/Time: 12/6/18 at 1555

Signed Sampler: [illegible]

Sample Observations: clear, no odor

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

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-13B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18

Well Number: MW-13B-120618

Field Crew: KC & JM

Well Depth (ft): 58.97

DTW (ft): 21.69

Water Column (ft): 37.28

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 55-58

Sample Date/Time: 12/06/18 at 1505

Signed Sampler: [illegible]

Sample Observations:

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

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-52

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/06/18
Well Number: MW-52
Field Crew: KC JM
Well Depth (ft): 32.93
DTW (ft): 15.80
Water Column (ft): 17.13
Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 25-28
Sample Date/Time: 12/6/18 at 1620
Signed Sampler: KCMM
Sample Observations: clear no odor
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-36

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-36-120618
Field Crew: KC JW
Well Depth (ft): 23.70
DTW (ft): 16.65
Water Column (ft): 7.05
Remarks:
DUP-COLLECTED [MW-36-D-120618]

SAMPLING INFORMATION:

Depth sample was acquired: 20ft
Sample Date/Time: 12/06/18 at 1415
Signed Sampler: KCMM
Sample Observations: Slightly turb.d, no odor
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-36B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-36B-120618
Field Crew: KCJM
Well Depth (ft): 46.38
DTW (ft): 16.32
Water Column (ft): 30.06
Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 43.0ft
Sample Date/Time: 12/06/18 at 1435
Signed Sampler: KCMM
Sample Observations: Slightly turb.d, no odor
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-06

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18

Well Number: MW-06-120618

Field Crew: KC & JM

Remarks:

Well Depth (ft): 19.40

DTW (ft): 11.24

Water Column (ft): 8.16

SAMPLING INFORMATION:

Depth sample was acquired: 18.40

Sample Date/Time: 12/6/18 at ~~1145~~ 1150

Signed Sampler: KCMM

Sample Observations: clear, no odor

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

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-06B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18

Well Number: MW6B-120618

Field Crew: KC & JM

Remarks:

Well Depth (ft): 88.25

DTW (ft): 11.39

Water Column (ft): = 76.86

SAMPLING INFORMATION:

Depth sample was acquired: 88.25

Sample Date/Time: 12/6/18 at 1135

Signed Sampler: KCMM

Sample Observations: clear, no odor

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

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-07

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18

Well Number: MW-07-120618

Field Crew: JM KC

Remarks: ⊕ CHECK FOR PRODUCT IN HYDRASLEEVE

Well Depth (ft): 13.82

DTW (ft): 10.99

Water Column (ft): 2.83

SAMPLING INFORMATION:

Depth sample was acquired: 13.82

Sample Date/Time: 12/6/18 at 1325

Signed Sampler: KCMM

Sample Observations: slightly turbid ~~strong odor~~ STRONG ODOR

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

(14)

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-16

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18

Well Number: MW-16-120618

Field Crew: ~~KC & JM~~ KC & JM

Remarks: SPARGE SYSTEM ON HIGH MNA NOT FULL ~~HSS~~ Hydrasleeve ⊕ CHECK FOR PRODUCT DEVELOPMENT IN HYDRASLEEVE $Fe^{2+} = 0.0 \frac{mg}{L}$

Well Depth (ft): 20.03

DTW (ft): 4.98

Water Column (ft): 15.05

SAMPLING INFORMATION:

Depth sample was acquired: 20.03

Sample Date/Time: 12/6/18 at 1345

Signed Sampler: KCMM

Sample Observations: slightly Turbid NOT FULL ALKALINITY SAMPLE

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

(12)

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-02B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/06/18
Well Number: MW-02B-120618
Field Crew: KC & JM
Remarks:

Well Depth (ft): 81.22
DTW (ft): 12.42
Water Column (ft): 68.8

SAMPLING INFORMATION:

Depth sample was acquired: 82 ft
Sample Date/Time: 12/06/18 at 9:45
Signed Sampler: [signature]
Sample Observations: no odor, clear
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-09

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/6/18
Well Number: MW-09
Field Crew: KC & JM
Remarks:
MNA ☆ CHECK HYDRASLEEVE FOR PRODUCT $Fe^{2+} = 0.0 \frac{Mg}{L}$

Well Depth (ft): 27.33
DTW (ft): 0
Water Column (ft):

SAMPLING INFORMATION:

Depth sample was acquired: 27.33
Sample Date/Time: 12/6/18 at 1055
Signed Sampler: [signature]
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other: MNA)

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-09B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/06/18
Well Number: MW-09B
Field Crew: JM & KC
Remarks:

Well Depth (ft): 128.32
DTW (ft): 3.90
Water Column (ft): 124.42

SAMPLING INFORMATION:

Depth sample was acquired: 128 ft
Sample Date/Time: 12/6/18 at 1040
Signed Sampler: [signature]
Sample Observations: clear no odor
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER: MW-02

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 12/06/18
Well Number: MW-02
Field Crew: JM & KC
Remarks:
MNA $Fe^{2+} = 0.0 \frac{Mg}{L}$

Well Depth (ft): 17.97
DTW (ft): 3.58
Water Column (ft): 14.39

SAMPLING INFORMATION:

Depth sample was acquired: 17.97
Sample Date/Time: 12/06/18 at 1105
Signed Sampler: [signature]
Sample Observations: Slightly Turbid, no odor
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other: MNA)

11

(3)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-15S

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/06/18	Well Depth (ft): * 80.90
Well Number:	MW-15S	DTW (ft): 14.44
Field Crew:	MW, EH	Water Column (ft): 66.56
Remarks:		☆ 2 BOTTLE SET

SAMPLING INFORMATION:

Depth sample was acquired:	70-73
Sample Date/Time:	12/06/18 @ 1435
Signed Sampler:	
Sample Observations:	
Parameters (please circle):	(VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-38

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/06/18	Well Depth (ft): 11.51
Well Number:	MW-38	DTW (ft): 1.12
Field Crew:	MW, EH	Water Column (ft): 10.39
Remarks:		☆ 2 BOTTLE SET

SAMPLING INFORMATION:

Depth sample was acquired:	6-9
Sample Date/Time:	12/06/18 @ 1545
Signed Sampler:	
Sample Observations:	
Parameters (please circle):	(VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-37

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/06/18	Well Depth (ft): 18.11
Well Number:	MW-36	DTW (ft): 3.01
Field Crew:	MW, EH	Water Column (ft): 15.01
Remarks:		☆ 2 BOTTLE SET

SAMPLING INFORMATION:

Depth sample was acquired:	12-15
Sample Date/Time:	12/06/18 @ 1540
Signed Sampler:	
Sample Observations:	
Parameters (please circle):	(VOCs) SVOCs Dissolved Metals Other:

(1)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-42

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18	Well Depth (ft): 13.39
Well Number: MW-42	DTW (ft): 4.37
Field Crew: ~~AAW~~, MW, EH	Water Column (ft): 9.02

Remarks:

MNA MW-42-120618 $Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 7-10

Sample Date/Time: 12/06/18 @ 1340

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-41

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/6/18	Well Depth (ft): 13.39
Well Number: MW-41	DTW (ft): 4.37
Field Crew: [signature] MW, EH	Water Column (ft): 9.02

Remarks:

MW-41-120618 ☆Dup MW-41-D-120618

SAMPLING INFORMATION:

Depth sample was acquired: 7-10

Sample Date/Time: 12/06/18 @ 1350

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

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

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18	Well Depth (ft): 13.15
Well Number: MW-40	DTW (ft): 2.27
Field Crew: MW, EH	Water Column (ft): 10.88

Remarks:

MNA MW-40-120618 $Fe^{2+} = 1.5 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 7-10

Sample Date/Time: 12/06/18 @ 1400

Signed Sampler: [signature]

Sample Observations:

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

(2)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-39

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18	Well Depth (ft): 13.03
Well Number: MW-39	DTW (ft): 4.45
Field Crew: MW, EH	Water Column (ft): 8.58

Remarks:

MW-39-120618 ☆2 BOTTIE SET

SAMPLING INFORMATION:

Depth sample was acquired: 7-10

Sample Date/Time: 12/06/18 @ 1415

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-34

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18	Well Depth (ft): 7.82
Well Number: MW-34	DTW (ft): 2.87
Field Crew: MW, EH	Water Column (ft): 4.95

Remarks:

MW-34-120618 ☆ 2 BOTTLE SET

SAMPLING INFORMATION:

Depth sample was acquired: 2.0-5.0 → BOTTOM IF NEEDED

Sample Date/Time: 12/06/18 @ 1420

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-15

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 12/06/18	Well Depth (ft): 19
Well Number: MW-15	DTW (ft): 10.37
Field Crew: MW, EH	Water Column (ft): 8.63

Remarks:

MNA

$Fe^{2+} = 0.0$ mg/L

SAMPLING INFORMATION:

Depth sample was acquired: 16-19

Sample Date/Time: 12/06/18 @ 1430

Signed Sampler:

Sample Observations:

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

(4)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-24

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/06/18	Well Depth (ft):	15.33
Well Number:	MW-24	DTW (ft):	4.78
Field Crew:	MW, EH	Water Column (ft):	10.55

Remarks: 2 VOCs

SAMPLING INFORMATION:

Depth sample was acquired: 10-13

Sample Date/Time: 120618 @1515

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-24B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	12/06/18	Well Depth (ft):	46.23
Well Number:	MW-24B	DTW (ft):	5.59
Field Crew:	MW, EH	Water Column (ft):	40.64

Remarks: 2 VOCS

SAMPLING INFORMATION:

Depth sample was acquired: 35-38

Sample Date/Time: 12/06/18 1505

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	~~MW-25~~ ~~MW-34~~ MW-43

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	~~M~~ 12/06/18	Well Depth (ft):	10.30
Well Number:	MW-43	DTW (ft):	4.24
Field Crew:	MW, EH	Water Column (ft):	6.04

Remarks: 2 VOC

SAMPLING INFORMATION:

Depth sample was acquired: 7-10

Sample Date/Time: 12/06/18 @ 1520

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400	MW-07

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 13.5
Well Number: MW-07	DTW (ft): 6.15
Field Crew: MW, KC, AD	Water Column (ft): 7.35

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: ~~9-1~~ 10.5 - 13.5

Sample Date/Time: 02/19/19 @

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-15B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 77.9
Well Number: MW-15B	DTW (ft): 8.81
Field Crew: MW, KC, AD	Water Column (ft): 69.09

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 60 - 63 ft

Sample Date/Time: 02/19/19 @

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-20

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 19Ft
Well Number: MW-20	DTW (ft): 6.39
Field Crew: MW, KC, AD	Water Column (ft): 12.61

Remarks:

FILM ON TOP OF WATER

SAMPLING INFORMATION:

Depth sample was acquired: 16 - 19 Ft

Sample Date/Time: 02/19/19 @

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-26

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 15 ft
Well Number: MW-26	DTW (ft): 1.21
Field Crew: MW, KC, AD	Water Column (ft): 13.79
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 11 - 14 ft				
Sample Date/Time: 02/19/19 @				
Signed Sampler:				
Sample Observations:				
Parameters (please circle):	(VOCs)	SVOCs	Dissolved Metals	Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-36

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 24.5
Well Number: MW-36	DTW (ft): 11.97
Field Crew: MW, KC, AD	Water Column (ft): 12.53
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 17 - 19				
Sample Date/Time: 02/19/19				
Signed Sampler:				
Sample Observations:				
Parameters (please circle):	(VOCs)	SVOCs	Dissolved Metals	Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-37

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 16.00
Well Number: MW-37	DTW (ft): 3.08
Field Crew: MW, KC, AD	Water Column (ft): 12.92
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 11 - 14				
Sample Date/Time: 02/19/19 @				
Signed Sampler:				
Sample Observations:				
Parameters (please circle):	(VOCs)	SVOCs	Dissolved Metals	Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-38

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 9.00
Well Number: MW-38	DTW (ft): 1.27
Field Crew: MW, KC, AD	Water Column (ft): 7.75

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 5-8 ft

Sample Date/Time: 02/19/19 @

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-39

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 11
Well Number: MW-39	DTW (ft): 4.42
Field Crew: MW, KC, AD	Water Column (ft): 6.58

Remarks:

IRON FLOCCULANT

SAMPLING INFORMATION:

Depth sample was acquired: ~~02/19/19~~ 6-9 ft

Sample Date/Time: 02/19/19

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
	MW-41

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 02/19/19	Well Depth (ft): 11
Well Number: MW-41	DTW (ft): 3.58
Field Crew: MW, KC, AD	Water Column (ft): 7.42

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time: 6-9

Signed Sampler:

Sample Observations:

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

JACOBS

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

LOW FLOW SAMPLING LOG

Well Number:	MW-17B	Site: Lewis Drive Site, Belton, SC	
Field Crew:	MW, KC, AD	Date:	02/19/19
Well Depth (ft):	27.0	Purge Methodology:	
DTW (ft):	8.90		
Water Column (ft):	18.10		
Well Diameter (in):	4"		
Gal. Per ft:	0.653		
Well volume (gal):	11.81		
Depth of Screen (ft):			

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: 037366
Pump type (please circle): (TYPHOON) Peristaltic Bladder
Pump serial number: 023823

PID reading: 0.2 opening well | after venting, if initially high | middle of sampling 0.0 | closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	SPC 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
1300	9.29	~~35~~ 51	1/2 GAL	6.66	18.4	0.212	-255.0	3.67	8.2	CLEAR/NO ODOR
1303	9.99	51	1.5	6.41	18.3	0.210	-421	0.53	1.7	
1308	10.47	65	7.5	6.39	18.9	0.207	-496.1	0.16	1.4	
1313	6.66	65	13.5	6.30	19.0	0.184	-478.1	0.10	0.9	
1318	10.71	65	19.5	6.20	19.2	0.164	-426.8	0.09	1.1	
1323	10.75	65	25.5	6.17	19.2	0.158	-392.8	0.09	1.3	
1328	10.80	65	31.5	6.18	19.2	0.158	-344.6	0.10	1.2	
1333	10.84	65	37.5	6.13	19.2	0.149	-322.6	0.09	1.1	
1338	10.88	65	43.5	6.10	19.3	0.143	-309.3	0.09	1.0	
1343	10.92	65	49.5	6.08	19.3	0.138	-299.6	0.09	1.0	
1348	10.97	65	55.5	6.06	19.3	0.141	-287.2	0.09	0.9	

02/19/19

Remarks:
~~35~~ 51 = 1 GAL/MIN
65 = 1.2 GAL/MIN

MW-17B-021919
MW-17B-D-021919

SAMPLING INFORMATION:

Depth to Water Before Sampling: 10.97 Depth sample was acquired: 13ft
Sample Methodology: BAILER
Sample Date/Time: 02/19/19 @ 1350
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER D3161400. | WELL NUMBER MW-40 | SHEET 1 OF

LOW FLOW SAMPLING LOG

Well Number: MW-40
Field Crew: MW, AD, IKC
Well Depth (ft): ~~27~~ 13.2 Purge
DTW (ft): 2.21 Methodology: low flow
Water Column (ft): 10.99
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 1.79
Depth of Screen (ft): —

Site: LEWIS DRIVE
Date: 02/20/19

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): (TYPHOON) Peristaltic Bladder
Pump serial number: 037058

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

Field Parameters

Time	DTW (toc)	GAL/MIN 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
1333	START PUMP									
1335	6.94	1.2	0.20	6.02	11.06	0.030	140.3	7.01	52	TURBID, NO ODOR
1338	9.50	1.2	2.5	5.61	13.8	0.031	80.8	1.59	85	TURBID, NO ODOR
1341	10.46	1.2	6.1	5.50	14.3	0.033	78.5	1.29	99	TURBID, NO ODOR
1344	10.62	1.2	9.7	5.49	14.5	0.033	80.4	1.31	46	TURBID, NO ODOR
1344	STOPPED PUMP									
1410	COLLECTED SAMPLE									

Remarks: 5 x WELL VOLUME = 9 GALLONS

MW-40-022019

SAMPLING INFORMATION:

Depth to Water Before Sampling: 10.5 Depth sample was acquired: 10.5
Sample Methodology: BAILER
Sample Date/Time: 02/20/19
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: TURBID, NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400	MW-34
	SHEET 1 OF

LOW FLOW SAMPLING LOG

Well Number: MW-34
Field Crew: MW, AD, KC
Well Depth (ft): 7.86
DTW (ft): 2.83
Water Column (ft): 5.03
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.82
Depth of Screen (ft):
PID reading:

Purge
Methodology: low flow

Site: LEWIS DRIVE
Date: 02/20/19

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): TYPHOON Peristaltic Bladder
Pump serial number: 037058

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. [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
1310	2.83	START PUMP								
1310	WELL	PUMPED DRY								
1313	6.88									
1317	6.85									
1318	6.83									
1400	6.57	COLLECT SAMPLE								

02/20/19

Remarks:
5x WELL VOLUME = 4 GALLONS

SAMPLING INFORMATION:

Depth to Water Before Sampling: 6.57
Depth sample was acquired: 6.50
Sample Methodology: BAILER
Sample Date/Time: 02/20/19 @
Signed Sampler:
Filtered Metals Collected: Y / (N)
Filter Size:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400	MW-23
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number:	MW-23
Field Crew:	MW, KC, AD
Well Depth (ft):	27.5
DTW (ft):	4.24
Water Column (ft):	23.26
Well Diameter (in):	2
Gal. Per ft:	~~3.79~~ 0.163
Well volume (gal):	3.79
Depth of Screen (ft):	—

Purge
Methodology: low flow

Site: LEWIS DRIVE
Date: 02/20/19

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): (TYPHOON) Peristaltic Bladder
Pump serial number: 037058

PID reading: opening well 6.0 after venting, if initially high middle of sampling 0.0 closing well 0.0

Field Parameters

Time	DTW (toc)	GAL/MIN 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
0900	4.95	65=1.2	36AL	4.97	14.9	0.072	164	1.07	16.5	CLEAR, NO ODOR
0903	5.06	1.2	6.Bb	4.93	15.2	0.068	136.6	0.74	4.2	CLEAR, NO ODOR
0906	5.08	1.2	10	4.95	15.3	0.067	138.5	0.71	7.4	CLEAR, NO ODOR
0909	5.08	1.2	13.6	4.95	15.3	0.066	142.9	0.68	4.0	CLEAR, NO ODOR
0912	5.10	1.2	17.2	4.95	15.3	0.066	145.9	0.67	0.9	CLEAR, NO ODOR
0915	5.12	1.2	20.8	4.95	15.4	0.066	148.6	0.66	0.0	CLEAR, NO ODOR
0915	COLLECT	SAMPLE								

02/20/19

Remarks: 5x WELL VOLUME = 19 GALLONS
65 FLOW RATE = 1.2 GAL/MIN

MW-23-022019
MW-23-D-022019

SAMPLING INFORMATION:

Depth to Water Before Sampling: 5.12 Depth sample was acquired: 10 FT
Sample Methodology: BAILER
Sample Date/Time: 02/20/19 @
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR, NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER D3161400

WELL NUMBER MW-46

SHEET | OF |

LOW FLOW SAMPLING LOG

Well Number: MW-46
Field Crew: MW, AD, K. CHERNOFF
Well Depth (ft): 17.1 Purge
DTW (ft): 3.83 Methodology: low flow
Water Column (ft): 13.27
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 2.16
Depth of Screen (ft):
PID reading: opening well 00 after venting, if initially high middle of sampling 0.0 closing well 0.0

Site: LEWIS DRIVE
Date: 02/20/19

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): (TYPHOON) Peristaltic Bladder
Pump serial number: 037058

Field Parameters

Time	DTW (toc)	~~GAL/FT~~ 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
0955	START	PUMP								
0955	4.84	6.5=1.2	1	5.17	11.7	0.029	171.5	1.70	3.9	CLEAR, NO ODOR
0958	7.37	1.2	4.6	5.06	14.2	0.030	138.1	0.47	1.9	SLIGHT ODOR
1001	7.17	1.2	8.0	5.06	14.4	0.031	133.5	0.34	0	SLIGHT ODOR
1004	7.93	1.2	11.6	5.06	14.5	0.031	132.8	0.33	0	SLIGHT ODOR
1005	COLLECT SAMPLE									

02/20/19

Remarks: 5x WELL VOLUME = 11 GALLONS

MW-46-022019

SAMPLING INFORMATION:

Depth to Water Before Sampling: 7.93 Depth sample was acquired: 10 ft
Sample Methodology: BAILER
Sample Date/Time: 02/20/19
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: SLIGHT ODOR, CLEAR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

(1)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	~~MW-~~ MW-19

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: ~~MW-~~ MW-19

Field Crew: MW, TH, JM, AD

Well Depth (ft): 19

DTW (ft): 5.67

Water Column (ft):

Remarks: Fe^{2+} = 0.25 mg/L

MW-19-030519

SAMPLING INFORMATION:

Depth sample was acquired: 9Ft - 12Ft

Sample Date/Time: 03/05/19 @ 1300

Signed Sampler:

Sample Observations: ORANGE FLOCCULANT

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	~~MW-~~ MW-29

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: ~~MW-~~ MW-29

Field Crew: MW, TH, JM, AD

Well Depth (ft): 15.0

DTW (ft): 0.71

Water Column (ft):

Remarks: SLIGHT TURBIDITY / NO ODOR

MW-29-030519

SAMPLING INFORMATION:

Depth sample was acquired: 11 - 14

Sample Date/Time: 03/05/19 @ 1250

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-26B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:

Well Number: MW-26B

Field Crew:

Well Depth (ft): 38.0

DTW (ft):

Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-20

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-20

Field Crew: MW, TH, TM, AD

Remarks: Fe^{2+} = 1.5 mg/L

Well Depth (ft): 19

DTW (ft): 5.94

Water Column (ft):

SLIGHT ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 15ft - 18ft

Sample Date/Time: 03/05/19 @ 1300

Signed Sampler:

Sample Observations: SLIGHT ODOR

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-26

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-26

Field Crew: MW, TH, TM, AD

Remarks:

Well Depth (ft): 15.0

DTW (ft): 0.61

Water Column (ft):

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 11 - 14

Sample Date/Time: 03/05/19 @ ~~1300~~ 1340

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-26B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-26B

Field Crew: MW, TH, TM, AD

Remarks:

Well Depth (ft): 38.0

DTW (ft): 0.0

Water Column (ft): 38

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 30 ft - 33 ft

Sample Date/Time: 03/05/19 @ 1335

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-23

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-23

Field Crew:

Well Depth (ft): 20

DTW (ft): 2.83

Water Column (ft):

Remarks: DUPLICATE

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 13Ft - 15 ft

Sample Date/Time: 03/05/19 @ 1355

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-23B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-23B

Field Crew:

Well Depth (ft): 50.5

DTW (ft): 6.69

Water Column (ft):

Remarks:

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 40 ft - 50 ft

Sample Date/Time: 03/05/19 @ 1400

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-46

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-46

Field Crew:

Well Depth (ft): 14.0

DTW (ft): 2.67

Water Column (ft):

Remarks:

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 03/05/19 @ 1435

Sample Date/Time: 11-14

Signed Sampler:

Sample Observations:

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

4

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-45

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19	Well Depth (ft): 14.0
Well Number: MW-45	DTW (ft): 5.64
Field Crew:	Water Column (ft):

Remarks:

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 11-14

Sample Date/Time: 03/05/19 @ 1415

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-45B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19	Well Depth (ft): 40.3
Well Number: MW-45B	DTW (ft): 9.13
Field Crew:	Water Column (ft):

Remarks:

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: ~~#-14~~ ~~40~~ 30-33ft

Sample Date/Time: 03/05/19 @ 1420

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-21

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19	Well Depth (ft): 20.0
Well Number: MW-21	DTW (ft): 8.84
Field Crew:	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 14-17ft

Sample Date/Time: 03/05/19 @ 1445

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-17

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19	Well Depth (ft): 11.0
Well Number: MW-17	DTW (ft): 6.81
Field Crew:	Water Column (ft):
Remarks: CLEAR, ODOR	

SAMPLING INFORMATION:

Depth sample was acquired: 03/05/19 @ 1500

Sample Date/Time: 8-11 ft

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-17B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:	Well Depth (ft): 27.0
Well Number: MW-17B	DTW (ft): 7.18
Field Crew:	Water Column (ft):
Remarks: CLEAR, NO ODOR	

SAMPLING INFORMATION:

Depth sample was acquired: 20-23 ft

Sample Date/Time: 03/05/19 @ 1505

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-22

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19	Well Depth (ft): 11.0
Well Number: MW-22	DTW (ft): 3.41
Field Crew:	Water Column (ft):
Remarks: Fe^{2+} = 0.0 mg/L CLEAR, NO ODOR	

SAMPLING INFORMATION:

Depth sample was acquired: 8-11 ft

Sample Date/Time: 03/05/19 @ 1520

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-44

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19
Well Number: MW-44
Field Crew: MW, JM, TH
Well Depth (ft): 10.0
DTW (ft): 1.41
Water Column (ft):
Remarks:

CLEAR SAMPLE, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 7 - 10 ft
Sample Date/Time: 03/05/19 @ 1540
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-44B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19
Well Number: MW-44B
Field Crew: MW, JM, TH
Well Depth (ft): 37.1
DTW (ft): 5.97
Water Column (ft):
Remarks:

SAMPLE SLIGHTLY TURBID, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 03/05/19 @ 1550
Sample Date/Time: 20 - 23 ft
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-01

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19
Well Number: MW-01
Field Crew: MW, JM, TH
Well Depth (ft): 13.0
DTW (ft): 2.79
Water Column (ft):
Remarks: Fe^{2+}

$Fe^{2+} = 0.25 \frac{mg}{L}$

CLEAR SAMPLE, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 9 - 12 ft
Sample Date/Time: 03/05/19 @ 1600
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-01B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-01B

Field Crew: MW, JM, TH

Well Depth (ft): 38.5

DTW (ft): 4.02

Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 20 - 23 ft

Sample Date/Time: 03/05/19 @ 1610

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-27

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-27

Field Crew: MW, JM, TH

Well Depth (ft): 30.3

DTW (ft): 18.01

Water Column (ft):

Remarks:

SAMPLE CLEAR, SLIGHT ODOR

DUPLICATE @ 1621

SAMPLING INFORMATION:

Depth sample was acquired: 20 - 23 ft

Sample Date/Time: 03/05/19 @ 1620

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-27B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/05/19

Well Number: MW-27B

Field Crew: MW, JM, TH

Well Depth (ft): 46.0

DTW (ft): 24.49

Water Column (ft):

Remarks:

CLEAR SAMPLE, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 40 - 43 ft

Sample Date/Time: 03/05/19 @ 1630

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-11

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 | Well Depth (ft): 25.2

Well Number: MW-11 | DTW (ft): 23.01

Field Crew: MW, JM, TH, AD | Water Column (ft):

Remarks: Fe^{2+}

$Fe^{2+} = 0.0 \frac{mg}{L}$ ODOR PRESENT, CLEAR

SAMPLING INFORMATION:

Depth sample was acquired: ~~23 - 26~~ 24 - 27

Sample Date/Time: 03/06/19 @ 0950

Signed Sampler: Melissa Allen

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-12 MW-12

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 | Well Depth (ft): 19.3

Well Number: MW-12 | DTW (ft): 5.05

Field Crew: MW, JM, TH, AD | Water Column (ft):

Remarks: Fe^{2+}

$Fe^{2+} = 0.0 \frac{mg}{L}$ CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 10 - 13 ft

Sample Date/Time: 03/06/19 @ 1055

Signed Sampler: Melissa Allen

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-12B MW-12B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 | Well Depth (ft): 43.0

Well Number: MW-12B | DTW (ft): 7.05

Field Crew: MW, JM, TH, AD | Water Column (ft):

Remarks:

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 35 - 38 ft

Sample Date/Time: 03/06/19 @ 1105

Signed Sampler: Melissa Allen

Sample Observations:

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

(2)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-28

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/06/19
Well Number: MW-28
Field Crew: MW, JM, AD, TH
Remarks: Fe^{2+}

Well Depth (ft): 25.0
DTW (ft): 16.42
Water Column (ft):

$Fe^{2+} = 0.5 \frac{mg}{L}$ TURBID, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 21 - 24 ft
Sample Date/Time: 03/06/19 @ 1020
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-49

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/06/19
Well Number: MW-49
Field Crew: MW, JM, AD, TH
Remarks:

Well Depth (ft): 21.0
DTW (ft): 9.88
Water Column (ft):

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 15 - 18 Ft
Sample Date/Time: 03/06/19 @ 1035
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-35

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/06/19
Well Number: MW-35
Field Crew: MW, JM, AD, TH
Remarks: Fe^{2+}

Well Depth (ft): 25.0
DTW (ft): 5.39
Water Column (ft):

$Fe^{2+} = 0.25 \frac{mg}{L}$ CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 15 - 18 ft
Sample Date/Time: 03/06/19 @ 1030
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

(3)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-25 MW-25

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19

Well Number: MW-25

Field Crew: MW, JM, TH, AD

Well Depth (ft): 15.0

DTW (ft): 5.03

Water Column (ft):

Remarks: Fe^{2+}

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 10-13ft

Sample Date/Time: 03/06/19 @ 1055

Signed Sampler: Melissa Ulm

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-25B MW-25B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19

Well Number: MW-25B

Field Crew: MW, JM, TH, AD

Well Depth (ft): 58.0

DTW (ft): 2.72

Water Column (ft):

Remarks:

CLEAR, NO ODOR ☆DUPLICATE

SAMPLING INFORMATION:

Depth sample was acquired: 50-53 ft

Sample Date/Time: 03/06/19 @ 1040

Signed Sampler: Melissa Ulm

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-42 MW-42

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19

Well Number: MW-42

Field Crew: MW, JM, TH, AD

Well Depth (ft): 11.0

DTW (ft): 4.06

Water Column (ft):

Remarks: Fe^{2+}

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 7-10 ft

Sample Date/Time: 03/06/19 @ 1110

Signed Sampler: Melissa Ulm

Sample Observations:

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

4

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-41 MW-41

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 11.0
Well Number: MW-41	DTW (ft): 3.33
Field Crew: MW, TM, TH, AD	Water Column (ft):
Remarks:	

SAMPLING INFORMATION:

Depth sample was acquired: 7-10 Ft

Sample Date/Time: 03/06/19 @ 1120

Signed Sampler: Melissa Ulm

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-40 MW-40

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 11.0
Well Number: MW-40	DTW (ft): 1.82
Field Crew: MW, TH, TM, AD	Water Column (ft):
Remarks: Fe^{2+} = 0.0 mg/L	

SAMPLING INFORMATION:

Depth sample was acquired: 7-10 ft

Sample Date/Time: 03/06/19 @ 1135

Signed Sampler: Melissa Ulm

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-39 MW-39

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 11.0
Well Number: MW-39	DTW (ft): 3.99
Field Crew: MW, TH, TM, AD	Water Column (ft):
Remarks: SAMPLE ~~CLEAR~~, NO ODOR SLIGHTLY TURBID	

SAMPLING INFORMATION:

Depth sample was acquired: 7-10 Ft

Sample Date/Time: 03/06/19 @ 1345

Signed Sampler: Melissa Ulm

Sample Observations:

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

(5)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-34 MW-34

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 5.0
Well Number: MW-34	DTW (ft): 2.66
Field Crew: MW, TH, JM, AD	Water Column (ft):

Remarks:

SAMPLE CLEAR ~~[illegible]~~
NO, ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 4-7 ft

Sample Date/Time: 03/06/19 @ 1325

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-15 MW-15

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 19.0
Well Number: MW-15	DTW (ft): 7.07
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks: Fe^{2+}

$Fe^{2+} = 0.0$ mg/L

SAMPLING INFORMATION:

Depth sample was acquired: 15-18 ft

Sample Date/Time: 03/06/19 @ 1140

Signed Sampler: [signature]

Sample Observations:

Parameters (please circle): [VOCs] SVOCs Dissolved Metals Other: [MNA]

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-15B

(FD)

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 77.9
Well Number: MW-15B	DTW (ft): 13.14
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 70-73 ft

Sample Date/Time: 03/06/19 @ 1355

Signed Sampler: [signature]

Sample Observations:

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

(6)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-38 MW-38

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19

Well Number: MW-38

Field Crew: MW, AD, TH, JM

Well Depth (ft): 9.0

DTW (ft): 0.72

Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 6 - 9 ft

Sample Date/Time: 03/06/19 @ 1450

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-37 MW-37

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19

Well Number: MW-37

Field Crew: MW, JM, AD, TH

Well Depth (ft): 16.0

DTW (ft): 2.90

Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 10 - 13 ft

Sample Date/Time: 03/06/19 @ 1445

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-24 MW-24

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19

Well Number: MW-24

Field Crew: MW, JM, TH, AD

Well Depth (ft): 13.0

DTW (ft): 5.07

Water Column (ft):

Remarks:

ORANGE FLOCCULANT, TURBID

SAMPLING INFORMATION:

Depth sample was acquired: 10 - 13 ft

Sample Date/Time: 03/06/19 @ 1420

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-24B MW-24B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 39.5
Well Number: MW-24B	DTW (ft): 5.70
Field Crew: MW, AD, JM, TH	Water Column (ft):

Remarks:

CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 20-23 ft

Sample Date/Time: 03/06/19 @ 1410

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-43 MW-43

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 8.0
Well Number: MW-43	DTW (ft): 4.36
Field Crew: MW, TH, JM, AD	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 6-9 ft

Sample Date/Time: 03/06/19 @ 1440

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-43B MW-43B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 51.0
Well Number: MW-43B	DTW (ft): 0.97
Field Crew: MW, JM, TH, AD	Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 40-43 ft

Sample Date/Time: 03/06/19 @ 1430

Signed Sampler:

Sample Observations:

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

(8)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-13 MW-13

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 | Well Depth (ft): 19.0

Well Number: MW-13 | DTW (ft): 15.23

Field Crew: MW, AD, TH, JM | Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 17-20 Ft

Sample Date/Time: 03/06/19 @ 1525

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-13B MW-13B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 | Well Depth (ft): 58.0

Well Number: MW-13B | DTW (ft): 16.37

Field Crew: MW, AD, TH, JM | Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired: 50-53 Ft

Sample Date/Time: 03/06/19 @ 1530

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-14 MW-14

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 | Well Depth (ft): 19.3

Well Number: MW-14 | DTW (ft): 9.49

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 15-18 Ft

Sample Date/Time: 03/06/19 @ 1515

Signed Sampler:

Sample Observations:

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

9

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-14B MW-14B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 76.9
Well Number: MW-14B	DTW (ft): 11.53
Field Crew: MW, JM, TH, AD	Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 70 - 73 Ft

Sample Date/Time: 03/06/19 @ 1520

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-51 MW-51

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19	Well Depth (ft): 22.5
Well Number: MW-51	DTW (ft): 15.86
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 19 - 22 Ft

Sample Date/Time: 03/06/19 @ 1500

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-52 MW-52

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/06/19 @ 1510	Well Depth (ft): 28.5
Well Number: MW-52	DTW (ft): 14.43
Field Crew: MW, JM, TH, AD	Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 25 - 28 Ft

Sample Date/Time: 03/06/19 @

Signed Sampler:

Sample Observations:

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

(10)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-50B · MW-50B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 3/6/19
Well Number: MW-50B
Field Crew: MW, AD, JM, TH
Well Depth (ft): 106.0
DTW (ft): 15.33
Water Column (ft):
Remarks:
SAMPLE VERY TURBID, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 96 - 99
Sample Date/Time: 3/06/19 @ 1620
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-48B · MW-48B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 3/6/19
Well Number: MW-48B
Field Crew: MW, AD, JM, TH
Well Depth (ft): 91.0
DTW (ft): 13.75
Water Column (ft):
Remarks:
WATER CLEAR, NO ODOR
* WELL NEEDS WELL TAG

SAMPLING INFORMATION:

Depth sample was acquired: 80 - 82
Sample Date/Time: 3/6/19 @ 1630
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-33

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date:
Well Number: MW-33
Field Crew:
Well Depth (ft):
DTW (ft):
Water Column (ft):
Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:
Sample Date/Time:
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

11

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-33T MW-33T

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 3/6/19

Well Number: MW-33T

Field Crew: MW, AD, JM, TH

Well Depth (ft): 96.5

DTW (ft): 20.72

Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 88-90

Sample Date/Time: 3/6/19 @ 1610

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-31 MW-31

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 3/6/19

Well Number: MW-31

Field Crew: MW, AD, JM, TH

Well Depth (ft): 25.0

DTW (ft): 13.42

Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 17-20

Sample Date/Time: 3/6/19 @ 1600

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-31B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:

Well Number: MW-31B

Field Crew:

Well Depth (ft):

DTW (ft):

Water Column (ft):

Remarks:

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

12

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-47 MW-47

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 3/6/19

Well Number: MW-47

Field Crew: MW, AD, JM, TH

Well Depth (ft): 20.0

DTW (ft): 10.27

Water Column (ft):

Remarks:

* WELL NEEDS WELL TAG

CLEAR SAMPLE, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 15-17

Sample Date/Time: 3/6/19 @ 1555

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-10

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:

Well Number: MW-10

Field Crew:

Well Depth (ft): 20.0

DTW (ft): 2.02

Water Column (ft):

Remarks: Fe^{2+}

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-32

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date:

Well Number: MW-32

Field Crew:

Well Depth (ft): 24.5

DTW (ft): 5.22

Water Column (ft):

Remarks: Fe^{2+}

SAMPLING INFORMATION:

Depth sample was acquired:

Sample Date/Time:

Signed Sampler:

Sample Observations:

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

13

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-03 MW-03

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19	Well Depth (ft): 20.0
Well Number: MW-03	DTW (ft): 6.70
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks: Fe^{2+} $Fe^{2+} = 0.0 \frac{mg}{L}$ WELL UNDER PRESSURE SAMPLE VERY TURBID. UNABLE TO GUAGE Fe^{2+}

SAMPLING INFORMATION:

Depth sample was acquired: 15 - 18 ft
Sample Date/Time: 03/07/19 @ 0940
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-30

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19	Well Depth (ft): 15.3
Well Number: MW-30	DTW (ft): 6.16
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:
SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 10 - 13
Sample Date/Time: 03/07/19 @ 0925
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-54

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/09	Well Depth (ft): 25.2
Well Number: MW-54	DTW (ft): 5.50
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:
SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 17 - 20
Sample Date/Time: 03/07/19 @ 0935
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-53

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 21.8

Well Number: MW-53 | DTW (ft): 2.02

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 12-15

Sample Date/Time: ~~[illegible]~~ 03/07/19 @ 0945

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-04

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 20.0

Well Number: MW-04 | DTW (ft): 6.23

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks: Fe^{2+} = [illegible] 0.0 mg/L

SAMPLING INFORMATION:

Depth sample was acquired: 12-15

Sample Date/Time: 03/07/19 @ 1000

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-05

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 20.0

Well Number: MW-05 | DTW (ft): 2.91

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 12-15

Sample Date/Time: 03/07/19 @ 1020

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-02

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/07/19
Well Number: MW-02
Field Crew: MW, TH, AD, JM
Well Depth (ft): 20.0
DTW (ft): 0.0
Water Column (ft):
Remarks: $Fe^{2+} = 0.0 \frac{mg}{L}$ SAMPLE VERY TURBID, NO ODOR. WELL BEGAN DAYLIGHTING AFTER WELL WAS UNPLUGGED

SAMPLING INFORMATION:

Depth sample was acquired: 12-15
Sample Date/Time: 03/07/19 @ 1130
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-02B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/07/19
Well Number: MW-02B
Field Crew: MW, TH, AD, JM
Well Depth (ft): 81.0
DTW (ft): 3.74
Water Column (ft):
Remarks: SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 75-78
Sample Date/Time: 03/07/19 @ 1040
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-09

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/07/19
Well Number: MW-09
Field Crew: MW, TH, AD, JM
Well Depth (ft): 19.5
DTW (ft): 8.00
Water Column (ft):
Remarks: $Fe^{2+} = 0.0 \frac{mg}{L}$ SAMPLE SLIGHTLY TURBID / NO ODOR. WELL ~~BAR~~ BEGAN DAYLIGHTING AFTER PLUG REMOVED

SAMPLING INFORMATION:

Depth sample was acquired: 14-17
Sample Date/Time: 03/07/19 @ 1115
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-09B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19	Well Depth (ft): 151.0
Well Number: MW-09B	DTW (ft): 4.07
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 140 - 143

Sample Date/Time: 03/07/19 @ 1100

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-06

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19	Well Depth (ft): 19.6
Well Number: MW-06	DTW (ft): 3.57
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:

SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 13 - 16

Sample Date/Time: 03/07/19 @ 1310

Signed Sampler: [signature]

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-06B

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19	Well Depth (ft): 85.2
Well Number: MW-06B	DTW (ft): 3.99
Field Crew: MW, TH, AD, JM	Water Column (ft):

Remarks:

CLEAR SAMPLE, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 70 - 73

Sample Date/Time: 03/07/19 @ 1315

Signed Sampler: [signature]

Sample Observations:

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

(17)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-07 FD *

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 13.5

Well Number: MW-07 | DTW (ft): 4.72

Field Crew: MV, TH, AD, JM | Water Column (ft):

Remarks:

SAMPLE CLEAR, STRONG ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 9-12

Sample Date/Time: 03/07/19 @ 1320

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-16

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 20.0

Well Number: MW-16 | DTW (ft): 2.00

Field Crew: MV, TH, AD, JM | Water Column (ft):

Remarks: Fe^{2+}

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLE TURBID, SLIGHT ODOR

WELL BEGAN DAYLIGHTING WHEN WELL WAS OPENED

SAMPLING INFORMATION:

Depth sample was acquired: 10-13

Sample Date/Time: 03/07/19 @ 1335

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-18 ?

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 20.0

Well Number: MW-18 | DTW (ft): 15.90

Field Crew: MV, TH, AD, JM | Water Column (ft):

Remarks: Fe^{2+}

SLIGHT SHEEN IN SAMPLE BOTTLES

ORANGE FLOCCULANT IN HYDROSLEEVE

$Fe^{2+} = 1.25 \frac{mg}{L}$

SLIGHT TURBIDITY, STRONG ODOR, SHEEN IN HYDROSLEEVE

SAMPLING INFORMATION:

Depth sample was acquired: 19-20

Sample Date/Time: 03/07/19 @ 1350

Signed Sampler:

Sample Observations:

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

(18)

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-08

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 19.7

Well Number: MW-08 | DTW (ft): 7.45

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks: Fe^{2+} SLIGHT TURBIDITY, NO ODOR

$Fe^{2+} = 0.0 \frac{mg}{L}$

SAMPLING INFORMATION:

Depth sample was acquired: 15-18

Sample Date/Time: 03/07/19 @ 1405

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-36

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 24.5

Well Number: MW-36 | DTW (ft): 10.40

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks: SAMPLE CLEAR, NO ODOR

SAMPLING INFORMATION:

Depth sample was acquired: 12-15

Sample Date/Time: 03/07/19 @ 1515

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-36B FD *

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC

Date: 03/07/19 | Well Depth (ft): 26.0

Well Number: MW-36B | DTW (ft): 10.02

Field Crew: MW, TH, AD, JM | Water Column (ft):

Remarks: SAMPLE SLIGHTLY TURBID, NO ODOR

FD @ 1521

SAMPLING INFORMATION:

Depth sample was acquired: 17-20

Sample Date/Time: 03/07/19 @ 1520

Signed Sampler:

Sample Observations:

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

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-47

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date:
Well Number: MW-47
Field Crew:
Remarks:
Well Depth (ft): 20.0
DTW (ft):
Water Column (ft):

SAMPLING INFORMATION:

Depth sample was acquired:
Sample Date/Time:
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-10

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/07/19
Well Number: MW-10
Field Crew: MW, TH, AD, JM
Remarks: Fe^{2+} = 0.0 mg/L — SAMPLE CLEAR, NO ODOR
Well Depth (ft): 20.0
DTW (ft):
Water Column (ft):

SAMPLING INFORMATION:

Depth sample was acquired:
Sample Date/Time: 03/07/19 @ 1420
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

JACOBS

PROJECT NUMBER	WELL NUMBER
D3161400.A.PN.EV.LDOMR.GW	MW-32

HYDRASLEEVE SAMPLING LOG

Site: Lewis Drive Site, Belton, SC
Date: 03/07/19
Well Number: MW-32
Field Crew: MW, TH, AD, JM
Remarks: Fe^{2+} = 0.0 mg/L — SAMPLE SLIGHTLY TURBID, NO ODOR
Well Depth (ft): 24.5
DTW (ft):
Water Column (ft):

SAMPLING INFORMATION:

Depth sample was acquired: 17-18
Sample Date/Time: 03/07/19 @ 1440
Signed Sampler:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other: MNA

Appendix B
Analytical Laboratory Reports

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 27, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1071958
Samples Received:	02/20/2019
Project Number:	D3161400.B.PN.EV.LDO
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-20-021919 L1071958-01 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 08:40 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	5	02/20/19 21:36	02/20/19 21:36	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	100	02/22/19 10:26	02/22/19 10:26	JHH	Mt. Juliet, TN

MW-07-021919 L1071958-02 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 09:10 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 21:54	02/20/19 21:54	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	50	02/22/19 10:44	02/22/19 10:44	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1242698	250	02/27/19 11:16	02/27/19 11:16	JHH	Mt. Juliet, TN

MW-15B-021919 L1071958-03 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 09:25 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 22:13	02/20/19 22:13	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	20	02/22/19 11:03	02/22/19 11:03	JHH	Mt. Juliet, TN

MW-37-021919 L1071958-04 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 09:35 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 22:32	02/20/19 22:32	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1242698	1	02/27/19 10:58	02/27/19 10:58	JHH	Mt. Juliet, TN

MW-38-021919 L1071958-05 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 09:40 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 22:50	02/20/19 22:50	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	10	02/22/19 11:41	02/22/19 11:41	JHH	Mt. Juliet, TN

MW-39-021919 L1071958-06 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 09:55 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 23:09	02/20/19 23:09	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	1	02/22/19 11:59	02/22/19 11:59	JHH	Mt. Juliet, TN

MW-26-021919 L1071958-07 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 08:55 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 23:28	02/20/19 23:28	BRA	Mt. Juliet, TN

MW-41-021919 L1071958-08 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 10:00 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/20/19 23:47	02/20/19 23:47	BRA	Mt. Juliet, TN

MW-36-021919 L1071958-09 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 10:20 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/21/19 00:05	02/21/19 00:05	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	5	02/22/19 12:18	02/22/19 12:18	JHH	Mt. Juliet, TN

MW-17B-021919 L1071958-10 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:50 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/21/19 00:24	02/21/19 00:24	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	25	02/22/19 12:37	02/22/19 12:37	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1242698	250	02/27/19 15:38	02/27/19 15:38	JHH	Mt. Juliet, TN

MW-17B-D-021919 L1071958-11 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:51 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/21/19 00:43	02/21/19 00:43	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	50	02/22/19 12:55	02/22/19 12:55	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1242698	500	02/27/19 11:53	02/27/19 11:53	JHH	Mt. Juliet, TN

FB01-021919 L1071958-12 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 15:35 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240073	1	02/21/19 01:02	02/21/19 01:02	BRA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240624	1	02/22/19 13:14	02/22/19 13:14	JHH	Mt. Juliet, TN

TB02-021919 L1071958-13 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 15:55 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241036	1	02/23/19 10:47	02/23/19 10:47	JAH	Mt. Juliet, TN

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	6650		100	100	02/22/2019 10:26	WG1240624
Toluene	13900		100	100	02/22/2019 10:26	WG1240624
Ethylbenzene	1080		100	100	02/22/2019 10:26	WG1240624
Total Xylenes	11700		300	100	02/22/2019 10:26	WG1240624
Methyl tert-butyl ether	128		5.00	5	02/20/2019 21:36	WG1240073
Naphthalene	341		25.0	5	02/20/2019 21:36	WG1240073
1,2-Dichloroethane	ND		5.00	5	02/20/2019 21:36	WG1240073
(S) Toluene-d8	*94.8*		*80.0-120*		*02/20/2019 21:36*	WG1240073
(S) Toluene-d8	*102*		*80.0-120*		*02/22/2019 10:26*	WG1240624
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*02/20/2019 21:36*	WG1240073
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*02/22/2019 10:26*	WG1240624
(S) 1,2-Dichloroethane-d4	*79.2*		*70.0-130*		*02/20/2019 21:36*	WG1240073
(S) 1,2-Dichloroethane-d4	*82.8*		*70.0-130*		*02/22/2019 10:26*	WG1240624

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	5360		50.0	50	02/22/2019 10:44	WG1240624
Toluene	12400		250	250	02/27/2019 11:16	WG1242698
Ethylbenzene	516		50.0	50	02/22/2019 10:44	WG1240624
Total Xylenes	7280		150	50	02/22/2019 10:44	WG1240624
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 21:54	WG1240073
Naphthalene	6.32		5.00	1	02/20/2019 21:54	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 21:54	WG1240073
(S) Toluene-d8	*88.4*		*80.0-120*		*02/20/2019 21:54*	WG1240073
(S) Toluene-d8	*104*		*80.0-120*		*02/22/2019 10:44*	WG1240624
(S) Toluene-d8	*100*		*80.0-120*		*02/27/2019 11:16*	WG1242698
(S) 4-Bromofluorobenzene	*99.7*		*77.0-126*		*02/20/2019 21:54*	WG1240073
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*02/22/2019 10:44*	WG1240624
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*02/27/2019 11:16*	WG1242698
(S) 1,2-Dichloroethane-d4	*121*		*70.0-130*		*02/20/2019 21:54*	WG1240073
(S) 1,2-Dichloroethane-d4	*83.0*		*70.0-130*		*02/22/2019 10:44*	WG1240624
(S) 1,2-Dichloroethane-d4	*98.9*		*70.0-130*		*02/27/2019 11:16*	WG1242698

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	686		20.0	20	02/22/2019 11:03	WG1240624
Toluene	1420		20.0	20	02/22/2019 11:03	WG1240624
Ethylbenzene	71.2		1.00	1	02/20/2019 22:13	WG1240073
Total Xylenes	621		60.0	20	02/22/2019 11:03	WG1240624
Methyl tert-butyl ether	92.3		1.00	1	02/20/2019 22:13	WG1240073
Naphthalene	12.6		5.00	1	02/20/2019 22:13	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 22:13	WG1240073
(S) Toluene-d8	*93.0*		*80.0-120*		*02/20/2019 22:13*	WG1240073
(S) Toluene-d8	*103*		*80.0-120*		*02/22/2019 11:03*	WG1240624
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*02/20/2019 22:13*	WG1240073
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*02/22/2019 11:03*	WG1240624
(S) 1,2-Dichloroethane-d4	*85.8*		*70.0-130*		*02/20/2019 22:13*	WG1240073
(S) 1,2-Dichloroethane-d4	*84.0*		*70.0-130*		*02/22/2019 11:03*	WG1240624

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	02/27/2019 10:58	WG1242698
Toluene	ND		1.00	1	02/27/2019 10:58	WG1242698
Ethylbenzene	ND		1.00	1	02/20/2019 22:32	WG1240073
Total Xylenes	ND		3.00	1	02/27/2019 10:58	WG1242698
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 22:32	WG1240073
Naphthalene	ND		5.00	1	02/20/2019 22:32	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 22:32	WG1240073
(S) Toluene-d8	*104*		*80.0-120*		*02/20/2019 22:32*	WG1240073
(S) Toluene-d8	*100*		*80.0-120*		*02/27/2019 10:58*	WG1242698
(S) 4-Bromofluorobenzene	*98.7*		*77.0-126*		*02/20/2019 22:32*	WG1240073
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*02/27/2019 10:58*	WG1242698
(S) 1,2-Dichloroethane-d4	*79.8*		*70.0-130*		*02/20/2019 22:32*	WG1240073
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*02/27/2019 10:58*	WG1242698

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	887		10.0	10	02/22/2019 11:41	WG1240624
Toluene	ND		10.0	10	02/22/2019 11:41	WG1240624
Ethylbenzene	ND		1.00	1	02/20/2019 22:50	WG1240073
Total Xylenes	331		30.0	10	02/22/2019 11:41	WG1240624
Methyl tert-butyl ether	87.1		1.00	1	02/20/2019 22:50	WG1240073
Naphthalene	14.3		5.00	1	02/20/2019 22:50	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 22:50	WG1240073
(S) Toluene-d8	*99.7*		*80.0-120*		*02/20/2019 22:50*	WG1240073
(S) Toluene-d8	*105*		*80.0-120*		*02/22/2019 11:41*	WG1240624
(S) 4-Bromofluorobenzene	*99.2*		*77.0-126*		*02/20/2019 22:50*	WG1240073
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*02/22/2019 11:41*	WG1240624
(S) 1,2-Dichloroethane-d4	*82.3*		*70.0-130*		*02/20/2019 22:50*	WG1240073
(S) 1,2-Dichloroethane-d4	*88.9*		*70.0-130*		*02/22/2019 11:41*	WG1240624

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	02/22/2019 11:59	WG1240624
Toluene	ND		1.00	1	02/22/2019 11:59	WG1240624
Ethylbenzene	ND		1.00	1	02/20/2019 23:09	WG1240073
Total Xylenes	ND		3.00	1	02/22/2019 11:59	WG1240624
Methyl tert-butyl ether	53.8		1.00	1	02/20/2019 23:09	WG1240073
Naphthalene	ND		5.00	1	02/20/2019 23:09	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 23:09	WG1240073
(S) Toluene-d8	*101*		*80.0-120*		*02/20/2019 23:09*	WG1240073
(S) Toluene-d8	*105*		*80.0-120*		*02/22/2019 11:59*	WG1240624
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*02/20/2019 23:09*	WG1240073
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*02/22/2019 11:59*	WG1240624
(S) 1,2-Dichloroethane-d4	*97.6*		*70.0-130*		*02/20/2019 23:09*	WG1240073
(S) 1,2-Dichloroethane-d4	*83.2*		*70.0-130*		*02/22/2019 11:59*	WG1240624

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	02/20/2019 23:28	WG1240073
Toluene	ND		1.00	1	02/20/2019 23:28	WG1240073
Ethylbenzene	ND		1.00	1	02/20/2019 23:28	WG1240073
Total Xylenes	ND		3.00	1	02/20/2019 23:28	WG1240073
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 23:28	WG1240073
Naphthalene	ND		5.00	1	02/20/2019 23:28	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 23:28	WG1240073
(S) Toluene-d8	*102*		*80.0-120*		*02/20/2019 23:28*	WG1240073
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*02/20/2019 23:28*	WG1240073
(S) 1,2-Dichloroethane-d4	*94.0*		*70.0-130*		*02/20/2019 23:28*	WG1240073

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	02/20/2019 23:47	WG1240073
Toluene	ND		1.00	1	02/20/2019 23:47	WG1240073
Ethylbenzene	ND		1.00	1	02/20/2019 23:47	WG1240073
Total Xylenes	ND		3.00	1	02/20/2019 23:47	WG1240073
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 23:47	WG1240073
Naphthalene	ND		5.00	1	02/20/2019 23:47	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/20/2019 23:47	WG1240073
(S) Toluene-d8	*103*		*80.0-120*		*02/20/2019 23:47*	WG1240073
(S) 4-Bromofluorobenzene	*98.7*		*77.0-126*		*02/20/2019 23:47*	WG1240073
(S) 1,2-Dichloroethane-d4	*89.5*		*70.0-130*		*02/20/2019 23:47*	WG1240073

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	708		5.00	5	02/22/2019 12:18	WG1240624
Toluene	186		1.00	1	02/21/2019 00:05	WG1240073
Ethylbenzene	ND		1.00	1	02/21/2019 00:05	WG1240073
Total Xylenes	152		3.00	1	02/21/2019 00:05	WG1240073
Methyl tert-butyl ether	ND		1.00	1	02/21/2019 00:05	WG1240073
Naphthalene	ND		5.00	1	02/21/2019 00:05	WG1240073
1,2-Dichloroethane	ND		1.00	1	02/21/2019 00:05	WG1240073
(S) Toluene-d8	*98.2*		*80.0-120*		*02/21/2019 00:05*	WG1240073
(S) Toluene-d8	*102*		*80.0-120*		*02/22/2019 12:18*	WG1240624
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*02/21/2019 00:05*	WG1240073
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*02/22/2019 12:18*	WG1240624
(S) 1,2-Dichloroethane-d4	*89.6*		*70.0-130*		*02/21/2019 00:05*	WG1240073
(S) 1,2-Dichloroethane-d4	*85.4*		*70.0-130*		*02/22/2019 12:18*	WG1240624

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	7810		250	250	02/27/2019 15:38	WG1242698
Toluene	20200		250	250	02/27/2019 15:38	WG1242698
Ethylbenzene	1140		25.0	25	02/22/2019 12:37	WG1240624
Total Xylenes	8330		75.0	25	02/22/2019 12:37	WG1240624
Methyl tert-butyl ether	410		25.0	25	02/22/2019 12:37	WG1240624
Naphthalene	181		125	25	02/22/2019 12:37	WG1240624
1,2-Dichloroethane	ND		1.00	1	02/21/2019 00:24	WG1240073
(S) Toluene-d8	*88.5*		*80.0-120*		*02/21/2019 00:24*	WG1240073
(S) Toluene-d8	*95.8*		*80.0-120*		*02/22/2019 12:37*	WG1240624
(S) Toluene-d8	*106*		*80.0-120*		*02/27/2019 15:38*	WG1242698
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*02/21/2019 00:24*	WG1240073
(S) 4-Bromofluorobenzene	*99.8*		*77.0-126*		*02/22/2019 12:37*	WG1240624
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*02/27/2019 15:38*	WG1242698
(S) 1,2-Dichloroethane-d4	*89.5*		*70.0-130*		*02/21/2019 00:24*	WG1240073
(S) 1,2-Dichloroethane-d4	*85.2*		*70.0-130*		*02/22/2019 12:37*	WG1240624
(S) 1,2-Dichloroethane-d4	*73.2*		*70.0-130*		*02/27/2019 15:38*	WG1242698

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	7910		50.0	50	02/22/2019 12:55	WG1240624
Toluene	20700		500	500	02/27/2019 11:53	WG1242698
Ethylbenzene	1210		50.0	50	02/22/2019 12:55	WG1240624
Total Xylenes	8910		150	50	02/22/2019 12:55	WG1240624
Methyl tert-butyl ether	401		50.0	50	02/22/2019 12:55	WG1240624
Naphthalene	ND		250	50	02/22/2019 12:55	WG1240624
1,2-Dichloroethane	ND		1.00	1	02/21/2019 00:43	WG1240073
(S) Toluene-d8	*87.2*		*80.0-120*		*02/21/2019 00:43*	WG1240073
(S) Toluene-d8	*102*		*80.0-120*		*02/22/2019 12:55*	WG1240624
(S) Toluene-d8	*100*		*80.0-120*		*02/27/2019 11:53*	WG1242698
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*02/21/2019 00:43*	WG1240073
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*02/22/2019 12:55*	WG1240624
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*02/27/2019 11:53*	WG1242698
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*02/21/2019 00:43*	WG1240073
(S) 1,2-Dichloroethane-d4	*79.0*		*70.0-130*		*02/22/2019 12:55*	WG1240624
(S) 1,2-Dichloroethane-d4	*82.4*		*70.0-130*		*02/27/2019 11:53*	WG1242698

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	02/22/2019 13:14	WG1240624
Toluene	ND		1.00	1	02/22/2019 13:14	WG1240624
Ethylbenzene	ND		1.00	1	02/22/2019 13:14	WG1240624
Total Xylenes	ND		3.00	1	02/22/2019 13:14	WG1240624
Methyl tert-butyl ether	ND		1.00	1	02/21/2019 01:02	WG1240073
Naphthalene	ND		5.00	1	02/22/2019 13:14	WG1240624
1,2-Dichloroethane	ND		1.00	1	02/21/2019 01:02	WG1240073
(S) Toluene-d8	*102*		*80.0-120*		*02/21/2019 01:02*	WG1240073
(S) Toluene-d8	*103*		*80.0-120*		*02/22/2019 13:14*	WG1240624
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*02/21/2019 01:02*	WG1240073
(S) 4-Bromofluorobenzene	*95.6*		*77.0-126*		*02/22/2019 13:14*	WG1240624
(S) 1,2-Dichloroethane-d4	*83.9*		*70.0-130*		*02/21/2019 01:02*	WG1240073
(S) 1,2-Dichloroethane-d4	*79.7*		*70.0-130*		*02/22/2019 13:14*	WG1240624

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	02/23/2019 10:47	WG1241036
Benzene	ND		1.00	1	02/23/2019 10:47	WG1241036
Bromochloromethane	ND		1.00	1	02/23/2019 10:47	WG1241036
Bromodichloromethane	ND		1.00	1	02/23/2019 10:47	WG1241036
Bromoform	ND		1.00	1	02/23/2019 10:47	WG1241036
Bromomethane	ND		5.00	1	02/23/2019 10:47	WG1241036
Carbon disulfide	ND		1.00	1	02/23/2019 10:47	WG1241036
Carbon tetrachloride	ND		1.00	1	02/23/2019 10:47	WG1241036
Chlorobenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
Chlorodibromomethane	ND		1.00	1	02/23/2019 10:47	WG1241036
Chloroethane	ND		5.00	1	02/23/2019 10:47	WG1241036
Chloroform	ND		5.00	1	02/23/2019 10:47	WG1241036
Chloromethane	ND		2.50	1	02/23/2019 10:47	WG1241036
Cyclohexane	ND		1.00	1	02/23/2019 10:47	WG1241036
1,2-Dibromo-3-Chloropropane	ND		5.00	1	02/23/2019 10:47	WG1241036
1,2-Dibromoethane	ND		1.00	1	02/23/2019 10:47	WG1241036
1,2-Dichlorobenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,3-Dichlorobenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,4-Dichlorobenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
Dichlorodifluoromethane	ND		5.00	1	02/23/2019 10:47	WG1241036
1,1-Dichloroethane	ND		1.00	1	02/23/2019 10:47	WG1241036
1,2-Dichloroethane	ND		1.00	1	02/23/2019 10:47	WG1241036
1,1-Dichloroethene	ND		1.00	1	02/23/2019 10:47	WG1241036
cis-1,2-Dichloroethene	ND		1.00	1	02/23/2019 10:47	WG1241036
trans-1,2-Dichloroethene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,2-Dichloropropane	ND		1.00	1	02/23/2019 10:47	WG1241036
cis-1,3-Dichloropropene	ND		1.00	1	02/23/2019 10:47	WG1241036
trans-1,3-Dichloropropene	ND		1.00	1	02/23/2019 10:47	WG1241036
Ethylbenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
2-Hexanone	ND		10.0	1	02/23/2019 10:47	WG1241036
Isopropylbenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
2-Butanone (MEK)	ND		10.0	1	02/23/2019 10:47	WG1241036
Methyl Acetate	ND		20.0	1	02/23/2019 10:47	WG1241036
Methyl Cyclohexane	ND		1.00	1	02/23/2019 10:47	WG1241036
Methylene Chloride	ND		5.00	1	02/23/2019 10:47	WG1241036
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	02/23/2019 10:47	WG1241036
Methyl tert-butyl ether	ND		1.00	1	02/23/2019 10:47	WG1241036
Styrene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,1,2,2-Tetrachloroethane	ND		1.00	1	02/23/2019 10:47	WG1241036
Tetrachloroethene	ND		1.00	1	02/23/2019 10:47	WG1241036
Toluene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,2,3-Trichlorobenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,2,4-Trichlorobenzene	ND		1.00	1	02/23/2019 10:47	WG1241036
1,1,1-Trichloroethane	ND		1.00	1	02/23/2019 10:47	WG1241036
1,1,2-Trichloroethane	ND		1.00	1	02/23/2019 10:47	WG1241036
Trichloroethene	ND		1.00	1	02/23/2019 10:47	WG1241036
Trichlorofluoromethane	ND		5.00	1	02/23/2019 10:47	WG1241036
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	02/23/2019 10:47	WG1241036
Vinyl chloride	ND		1.00	1	02/23/2019 10:47	WG1241036
Xylenes, Total	ND		3.00	1	02/23/2019 10:47	WG1241036
(S) Toluene-d8	*100*		*80.0-120*		*02/23/2019 10:47*	WG1241036
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*02/23/2019 10:47*	WG1241036
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*02/23/2019 10:47*	WG1241036
(S) 1,2-Dichloroethane-d4	*98.0*		*70.0-130*		*02/23/2019 10:47*	WG1241036

Sample Narrative:

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	

L1071958-13 WG1241036: Analyzed from a headspaced vial.

Method Blank (MB)

(MB) R3385966-3 02/20/19 18:46

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	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*89.4*			*70.0-130*

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

(LCS) R3385966-1 02/20/19 17:50 • (LCSD) R3385966-2 02/20/19 18:09

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 %
Benzene	25.0	27.2	26.4	109	106	70.0-123			2.93	20
1,2-Dichloroethane	25.0	22.0	21.5	87.9	86.0	70.0-128			2.11	20
Ethylbenzene	25.0	27.1	27.7	108	111	79.0-123			2.39	20
Methyl tert-butyl ether	25.0	25.2	24.1	101	96.2	68.0-125			4.51	20
Naphthalene	25.0	21.5	21.8	86.0	87.0	54.0-135			1.15	20
Toluene	25.0	27.2	27.6	109	110	79.0-120			1.64	20
Xylenes, Total	75.0	87.3	88.8	116	118	79.0-123			1.70	20
(S) Toluene-d8				*99.9*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*82.5*	*77.5*	*70.0-130*				

Method Blank (MB)

(MB) R3386109-3 02/22/19 07:37

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
(S) Toluene-d8	*99.7*			*80.0-120*
(S) 4-Bromofluorobenzene	*97.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*91.3*			*70.0-130*

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

(LCS) R3386109-1 02/22/19 06:40 • (LCSD) R3386109-2 02/22/19 06:59

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 %
Benzene	25.0	23.1	24.7	92.3	98.8	70.0-123			6.79	20
Ethylbenzene	25.0	23.1	23.8	92.3	95.3	79.0-123			3.19	20
Methyl tert-butyl ether	25.0	22.9	18.8	91.4	75.3	68.0-125			19.4	20
Naphthalene	25.0	20.6	23.0	82.5	91.9	54.0-135			10.8	20
Toluene	25.0	23.6	24.3	94.2	97.2	79.0-120			3.10	20
Xylenes, Total	75.0	75.1	77.1	100	103	79.0-123			2.63	20
(S) Toluene-d8				*100*	*101*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*98.4*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*89.9*	*98.2*	*70.0-130*				

Method Blank (MB)

(MB) R3386881-2 02/23/19 09:42

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
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) R3386881-2 02/23/19 09:42

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	*105*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*96.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3386881-1 02/23/19 08:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	139	111	19.0-160	
Benzene	25.0	23.7	94.7	70.0-123	
Bromodichloromethane	25.0	25.3	101	75.0-120	
Bromochloromethane	25.0	25.8	103	76.0-122	
Bromoform	25.0	24.9	99.4	68.0-132	
Bromomethane	25.0	26.0	104	10.0-160	
Carbon disulfide	25.0	24.6	98.5	61.0-128	
Carbon tetrachloride	25.0	25.0	99.8	68.0-126	
Chlorobenzene	25.0	24.1	96.4	80.0-121	
Chlorodibromomethane	25.0	24.4	97.7	77.0-125	
Chloroethane	25.0	24.0	96.2	47.0-150	
Chloroform	25.0	25.9	103	73.0-120	
Chloromethane	25.0	26.8	107	41.0-142	
1,2-Dibromo-3-Chloropropane	25.0	19.5	78.0	58.0-134	
1,2-Dibromoethane	25.0	25.4	102	80.0-122	
1,2-Dichlorobenzene	25.0	24.6	98.5	79.0-121	
1,3-Dichlorobenzene	25.0	24.2	96.8	79.0-120	
1,4-Dichlorobenzene	25.0	22.8	91.2	79.0-120	
Dichlorodifluoromethane	25.0	34.4	137	51.0-149	

Laboratory Control Sample (LCS)

(LCS) R3386881-1 02/23/19 08:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1-Dichloroethane	25.0	24.8	99.4	70.0-126	
1,2-Dichloroethane	25.0	25.2	101	70.0-128	
1,1-Dichloroethene	25.0	24.6	98.5	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
trans-1,2-Dichloroethene	25.0	25.0	99.9	73.0-120	
1,2-Dichloropropane	25.0	23.7	94.8	77.0-125	
cis-1,3-Dichloropropene	25.0	24.9	99.6	80.0-123	
trans-1,3-Dichloropropene	25.0	24.7	98.9	78.0-124	
Ethylbenzene	25.0	23.7	95.0	79.0-123	
2-Hexanone	125	129	103	67.0-149	
Isopropylbenzene	25.0	25.3	101	76.0-127	
2-Butanone (MEK)	125	124	99.2	44.0-160	
Methylene Chloride	25.0	24.5	98.1	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	127	102	68.0-142	
Methyl tert-butyl ether	25.0	24.7	98.8	68.0-125	
Styrene	25.0	25.5	102	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	22.2	88.9	72.0-132	
Toluene	25.0	22.8	91.2	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	24.8	99.4	69.0-132	
1,2,3-Trichlorobenzene	25.0	17.2	68.6	50.0-138	
1,2,4-Trichlorobenzene	25.0	19.4	77.7	57.0-137	
1,1,1-Trichloroethane	25.0	25.4	102	73.0-124	
1,1,2-Trichloroethane	25.0	22.9	91.5	80.0-120	
Trichloroethene	25.0	23.1	92.4	78.0-124	
Trichlorofluoromethane	25.0	25.3	101	59.0-147	
Vinyl chloride	25.0	27.2	109	67.0-131	
Xylenes, Total	75.0	73.8	98.4	79.0-123	
(S) Toluene-d8			*98.0*	*80.0-120*	
(S) a,a,a-Trifluorotoluene			*100*	*80.0-120*	
(S) 4-Bromofluorobenzene			*100*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

Method Blank (MB)

(MB) R3387346-3 02/27/19 10:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*90.0*			*70.0-130*

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

(LCS) R3387346-1 02/27/19 09:10 • (LCSD) R3387346-2 02/27/19 09:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	25.0	23.8	24.0	95.0	95.9	70.0-123			0.992	20
Toluene	25.0	24.0	24.2	95.9	96.9	79.0-120			0.978	20
Xylenes, Total	75.0	75.8	76.8	101	102	79.0-123			1.31	20
(S) Toluene-d8				*98.0*	*100*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.5*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*92.1*	*86.6*	*70.0-130*				

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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	T104704245-18-15
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

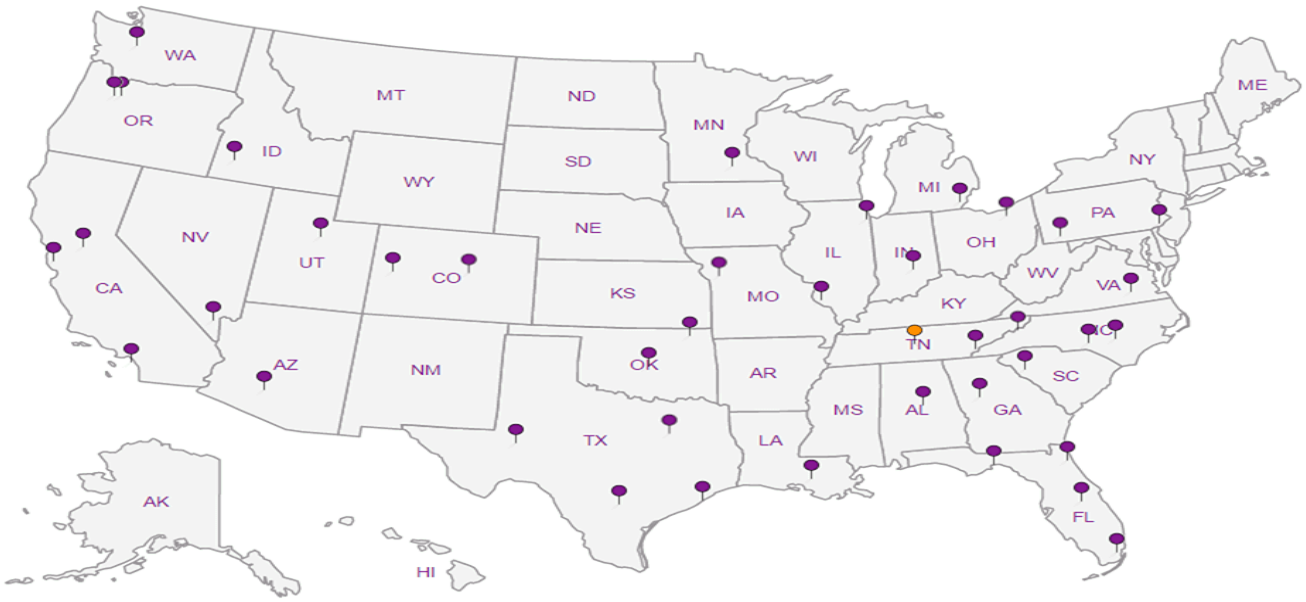
Third Party Federal Accreditations

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

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 # D3161400 A,PN, EV, LDOMR, 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

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# L071958

1047

Acctnum: **KINCH2MGA**
Template: **T146009**
Prelogin: **P693482**
TSR: **526 - Chris McCord**
PB: 2/7/19 mc
Shipped Via: **FedEX Ground**

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-20-021919	GRAB	GW	NA	021919	0840	3	X			-01
MW-07-021919		GW			0910	3	X			-02
MW-15B-021919		GW			0925	3	X			-03
MW-37-021919		GW			0935	3	X			-04
MW-38-021919		GW			0940	3	X			-05
MW-39-021919		GW			0955	3	X			-06
MW-26-021919		GW			0855	3	X			-07
MW-41-021919		GW			1000	3	X			-08
MW-36-021919		GW			1020	3	X			-09
MW-17B-021919		GW			1350	3	X			-10

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

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
RAD SCREEN: <0.5 mR/hr

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

Tracking #

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

Temp: 1.7+1-1.8 °C Bottles Received: 36+TB

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	02/19/19	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Mark T.

Date: 2/20 Time: 9:45

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 #: D3161400.B.PN.EV. LDOME.GW

Lab Project #: **KINCH2MGA-LEWIS12**

Collected by (print): MELISSA WARNER

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 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 # L1071958

Table #

Acctnum: **KINCH2MGA**
Template: **T146009**
Prelogin: **P693482**
TSR: **526 - Chris McCord**
PB: 2/7/19 mc

Shipped Via: **FedEX Ground**

Analysis / Container / Preservative

Pres Chk	X	X									
	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk									

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs			Remarks	Sample # (lab only)
MW-17B-D-021919	GRAB	GW	NA	02/19/19	1351	3	X			-11
FB01-021919	↓	GW	↓	↓	1535	3	X			-12
TB02-021919	↓	GW	↓	↓	1555	3	X	X		-13
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		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:

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

RAD SCREEN: <0.5 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
	02/19/19	1730		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
				1.7+.1=1.8 TM 36 FTB	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
				2/20 9:45	

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 01, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1072333
Samples Received:	02/21/2019
Project Number:	D3161400.B.PN.EV.LDO
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

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TABLE OF CONTENTS

MW-23-022019 L1072333-01 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 09:15 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240664	1	02/21/19 22:21	02/21/19 22:21	JAH	Mt. Juliet, TN

MW-23-D-022019 L1072333-02 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 09:16 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240664	1	02/21/19 22:41	02/21/19 22:41	JAH	Mt. Juliet, TN

MW-46-022019 L1072333-03 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 10:05 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240664	1	02/21/19 23:01	02/21/19 23:01	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241004	50	02/22/19 17:13	02/22/19 17:13	JHH	Mt. Juliet, TN

MW-34-022019 L1072333-04 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 14:00 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240664	1	02/21/19 23:21	02/21/19 23:21	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241004	5	02/22/19 17:33	02/22/19 17:33	JHH	Mt. Juliet, TN

MW-40-022019 L1072333-05 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 14:10 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240664	1	02/21/19 23:41	02/21/19 23:41	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241004	1	02/22/19 17:52	02/22/19 17:52	JHH	Mt. Juliet, TN

FB01-022019 L1072333-06 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 14:35 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1240664	1	02/22/19 00:01	02/22/19 00:01	JAH	Mt. Juliet, TN

TB01-022019 L1072333-07 GW

Collected by: Melissa Warren | Collected date/time: 02/20/19 14:40 | Received date/time: 02/21/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241036	1	02/23/19 11:07	02/23/19 11:07	JAH	Mt. Juliet, TN

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	5.34		1.00	1	02/21/2019 22:21	WG1240664
Toluene	2.16		1.00	1	02/21/2019 22:21	WG1240664
Ethylbenzene	ND		1.00	1	02/21/2019 22:21	WG1240664
Total Xylenes	ND		3.00	1	02/21/2019 22:21	WG1240664
Methyl tert-butyl ether	7.24		1.00	1	02/21/2019 22:21	WG1240664
Naphthalene	ND		5.00	1	02/21/2019 22:21	WG1240664
1,2-Dichloroethane	ND		1.00	1	02/21/2019 22:21	WG1240664
(S) Toluene-d8	*96.3*		*80.0-120*		*02/21/2019 22:21*	WG1240664
(S) 4-Bromofluorobenzene	*92.9*		*77.0-126*		*02/21/2019 22:21*	WG1240664
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*02/21/2019 22:21*	WG1240664

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	7.09		1.00	1	02/21/2019 22:41	WG1240664
Toluene	3.22		1.00	1	02/21/2019 22:41	WG1240664
Ethylbenzene	ND		1.00	1	02/21/2019 22:41	WG1240664
Total Xylenes	3.57		3.00	1	02/21/2019 22:41	WG1240664
Methyl tert-butyl ether	7.77		1.00	1	02/21/2019 22:41	WG1240664
Naphthalene	ND		5.00	1	02/21/2019 22:41	WG1240664
1,2-Dichloroethane	ND		1.00	1	02/21/2019 22:41	WG1240664
(S) Toluene-d8	*103*		*80.0-120*		*02/21/2019 22:41*	WG1240664
(S) 4-Bromofluorobenzene	*45.0*	J2	*77.0-126*		*02/21/2019 22:41*	WG1240664
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*02/21/2019 22:41*	WG1240664

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2380		50.0	50	02/22/2019 17:13	WG1241004
Toluene	82.4		1.00	1	02/21/2019 23:01	WG1240664
Ethylbenzene	2.97		1.00	1	02/21/2019 23:01	WG1240664
Total Xylenes	799		150	50	02/22/2019 17:13	WG1241004
Methyl tert-butyl ether	346		50.0	50	02/22/2019 17:13	WG1241004
Naphthalene	22.4		5.00	1	02/21/2019 23:01	WG1240664
1,2-Dichloroethane	ND		1.00	1	02/21/2019 23:01	WG1240664
(S) Toluene-d8	*96.8*		*80.0-120*		*02/21/2019 23:01*	WG1240664
(S) Toluene-d8	*103*		*80.0-120*		*02/22/2019 17:13*	WG1241004
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*02/21/2019 23:01*	WG1240664
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*02/22/2019 17:13*	WG1241004
(S) 1,2-Dichloroethane-d4	*97.0*		*70.0-130*		*02/21/2019 23:01*	WG1240664
(S) 1,2-Dichloroethane-d4	*95.2*		*70.0-130*		*02/22/2019 17:13*	WG1241004

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	124		1.00	1	02/21/2019 23:21	WG1240664
Toluene	3.82		1.00	1	02/21/2019 23:21	WG1240664
Ethylbenzene	1.13		1.00	1	02/21/2019 23:21	WG1240664
Total Xylenes	ND		15.0	5	02/22/2019 17:33	WG1241004
Methyl tert-butyl ether	303		5.00	5	02/22/2019 17:33	WG1241004
Naphthalene	ND		5.00	1	02/21/2019 23:21	WG1240664
1,2-Dichloroethane	ND		1.00	1	02/21/2019 23:21	WG1240664
(S) Toluene-d8	*96.6*		*80.0-120*		*02/21/2019 23:21*	WG1240664
(S) Toluene-d8	*101*		*80.0-120*		*02/22/2019 17:33*	WG1241004
(S) 4-Bromofluorobenzene	*96.7*		*77.0-126*		*02/21/2019 23:21*	WG1240664
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*02/22/2019 17:33*	WG1241004
(S) 1,2-Dichloroethane-d4	*99.2*		*70.0-130*		*02/21/2019 23:21*	WG1240664
(S) 1,2-Dichloroethane-d4	*93.4*		*70.0-130*		*02/22/2019 17:33*	WG1241004

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.68		1.00	1	02/21/2019 23:41	WG1240664
Toluene	ND		1.00	1	02/21/2019 23:41	WG1240664
Ethylbenzene	ND		1.00	1	02/21/2019 23:41	WG1240664
Total Xylenes	ND		3.00	1	02/21/2019 23:41	WG1240664
Methyl tert-butyl ether	7.34		1.00	1	02/22/2019 17:52	WG1241004
Naphthalene	ND		5.00	1	02/21/2019 23:41	WG1240664
1,2-Dichloroethane	ND		1.00	1	02/21/2019 23:41	WG1240664
(S) Toluene-d8	*97.2*		*80.0-120*		*02/21/2019 23:41*	WG1240664
(S) Toluene-d8	*98.6*		*80.0-120*		*02/22/2019 17:52*	WG1241004
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*02/21/2019 23:41*	WG1240664
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*02/22/2019 17:52*	WG1241004
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*02/21/2019 23:41*	WG1240664
(S) 1,2-Dichloroethane-d4	*93.5*		*70.0-130*		*02/22/2019 17:52*	WG1241004

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	02/22/2019 00:01	WG1240664
Toluene	ND		1.00	1	02/22/2019 00:01	WG1240664
Ethylbenzene	ND		1.00	1	02/22/2019 00:01	WG1240664
Total Xylenes	ND		3.00	1	02/22/2019 00:01	WG1240664
Methyl tert-butyl ether	ND		1.00	1	02/22/2019 00:01	WG1240664
Naphthalene	ND		5.00	1	02/22/2019 00:01	WG1240664
1,2-Dichloroethane	ND		1.00	1	02/22/2019 00:01	WG1240664
(S) Toluene-d8	*98.0*		*80.0-120*		*02/22/2019 00:01*	WG1240664
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*02/22/2019 00:01*	WG1240664
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*02/22/2019 00:01*	WG1240664

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	02/23/2019 11:07	WG1241036
Benzene	ND		1.00	1	02/23/2019 11:07	WG1241036
Bromochloromethane	ND		1.00	1	02/23/2019 11:07	WG1241036
Bromodichloromethane	ND		1.00	1	02/23/2019 11:07	WG1241036
Bromoform	ND		1.00	1	02/23/2019 11:07	WG1241036
Bromomethane	ND		5.00	1	02/23/2019 11:07	WG1241036
Carbon disulfide	ND		1.00	1	02/23/2019 11:07	WG1241036
Carbon tetrachloride	ND		1.00	1	02/23/2019 11:07	WG1241036
Chlorobenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
Chlorodibromomethane	ND		1.00	1	02/23/2019 11:07	WG1241036
Chloroethane	ND		5.00	1	02/23/2019 11:07	WG1241036
Chloroform	ND		5.00	1	02/23/2019 11:07	WG1241036
Chloromethane	ND		2.50	1	02/23/2019 11:07	WG1241036
Cyclohexane	ND		1.00	1	02/23/2019 11:07	WG1241036
1,2-Dibromo-3-Chloropropane	ND		5.00	1	02/23/2019 11:07	WG1241036
1,2-Dibromoethane	ND		1.00	1	02/23/2019 11:07	WG1241036
1,2-Dichlorobenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,3-Dichlorobenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,4-Dichlorobenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
Dichlorodifluoromethane	ND		5.00	1	02/23/2019 11:07	WG1241036
1,1-Dichloroethane	ND		1.00	1	02/23/2019 11:07	WG1241036
1,2-Dichloroethane	ND		1.00	1	02/23/2019 11:07	WG1241036
1,1-Dichloroethene	ND		1.00	1	02/23/2019 11:07	WG1241036
cis-1,2-Dichloroethene	ND		1.00	1	02/23/2019 11:07	WG1241036
trans-1,2-Dichloroethene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,2-Dichloropropane	ND		1.00	1	02/23/2019 11:07	WG1241036
cis-1,3-Dichloropropene	ND		1.00	1	02/23/2019 11:07	WG1241036
trans-1,3-Dichloropropene	ND		1.00	1	02/23/2019 11:07	WG1241036
Ethylbenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
2-Hexanone	ND		10.0	1	02/23/2019 11:07	WG1241036
Isopropylbenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
2-Butanone (MEK)	ND		10.0	1	02/23/2019 11:07	WG1241036
Methyl Acetate	ND		20.0	1	02/23/2019 11:07	WG1241036
Methyl Cyclohexane	ND		1.00	1	02/23/2019 11:07	WG1241036
Methylene Chloride	ND		5.00	1	02/23/2019 11:07	WG1241036
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	02/23/2019 11:07	WG1241036
Methyl tert-butyl ether	ND		1.00	1	02/23/2019 11:07	WG1241036
Styrene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,1,2,2-Tetrachloroethane	ND		1.00	1	02/23/2019 11:07	WG1241036
Tetrachloroethene	ND		1.00	1	02/23/2019 11:07	WG1241036
Toluene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,2,3-Trichlorobenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,2,4-Trichlorobenzene	ND		1.00	1	02/23/2019 11:07	WG1241036
1,1,1-Trichloroethane	ND		1.00	1	02/23/2019 11:07	WG1241036
1,1,2-Trichloroethane	ND		1.00	1	02/23/2019 11:07	WG1241036
Trichloroethene	ND		1.00	1	02/23/2019 11:07	WG1241036
Trichlorofluoromethane	ND		5.00	1	02/23/2019 11:07	WG1241036
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	02/23/2019 11:07	WG1241036
Vinyl chloride	ND		1.00	1	02/23/2019 11:07	WG1241036
Xylenes, Total	ND		3.00	1	02/23/2019 11:07	WG1241036
(S) Toluene-d8	*107*		*80.0-120*		*02/23/2019 11:07*	WG1241036
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*02/23/2019 11:07*	WG1241036
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*02/23/2019 11:07*	WG1241036
(S) 1,2-Dichloroethane-d4	*98.9*		*70.0-130*		*02/23/2019 11:07*	WG1241036

Sample Narrative:

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	

L1072333-07 WG1241036: Analyzed from a headspaced vial.

Method Blank (MB)

(MB) R3386206-2 02/21/19 18:37

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	*95.1*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3386206-1 02/21/19 17:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	20.9	83.5	70.0-123	
1,2-Dichloroethane	25.0	20.8	83.2	70.0-128	
Ethylbenzene	25.0	21.8	87.2	79.0-123	
Methyl tert-butyl ether	25.0	21.2	84.7	68.0-125	
Naphthalene	25.0	20.0	80.1	54.0-135	
Toluene	25.0	21.0	84.1	79.0-120	
Xylenes, Total	75.0	66.6	88.8	79.0-123	
(S) Toluene-d8			*95.3*	*80.0-120*	
(S) 4-Bromofluorobenzene			*98.3*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*94.5*	*70.0-130*	

Method Blank (MB)

(MB) R3387600-5 02/22/19 16:27

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
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*95.3*			*70.0-130*

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

(LCS) R3387600-3 02/22/19 15:28 • (LCSD) R3387600-4 02/22/19 15:47

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	24.9	27.2	99.5	109	70.0-123			8.95	20
Methyl tert-butyl ether	25.0	23.7	26.9	94.8	107	68.0-125			12.4	20
Xylenes, Total	75.0	71.2	83.4	94.9	111	79.0-123			15.8	20
(S) Toluene-d8				*97.3*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.4*	*105*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*101*	*99.8*	*70.0-130*				

Method Blank (MB)

(MB) R3386881-2 02/23/19 09:42

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
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) R3386881-2 02/23/19 09:42

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	*105*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*96.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3386881-1 02/23/19 08:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	139	111	19.0-160	
Benzene	25.0	23.7	94.7	70.0-123	
Bromodichloromethane	25.0	25.3	101	75.0-120	
Bromochloromethane	25.0	25.8	103	76.0-122	
Bromoform	25.0	24.9	99.4	68.0-132	
Bromomethane	25.0	26.0	104	10.0-160	
Carbon disulfide	25.0	24.6	98.5	61.0-128	
Carbon tetrachloride	25.0	25.0	99.8	68.0-126	
Chlorobenzene	25.0	24.1	96.4	80.0-121	
Chlorodibromomethane	25.0	24.4	97.7	77.0-125	
Chloroethane	25.0	24.0	96.2	47.0-150	
Chloroform	25.0	25.9	103	73.0-120	
Chloromethane	25.0	26.8	107	41.0-142	
1,2-Dibromo-3-Chloropropane	25.0	19.5	78.0	58.0-134	
1,2-Dibromoethane	25.0	25.4	102	80.0-122	
1,2-Dichlorobenzene	25.0	24.6	98.5	79.0-121	
1,3-Dichlorobenzene	25.0	24.2	96.8	79.0-120	
1,4-Dichlorobenzene	25.0	22.8	91.2	79.0-120	
Dichlorodifluoromethane	25.0	34.4	137	51.0-149	

Laboratory Control Sample (LCS)

(LCS) R3386881-1 02/23/19 08:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1-Dichloroethane	25.0	24.8	99.4	70.0-126	
1,2-Dichloroethane	25.0	25.2	101	70.0-128	
1,1-Dichloroethene	25.0	24.6	98.5	71.0-124	
cis-1,2-Dichloroethene	25.0	22.9	91.5	73.0-120	
trans-1,2-Dichloroethene	25.0	25.0	99.9	73.0-120	
1,2-Dichloropropane	25.0	23.7	94.8	77.0-125	
cis-1,3-Dichloropropene	25.0	24.9	99.6	80.0-123	
trans-1,3-Dichloropropene	25.0	24.7	98.9	78.0-124	
Ethylbenzene	25.0	23.7	95.0	79.0-123	
2-Hexanone	125	129	103	67.0-149	
Isopropylbenzene	25.0	25.3	101	76.0-127	
2-Butanone (MEK)	125	124	99.2	44.0-160	
Methylene Chloride	25.0	24.5	98.1	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	127	102	68.0-142	
Methyl tert-butyl ether	25.0	24.7	98.8	68.0-125	
Styrene	25.0	25.5	102	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	26.7	107	65.0-130	
Tetrachloroethene	25.0	22.2	88.9	72.0-132	
Toluene	25.0	22.8	91.2	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	24.8	99.4	69.0-132	
1,2,3-Trichlorobenzene	25.0	17.2	68.6	50.0-138	
1,2,4-Trichlorobenzene	25.0	19.4	77.7	57.0-137	
1,1,1-Trichloroethane	25.0	25.4	102	73.0-124	
1,1,2-Trichloroethane	25.0	22.9	91.5	80.0-120	
Trichloroethene	25.0	23.1	92.4	78.0-124	
Trichlorofluoromethane	25.0	25.3	101	59.0-147	
Vinyl chloride	25.0	27.2	109	67.0-131	
Xylenes, Total	75.0	73.8	98.4	79.0-123	
(S) Toluene-d8			*98.0*	*80.0-120*	
(S) a,a,a-Trifluorotoluene			*100*	*80.0-120*	
(S) 4-Bromofluorobenzene			*100*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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	T104704245-18-15
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

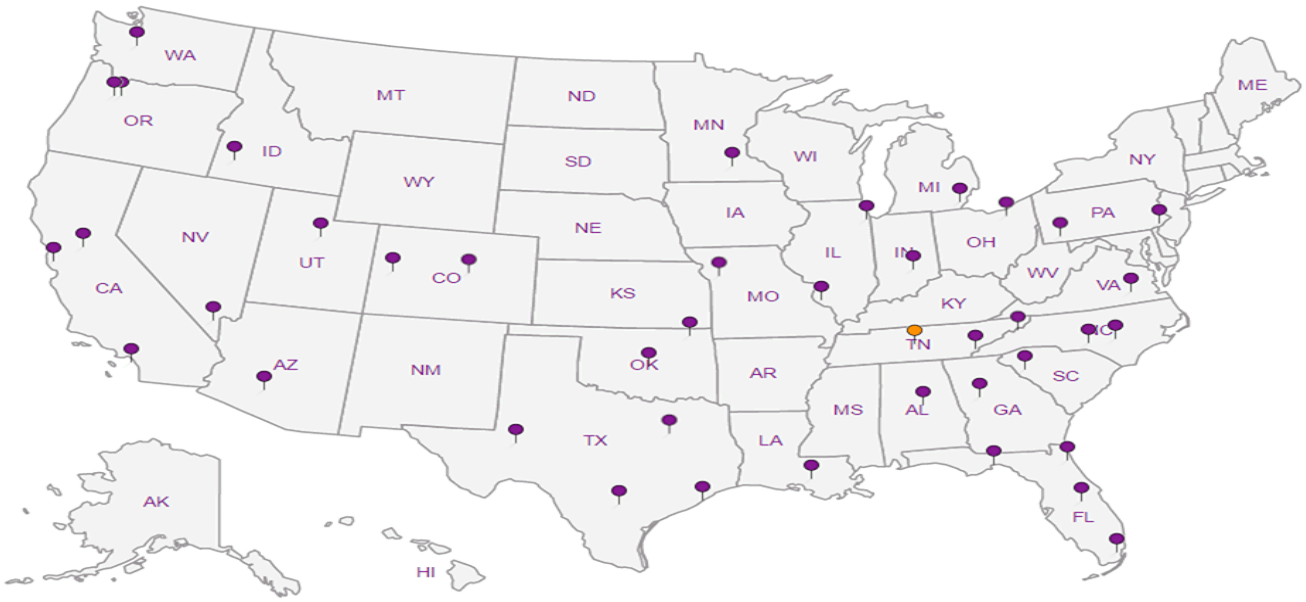
Third Party Federal Accreditations

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: 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 # D3161400.B.PN.EV.LDOMR.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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-23-022019	GRAB	GW	NA	02/20/19	0915	3				X	X		-01
MW-23-D-022019		GW			0916	3				X	X		-02
MW-46-022019		GW			1005	3				X			-03
MW-34-022019		GW			1400	3				X			-04
MW-40-022019		GW			1410	3				X			-05
FB01-022019		GW			1435	3				X			-06
TB01-022019		TB			1440	1					X	TRIP BLANK	-07

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# 1072333

B210

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-186
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 __FedEx __Courier __ _____

Tracking # 4624 3008 4315

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)
	02/20/19	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: 09-0.1 °C Bottles Received: 18

Date: 2/21/19 Time: 945

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 13, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1075738
Samples Received:	03/06/2019
Project Number:	D3161400.A.PN.EV.LDO
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:

Jason Romer
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-29-030519 L1075738-01 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 12:50 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 02:37	03/07/19 02:37	BMB	Mt. Juliet, TN

MW-19-030519 L1075738-02 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 13:00 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248195	1	03/11/19 16:25	03/11/19 16:25	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248195	1	03/11/19 16:25	03/11/19 16:25	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245834	1	03/06/19 20:19	03/06/19 20:19	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246645	1	03/08/19 11:36	03/08/19 11:36	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	5	03/07/19 02:58	03/07/19 02:58	BMB	Mt. Juliet, TN

MW-20-030519 L1075738-03 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 13:20 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248195	1	03/11/19 16:41	03/11/19 16:41	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248195	1	03/11/19 16:41	03/11/19 16:41	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245834	1	03/06/19 20:35	03/06/19 20:35	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246645	1	03/08/19 11:38	03/08/19 11:38	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	100	03/07/19 03:18	03/07/19 03:18	BMB	Mt. Juliet, TN

MW-26B-030519 L1075738-04 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 13:35 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 03:39	03/07/19 03:39	BMB	Mt. Juliet, TN

MW-23-030519 L1075738-05 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 13:55 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 03:59	03/07/19 03:59	BMB	Mt. Juliet, TN

MW-23B-030519 L1075738-06 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 14:00 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 04:20	03/07/19 04:20	BMB	Mt. Juliet, TN

MW-23-D-030519 L1075738-07 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 13:56 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 04:41	03/07/19 04:41	BMB	Mt. Juliet, TN

MW-45-030519 L1075738-08 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 14:15 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 05:01	03/07/19 05:01	BMB	Mt. Juliet, TN

MW-45B-030519 L1075738-09 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 14:20 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 05:22	03/07/19 05:22	BMB	Mt. Juliet, TN

MW-46-030519 L1075738-10 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 14:35 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 05:42	03/07/19 05:42	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248858	50	03/12/19 22:49	03/12/19 22:49	DWR	Mt. Juliet, TN

MW-26-030519 L1075738-11 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 13:40 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 06:03	03/07/19 06:03	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248858	1	03/12/19 23:25	03/12/19 23:25	DWR	Mt. Juliet, TN

MW-21-030519 L1075738-12 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 14:45 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 06:24	03/07/19 06:24	BMB	Mt. Juliet, TN

MW-17-030519 L1075738-13 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 15:00 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 06:44	03/07/19 06:44	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248858	10	03/12/19 23:48	03/12/19 23:48	DWR	Mt. Juliet, TN

MW-17B-030519 L1075738-14 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 15:05 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	50	03/07/19 07:05	03/07/19 07:05	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1249276	5000	03/13/19 13:37	03/13/19 13:37	JAH	Mt. Juliet, TN

MW-22-030519 L1075738-15 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 15:20 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248195	1	03/11/19 16:47	03/11/19 16:47	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248195	1	03/11/19 16:47	03/11/19 16:47	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245834	1	03/06/19 21:21	03/06/19 21:21	ST	Mt. Juliet, TN

MW-22-030519 L1075738-15 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 15:20 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method RSK175	WG1246645	1	03/08/19 11:42	03/08/19 11:42	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 07:25	03/07/19 07:25	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248858	1	03/13/19 00:33	03/13/19 00:33	DWR	Mt. Juliet, TN

MW-44-030519 L1075738-16 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 15:40 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 07:46	03/07/19 07:46	BMB	Mt. Juliet, TN

MW-44B-030519 L1075738-17 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 15:50 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 08:06	03/07/19 08:06	BMB	Mt. Juliet, TN

MW-01-030519 L1075738-18 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 16:00 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248195	1	03/11/19 16:54	03/11/19 16:54	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248195	1	03/11/19 16:54	03/11/19 16:54	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1245834	1	03/06/19 21:36	03/06/19 21:36	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246645	1	03/08/19 11:44	03/08/19 11:44	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 08:27	03/07/19 08:27	BMB	Mt. Juliet, TN

MW-01B-030519 L1075738-19 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 16:30 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 08:48	03/07/19 08:48	BMB	Mt. Juliet, TN

MW-27-030519 L1075738-20 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 16:20 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246331	1	03/07/19 09:08	03/07/19 09:08	BMB	Mt. Juliet, TN

MW-27-D-030519 L1075738-21 GW

Collected by: Melissa Warren | Collected date/time: 03/05/19 16:21 | Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246404	1	03/07/19 10:52	03/07/19 10:52	BMB	Mt. Juliet, TN

MW-27B-030519 L1075738-22 GW

Collected by: Melissa Warren
Collected date/time: 03/05/19 16:10
Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246404	1	03/07/19 11:11	03/07/19 11:11	BMB	Mt. Juliet, TN

FB01-030519 L1075738-23 GW

Collected by: Melissa Warren
Collected date/time: 03/05/19 16:05
Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246404	1	03/07/19 11:30	03/07/19 11:30	BMB	Mt. Juliet, TN

TB01-030519 L1075738-24 GW

Collected by: Melissa Warren
Collected date/time: 03/05/19 16:15
Received date/time: 03/06/19 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1245979	1	03/06/19 15:24	03/06/19 15:24	ADM	Mt. Juliet, TN

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.

Jason Romer
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	03/07/2019 02:37	WG1246331
Toluene	ND		1.00	1	03/07/2019 02:37	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 02:37	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 02:37	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 02:37	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 02:37	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 02:37	WG1246331
(S) Toluene-d8	*102*		*80.0-120*		*03/07/2019 02:37*	WG1246331
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/07/2019 02:37*	WG1246331
(S) 1,2-Dichloroethane-d4	*97.3*		*70.0-130*		*03/07/2019 02:37*	WG1246331

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	34800	B	20000	1	03/11/2019 16:25	WG1248195

Sample Narrative:
L1075738-02 WG1248195: 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	03/11/2019 16:25	WG1248195

Sample Narrative:
L1075738-02 WG1248195: 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)	ND		100	1	03/06/2019 20:19	WG1245834
Sulfate	ND		5000	1	03/06/2019 20:19	WG1245834

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	03/08/2019 11:36	WG1246645

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		5.00	5	03/07/2019 02:58	WG1246331
Toluene	19.4		5.00	5	03/07/2019 02:58	WG1246331
Ethylbenzene	33.1		5.00	5	03/07/2019 02:58	WG1246331
Total Xylenes	756		15.0	5	03/07/2019 02:58	WG1246331
Methyl tert-butyl ether	ND		5.00	5	03/07/2019 02:58	WG1246331
Naphthalene	294		25.0	5	03/07/2019 02:58	WG1246331
1,2-Dichloroethane	ND		5.00	5	03/07/2019 02:58	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/07/2019 02:58*	WG1246331
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*03/07/2019 02:58*	WG1246331
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*03/07/2019 02:58*	WG1246331

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	29200	B	20000	1	03/11/2019 16:41	WG1248195

Sample Narrative:
L1075738-03 WG1248195: 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	56600	T8	20000	1	03/11/2019 16:41	WG1248195

Sample Narrative:
L1075738-03 WG1248195: 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)	ND		100	1	03/06/2019 20:35	WG1245834
Sulfate	8810		5000	1	03/06/2019 20:35	WG1245834

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	367		10.0	1	03/08/2019 11:38	WG1246645

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	9480		100	100	03/07/2019 03:18	WG1246331
Toluene	19200		100	100	03/07/2019 03:18	WG1246331
Ethylbenzene	1320		100	100	03/07/2019 03:18	WG1246331
Total Xylenes	10800		300	100	03/07/2019 03:18	WG1246331
Methyl tert-butyl ether	187		100	100	03/07/2019 03:18	WG1246331
Naphthalene	ND		500	100	03/07/2019 03:18	WG1246331
1,2-Dichloroethane	ND		100	100	03/07/2019 03:18	WG1246331
(S) Toluene-d8	*105*		*80.0-120*		*03/07/2019 03:18*	WG1246331
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*03/07/2019 03:18*	WG1246331
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*03/07/2019 03:18*	WG1246331

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	03/07/2019 03:39	WG1246331
Toluene	ND		1.00	1	03/07/2019 03:39	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 03:39	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 03:39	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 03:39	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 03:39	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 03:39	WG1246331
(S) Toluene-d8	*102*		*80.0-120*		*03/07/2019 03:39*	WG1246331
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/07/2019 03:39*	WG1246331
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/07/2019 03:39*	WG1246331

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	87.7		1.00	1	03/07/2019 03:59	WG1246331
Toluene	1.35		1.00	1	03/07/2019 03:59	WG1246331
Ethylbenzene	1.16		1.00	1	03/07/2019 03:59	WG1246331
Total Xylenes	46.2		3.00	1	03/07/2019 03:59	WG1246331
Methyl tert-butyl ether	16.5		1.00	1	03/07/2019 03:59	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 03:59	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 03:59	WG1246331
(S) Toluene-d8	*102*		*80.0-120*		*03/07/2019 03:59*	WG1246331
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*03/07/2019 03:59*	WG1246331
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*03/07/2019 03:59*	WG1246331

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	03/07/2019 04:20	WG1246331
Toluene	ND		1.00	1	03/07/2019 04:20	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 04:20	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 04:20	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 04:20	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 04:20	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 04:20	WG1246331
(S) Toluene-d8	*101*		*80.0-120*		*03/07/2019 04:20*	WG1246331
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/07/2019 04:20*	WG1246331
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/07/2019 04:20*	WG1246331

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	81.6		1.00	1	03/07/2019 04:41	WG1246331
Toluene	1.26		1.00	1	03/07/2019 04:41	WG1246331
Ethylbenzene	1.21		1.00	1	03/07/2019 04:41	WG1246331
Total Xylenes	42.1		3.00	1	03/07/2019 04:41	WG1246331
Methyl tert-butyl ether	15.9		1.00	1	03/07/2019 04:41	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 04:41	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 04:41	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/07/2019 04:41*	WG1246331
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/07/2019 04:41*	WG1246331
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/07/2019 04:41*	WG1246331

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	03/07/2019 05:01	WG1246331
Toluene	ND		1.00	1	03/07/2019 05:01	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 05:01	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 05:01	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 05:01	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 05:01	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 05:01	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/07/2019 05:01*	WG1246331
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/07/2019 05:01*	WG1246331
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/07/2019 05:01*	WG1246331

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	03/07/2019 05:22	WG1246331
Toluene	ND		1.00	1	03/07/2019 05:22	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 05:22	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 05:22	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 05:22	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 05:22	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 05:22	WG1246331
(S) Toluene-d8	*100*		*80.0-120*		*03/07/2019 05:22*	WG1246331
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/07/2019 05:22*	WG1246331
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/07/2019 05:22*	WG1246331

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2350		50.0	50	03/12/2019 22:49	WG1248858
Toluene	73.7		1.00	1	03/07/2019 05:42	WG1246331
Ethylbenzene	4.01		1.00	1	03/07/2019 05:42	WG1246331
Total Xylenes	701		150	50	03/12/2019 22:49	WG1248858
Methyl tert-butyl ether	406		50.0	50	03/12/2019 22:49	WG1248858
Naphthalene	32.8		5.00	1	03/07/2019 05:42	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 05:42	WG1246331
(S) Toluene-d8	*99.1*		*80.0-120*		*03/07/2019 05:42*	WG1246331
(S) Toluene-d8	*97.5*		*80.0-120*		*03/12/2019 22:49*	WG1248858
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/07/2019 05:42*	WG1246331
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/12/2019 22:49*	WG1248858
(S) 1,2-Dichloroethane-d4	*110*		*70.0-130*		*03/07/2019 05:42*	WG1246331
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*03/12/2019 22:49*	WG1248858

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	03/12/2019 23:25	WG1248858
Toluene	ND		1.00	1	03/07/2019 06:03	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 06:03	WG1246331
Total Xylenes	ND		3.00	1	03/12/2019 23:25	WG1248858
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 06:03	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 06:03	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 06:03	WG1246331
(S) Toluene-d8	*104*		*80.0-120*		*03/07/2019 06:03*	WG1246331
(S) Toluene-d8	*92.9*		*80.0-120*		*03/12/2019 23:25*	WG1248858
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/07/2019 06:03*	WG1246331
(S) 4-Bromofluorobenzene	*130*	J1	*77.0-126*		*03/12/2019 23:25*	WG1248858
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/07/2019 06:03*	WG1246331
(S) 1,2-Dichloroethane-d4	*112*		*70.0-130*		*03/12/2019 23:25*	WG1248858

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	03/07/2019 06:24	WG1246331
Toluene	ND		1.00	1	03/07/2019 06:24	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 06:24	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 06:24	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 06:24	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 06:24	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 06:24	WG1246331
(S) Toluene-d8	*102*		*80.0-120*		*03/07/2019 06:24*	WG1246331
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/07/2019 06:24*	WG1246331
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/07/2019 06:24*	WG1246331

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	173		1.00	1	03/07/2019 06:44	WG1246331
Toluene	118		1.00	1	03/07/2019 06:44	WG1246331
Ethylbenzene	19.9		1.00	1	03/07/2019 06:44	WG1246331
Total Xylenes	474		30.0	10	03/12/2019 23:48	WG1248858
Methyl tert-butyl ether	27.9		1.00	1	03/07/2019 06:44	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 06:44	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 06:44	WG1246331
(S) Toluene-d8	*97.5*		*80.0-120*		*03/07/2019 06:44*	WG1246331
(S) Toluene-d8	*98.9*		*80.0-120*		*03/12/2019 23:48*	WG1248858
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/07/2019 06:44*	WG1246331
(S) 4-Bromofluorobenzene	*99.5*		*77.0-126*		*03/12/2019 23:48*	WG1248858
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*03/07/2019 06:44*	WG1246331
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*03/12/2019 23:48*	WG1248858

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	8360		50.0	50	03/07/2019 07:05	WG1246331
Toluene	22400		5000	5000	03/13/2019 13:37	WG1249276
Ethylbenzene	1370		50.0	50	03/07/2019 07:05	WG1246331
Total Xylenes	9180		150	50	03/07/2019 07:05	WG1246331
Methyl tert-butyl ether	308		50.0	50	03/07/2019 07:05	WG1246331
Naphthalene	261		250	50	03/07/2019 07:05	WG1246331
1,2-Dichloroethane	ND		50.0	50	03/07/2019 07:05	WG1246331
(S) Toluene-d8	*102*		*80.0-120*		*03/07/2019 07:05*	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/13/2019 13:37*	WG1249276
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/07/2019 07:05*	WG1246331
(S) 4-Bromofluorobenzene	*97.2*		*77.0-126*		*03/13/2019 13:37*	WG1249276
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/07/2019 07:05*	WG1246331
(S) 1,2-Dichloroethane-d4	*85.5*		*70.0-130*		*03/13/2019 13:37*	WG1249276

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/11/2019 16:47	WG1248195

Sample Narrative:
L1075738-15 WG1248195: 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	03/11/2019 16:47	WG1248195

Sample Narrative:
L1075738-15 WG1248195: 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)	5580		100	1	03/06/2019 21:21	WG1245834
Sulfate	63200		5000	1	03/06/2019 21:21	WG1245834

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	03/08/2019 11:42	WG1246645

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	03/07/2019 07:25	WG1246331
Toluene	ND		1.00	1	03/13/2019 00:33	WG1248858
Ethylbenzene	ND		1.00	1	03/07/2019 07:25	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 07:25	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 07:25	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 07:25	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 07:25	WG1246331
(S) Toluene-d8	*99.9*		*80.0-120*		*03/07/2019 07:25*	WG1246331
(S) Toluene-d8	*98.6*		*80.0-120*		*03/13/2019 00:33*	WG1248858
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/07/2019 07:25*	WG1246331
(S) 4-Bromofluorobenzene	*97.3*		*77.0-126*		*03/13/2019 00:33*	WG1248858
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/07/2019 07:25*	WG1246331
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*03/13/2019 00:33*	WG1248858

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	03/07/2019 07:46	WG1246331
Toluene	ND		1.00	1	03/07/2019 07:46	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 07:46	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 07:46	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 07:46	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 07:46	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 07:46	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/07/2019 07:46*	WG1246331
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/07/2019 07:46*	WG1246331
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/07/2019 07:46*	WG1246331

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	03/07/2019 08:06	WG1246331
Toluene	ND		1.00	1	03/07/2019 08:06	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 08:06	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 08:06	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 08:06	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 08:06	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 08:06	WG1246331
(S) Toluene-d8	*102*		*80.0-120*		*03/07/2019 08:06*	WG1246331
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/07/2019 08:06*	WG1246331
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/07/2019 08:06*	WG1246331

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/11/2019 16:54	WG1248195

Sample Narrative:
L1075738-18 WG1248195: 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	03/11/2019 16:54	WG1248195

Sample Narrative:
L1075738-18 WG1248195: 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)	120		100	1	03/06/2019 21:36	WG1245834
Sulfate	ND		5000	1	03/06/2019 21:36	WG1245834

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	03/08/2019 11:44	WG1246645

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	03/07/2019 08:27	WG1246331
Toluene	ND		1.00	1	03/07/2019 08:27	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 08:27	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 08:27	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 08:27	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 08:27	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 08:27	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/07/2019 08:27*	WG1246331
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/07/2019 08:27*	WG1246331
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*03/07/2019 08:27*	WG1246331

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	03/07/2019 08:48	WG1246331
Toluene	ND		1.00	1	03/07/2019 08:48	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 08:48	WG1246331
Total Xylenes	ND		3.00	1	03/07/2019 08:48	WG1246331
Methyl tert-butyl ether	1.02		1.00	1	03/07/2019 08:48	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 08:48	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 08:48	WG1246331
(S) Toluene-d8	*103*		*80.0-120*		*03/07/2019 08:48*	WG1246331
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/07/2019 08:48*	WG1246331
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/07/2019 08:48*	WG1246331

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	03/07/2019 09:08	WG1246331
Toluene	4.05		1.00	1	03/07/2019 09:08	WG1246331
Ethylbenzene	ND		1.00	1	03/07/2019 09:08	WG1246331
Total Xylenes	9.95		3.00	1	03/07/2019 09:08	WG1246331
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 09:08	WG1246331
Naphthalene	ND		5.00	1	03/07/2019 09:08	WG1246331
1,2-Dichloroethane	ND		1.00	1	03/07/2019 09:08	WG1246331
(S) Toluene-d8	*99.1*		*80.0-120*		*03/07/2019 09:08*	WG1246331
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/07/2019 09:08*	WG1246331
(S) 1,2-Dichloroethane-d4	*125*		*70.0-130*		*03/07/2019 09:08*	WG1246331

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.01		1.00	1	03/07/2019 10:52	WG1246404
Toluene	4.73		1.00	1	03/07/2019 10:52	WG1246404
Ethylbenzene	ND		1.00	1	03/07/2019 10:52	WG1246404
Total Xylenes	12.0		3.00	1	03/07/2019 10:52	WG1246404
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 10:52	WG1246404
Naphthalene	ND		5.00	1	03/07/2019 10:52	WG1246404
1,2-Dichloroethane	ND		1.00	1	03/07/2019 10:52	WG1246404
(S) Toluene-d8	*95.6*		*80.0-120*		*03/07/2019 10:52*	WG1246404
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/07/2019 10:52*	WG1246404
(S) 1,2-Dichloroethane-d4	*97.5*		*70.0-130*		*03/07/2019 10:52*	WG1246404

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	03/07/2019 11:11	WG1246404
Toluene	4.76		1.00	1	03/07/2019 11:11	WG1246404
Ethylbenzene	2.40		1.00	1	03/07/2019 11:11	WG1246404
Total Xylenes	20.0		3.00	1	03/07/2019 11:11	WG1246404
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 11:11	WG1246404
Naphthalene	ND		5.00	1	03/07/2019 11:11	WG1246404
1,2-Dichloroethane	ND		1.00	1	03/07/2019 11:11	WG1246404
(S) Toluene-d8	*97.3*		*80.0-120*		*03/07/2019 11:11*	WG1246404
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/07/2019 11:11*	WG1246404
(S) 1,2-Dichloroethane-d4	*97.2*		*70.0-130*		*03/07/2019 11:11*	WG1246404

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	03/07/2019 11:30	WG1246404
Toluene	ND		1.00	1	03/07/2019 11:30	WG1246404
Ethylbenzene	ND		1.00	1	03/07/2019 11:30	WG1246404
Total Xylenes	ND		3.00	1	03/07/2019 11:30	WG1246404
Methyl tert-butyl ether	ND		1.00	1	03/07/2019 11:30	WG1246404
Naphthalene	ND		5.00	1	03/07/2019 11:30	WG1246404
1,2-Dichloroethane	ND		1.00	1	03/07/2019 11:30	WG1246404
(S) Toluene-d8	*99.2*		*80.0-120*		*03/07/2019 11:30*	WG1246404
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/07/2019 11:30*	WG1246404
(S) 1,2-Dichloroethane-d4	*99.3*		*70.0-130*		*03/07/2019 11:30*	WG1246404

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	03/06/2019 15:24	WG1245979
Benzene	ND		1.00	1	03/06/2019 15:24	WG1245979
Bromochloromethane	ND		1.00	1	03/06/2019 15:24	WG1245979
Bromodichloromethane	ND		1.00	1	03/06/2019 15:24	WG1245979
Bromoform	ND		1.00	1	03/06/2019 15:24	WG1245979
Bromomethane	ND		5.00	1	03/06/2019 15:24	WG1245979
Carbon disulfide	ND	J3	1.00	1	03/06/2019 15:24	WG1245979
Carbon tetrachloride	ND		1.00	1	03/06/2019 15:24	WG1245979
Chlorobenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
Chlorodibromomethane	ND		1.00	1	03/06/2019 15:24	WG1245979
Chloroethane	ND		5.00	1	03/06/2019 15:24	WG1245979
Chloroform	ND		5.00	1	03/06/2019 15:24	WG1245979
Chloromethane	ND		2.50	1	03/06/2019 15:24	WG1245979
Cyclohexane	ND		1.00	1	03/06/2019 15:24	WG1245979
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/06/2019 15:24	WG1245979
1,2-Dibromoethane	ND		1.00	1	03/06/2019 15:24	WG1245979
1,2-Dichlorobenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,3-Dichlorobenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,4-Dichlorobenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
Dichlorodifluoromethane	ND		5.00	1	03/06/2019 15:24	WG1245979
1,1-Dichloroethane	ND		1.00	1	03/06/2019 15:24	WG1245979
1,2-Dichloroethane	ND		1.00	1	03/06/2019 15:24	WG1245979
1,1-Dichloroethene	ND		1.00	1	03/06/2019 15:24	WG1245979
cis-1,2-Dichloroethene	ND		1.00	1	03/06/2019 15:24	WG1245979
trans-1,2-Dichloroethene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,2-Dichloropropane	ND		1.00	1	03/06/2019 15:24	WG1245979
cis-1,3-Dichloropropene	ND		1.00	1	03/06/2019 15:24	WG1245979
trans-1,3-Dichloropropene	ND		1.00	1	03/06/2019 15:24	WG1245979
Ethylbenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
2-Hexanone	ND		10.0	1	03/06/2019 15:24	WG1245979
Isopropylbenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
2-Butanone (MEK)	ND		10.0	1	03/06/2019 15:24	WG1245979
Methyl Acetate	ND		20.0	1	03/06/2019 15:24	WG1245979
Methyl Cyclohexane	ND		1.00	1	03/06/2019 15:24	WG1245979
Methylene Chloride	ND		5.00	1	03/06/2019 15:24	WG1245979
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/06/2019 15:24	WG1245979
Methyl tert-butyl ether	ND		1.00	1	03/06/2019 15:24	WG1245979
Styrene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/06/2019 15:24	WG1245979
Tetrachloroethene	ND		1.00	1	03/06/2019 15:24	WG1245979
Toluene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,2,3-Trichlorobenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,2,4-Trichlorobenzene	ND		1.00	1	03/06/2019 15:24	WG1245979
1,1,1-Trichloroethane	ND		1.00	1	03/06/2019 15:24	WG1245979
1,1,2-Trichloroethane	ND		1.00	1	03/06/2019 15:24	WG1245979
Trichloroethene	ND		1.00	1	03/06/2019 15:24	WG1245979
Trichlorofluoromethane	ND		5.00	1	03/06/2019 15:24	WG1245979
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/06/2019 15:24	WG1245979
Vinyl chloride	ND		1.00	1	03/06/2019 15:24	WG1245979
Xylenes, Total	ND		3.00	1	03/06/2019 15:24	WG1245979
(S) Toluene-d8	*106*		*80.0-120*		*03/06/2019 15:24*	WG1245979
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*03/06/2019 15:24*	WG1245979
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/06/2019 15:24*	WG1245979
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/06/2019 15:24*	WG1245979

Method Blank (MB)

(MB) R3390814-1 03/11/19 15:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	3550	J	2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1075286-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075286-01 03/11/19 15:16 • (DUP) R3390814-3 03/11/19 15:25

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	97800	97100	1	0.802		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1075713-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075713-01 03/11/19 18:03 • (DUP) R3390814-6 03/11/19 18:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	82500	82400	1	0.0748		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3390814-5 03/11/19 16:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	106000	106	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3390814-2 03/11/19 15:09

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

L1075286-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075286-01 03/11/19 15:16 • (DUP) R3390814-4 03/11/19 15:25

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

L1075713-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075713-01 03/11/19 18:03 • (DUP) R3390814-7 03/11/19 18:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	2.47	J	20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3389344-1 03/06/19 12:42

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

L1075700-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1075700-02 03/06/19 14:40 • (DUP) R3389344-3 03/06/19 14:56

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	338	338	1	0.0592		15
Sulfate	27800	27800	1	0.0978		15

L1075738-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1075738-03 03/06/19 20:35 • (DUP) R3389344-6 03/06/19 20:50

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	8810	8910	1	1.17		15

Laboratory Control Sample (LCS)

(LCS) R3389344-2 03/06/19 12:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate	8000	8050	101	80.0-120	
Sulfate	40000	39900	99.8	80.0-120	

L1075700-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075700-02 03/06/19 14:40 • (MS) R3389344-4 03/06/19 15:11 • (MSD) R3389344-5 03/06/19 15:27

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	338	5120	5140	95.6	96.1	1	80.0-120			0.476	15
Sulfate	50000	27800	75300	75700	95.0	95.8	1	80.0-120			0.540	15

L1075738-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075738-03 03/06/19 20:35 • (MS) R3389344-7 03/06/19 21:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	ND	4820	96.4	1	80.0-120	
Sulfate	50000	8810	58200	98.7	1	80.0-120	

Method Blank (MB)

(MB) R3389972-1 03/08/19 10:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1076178-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076178-01 03/08/19 11:19 • (DUP) R3389972-2 03/08/19 11:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	45.3	43.6	1	3.69		20

L1076175-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076175-01 03/08/19 11:21 • (DUP) R3389972-3 03/08/19 11:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	22.9	25.3	1	10.2		20

L1076138-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076138-01 03/08/19 13:22 • (DUP) R3389972-4 03/08/19 13:24

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) R3389972-5 03/08/19 13:29 • (LCSD) R3389972-6 03/08/19 13:32

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	70.5	69.9	104	103	85.0-115			0.811	20

Method Blank (MB)

(MB) R3389504-3 03/06/19 13:17

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
Bromochloromethane	U		0.520	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
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
2-Butanone (MEK)	U		3.93	10.0
Isopropylbenzene	U		0.326	1.00
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) R3389504-3 03/06/19 13:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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
Toluene	U		0.412	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) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

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

(LCS) R3389504-1 03/06/19 12:17 • (LCSD) R3389504-2 03/06/19 12:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	152	152	122	122	19.0-160			0.114	27
Bromodichloromethane	25.0	22.0	21.9	87.9	87.7	75.0-120			0.182	20
Bromoform	25.0	26.6	26.5	107	106	68.0-132			0.478	20
Bromomethane	25.0	22.7	22.5	91.0	89.8	10.0-160			1.28	25
Bromochloromethane	25.0	23.0	23.1	92.0	92.5	76.0-122			0.559	20
Carbon tetrachloride	25.0	24.6	24.3	98.2	97.4	68.0-126			0.873	20
Chlorobenzene	25.0	23.3	23.3	93.2	93.0	80.0-121			0.147	20
Chlorodibromomethane	25.0	24.7	24.4	98.6	97.7	77.0-125			0.936	20
Chloroethane	25.0	22.1	22.0	88.3	87.8	47.0-150			0.473	20
Carbon disulfide	25.0	28.8	22.8	115	91.1	61.0-128		J3	23.4	20
Chloroform	25.0	21.8	21.5	87.2	86.1	73.0-120			1.22	20
Chloromethane	25.0	22.7	22.9	91.0	91.7	41.0-142			0.812	20
Benzene	25.0	23.0	22.7	91.8	91.0	70.0-123			0.976	20
1,2-Dibromo-3-Chloropropane	25.0	25.6	26.6	102	106	58.0-134			3.65	20
1,2-Dibromoethane	25.0	23.5	23.4	93.9	93.7	80.0-122			0.219	20
1,2-Dichlorobenzene	25.0	23.0	23.8	92.0	95.2	79.0-121			3.40	20
1,3-Dichlorobenzene	25.0	22.5	23.4	89.9	93.6	79.0-120			4.08	20
1,4-Dichlorobenzene	25.0	22.2	22.6	88.7	90.6	79.0-120			2.11	20
Dichlorodifluoromethane	25.0	22.9	22.8	91.4	91.4	51.0-149			0.0730	20

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

(LCS) R3389504-1 03/06/19 12:17 • (LCSD) R3389504-2 03/06/19 12:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethane	25.0	22.6	22.4	90.3	89.8	70.0-126			0.526	20
1,2-Dichloroethane	25.0	21.9	22.1	87.7	88.6	70.0-128			1.00	20
1,1-Dichloroethene	25.0	27.7	24.2	111	97.0	71.0-124			13.4	20
cis-1,2-Dichloroethene	25.0	22.6	22.4	90.2	89.8	73.0-120			0.507	20
trans-1,2-Dichloroethene	25.0	23.2	23.1	93.0	92.5	73.0-120			0.484	20
1,2-Dichloropropane	25.0	22.8	22.7	91.2	90.9	77.0-125			0.264	20
cis-1,3-Dichloropropene	25.0	21.9	21.9	87.6	87.7	80.0-123			0.141	20
trans-1,3-Dichloropropene	25.0	23.1	23.3	92.6	93.1	78.0-124			0.558	20
2-Hexanone	125	124	125	99.2	99.8	67.0-149			0.527	20
2-Butanone (MEK)	125	128	128	102	103	44.0-160			0.338	20
Methylene Chloride	25.0	23.6	23.3	94.3	93.1	67.0-120			1.22	20
4-Methyl-2-pentanone (MIBK)	125	123	124	98.8	99.5	68.0-142			0.727	20
Ethylbenzene	25.0	23.8	23.5	95.1	94.1	79.0-123			1.01	20
Styrene	25.0	25.1	25.1	100	100	73.0-130			0.248	20
1,1,2,2-Tetrachloroethane	25.0	21.5	22.3	85.8	89.1	65.0-130			3.77	20
Tetrachloroethene	25.0	24.0	23.8	96.1	95.1	72.0-132			0.987	20
1,1,2-Trichlorotrifluoroethane	25.0	26.3	21.7	105	86.6	69.0-132			19.4	20
Isopropylbenzene	25.0	24.4	24.2	97.8	96.7	76.0-127			1.08	20
1,2,3-Trichlorobenzene	25.0	24.1	25.4	96.6	101	50.0-138			4.88	20
1,2,4-Trichlorobenzene	25.0	24.7	25.7	98.7	103	57.0-137			3.93	20
1,1,1-Trichloroethane	25.0	23.8	23.5	95.2	94.1	73.0-124			1.21	20
1,1,2-Trichloroethane	25.0	22.4	22.3	89.4	89.1	80.0-120			0.417	20
Trichloroethene	25.0	23.2	23.0	93.0	91.8	78.0-124			1.26	20
Trichlorofluoromethane	25.0	25.0	24.7	100	98.9	59.0-147			1.30	20
Methyl tert-butyl ether	25.0	23.9	24.2	95.4	96.7	68.0-125			1.31	20
Vinyl chloride	25.0	21.3	21.3	85.2	85.3	67.0-131			0.0456	20
Toluene	25.0	24.1	23.9	96.4	95.6	79.0-120			0.789	20
Xylenes, Total	75.0	71.2	71.0	94.9	94.7	79.0-123			0.281	20
(S) Toluene-d8				*106*	*104*	*80.0-120*				
(S) a,a,a-Trifluorotoluene				*104*	*104*	*80.0-120*				
(S) 4-Bromofluorobenzene				*103*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*103*	*109*	*70.0-130*				

Method Blank (MB)

(MB) R3390901-2 03/07/19 02:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.7*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3390901-1 03/07/19 01:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	24.3	97.4	70.0-123	
1,2-Dichloroethane	25.0	24.9	99.4	70.0-128	
Ethylbenzene	25.0	24.4	97.7	79.0-123	
Methyl tert-butyl ether	25.0	21.0	84.0	68.0-125	
Naphthalene	25.0	27.5	110	54.0-135	
Toluene	25.0	23.5	93.9	79.0-120	
Xylenes, Total	75.0	72.9	97.2	79.0-123	
(S) Toluene-d8			*98.0*	*80.0-120*	
(S) 4-Bromofluorobenzene			*100*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*106*	*70.0-130*	

Method Blank (MB)

(MB) R3389760-2 03/07/19 09:49

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) 4-Bromofluorobenzene	*96.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*90.0*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3389760-1 03/07/19 09:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	25.4	102	70.0-123	
1,2-Dichloroethane	25.0	24.4	97.8	70.0-128	
Ethylbenzene	25.0	24.9	99.7	79.0-123	
Methyl tert-butyl ether	25.0	26.8	107	68.0-125	
Naphthalene	25.0	23.2	92.9	54.0-135	
Toluene	25.0	25.0	99.9	79.0-120	
Xylenes, Total	75.0	80.3	107	79.0-123	
(S) Toluene-d8			*101*	*80.0-120*	
(S) 4-Bromofluorobenzene			*101*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*100*	*70.0-130*	

Method Blank (MB)

(MB) R3391169-2 03/12/19 19:15

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	*97.9*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3391169-1 03/12/19 18:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	25.9	104	70.0-123	
Methyl tert-butyl ether	25.0	30.2	121	68.0-125	
Toluene	25.0	23.4	93.5	79.0-120	
Xylenes, Total	75.0	71.3	95.1	79.0-123	
(S) Toluene-d8			*99.1*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*109*	*70.0-130*	

Method Blank (MB)

(MB) R3391233-3 03/13/19 09:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Toluene	U		0.412	1.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*96.2*			*70.0-130*

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

(LCS) R3391233-1 03/13/19 08:55 • (LCSD) R3391233-2 03/13/19 09:13

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	%	%	%			%	%
Toluene	25.0	22.4	22.7	89.6	90.7	79.0-120			1.21	20
(S) Toluene-d8				*99.3*	*99.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*100*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*108*	*105*	*70.0-130*				

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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
B	The same analyte is found in the associated blank.
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.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

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	T104704245-18-15
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

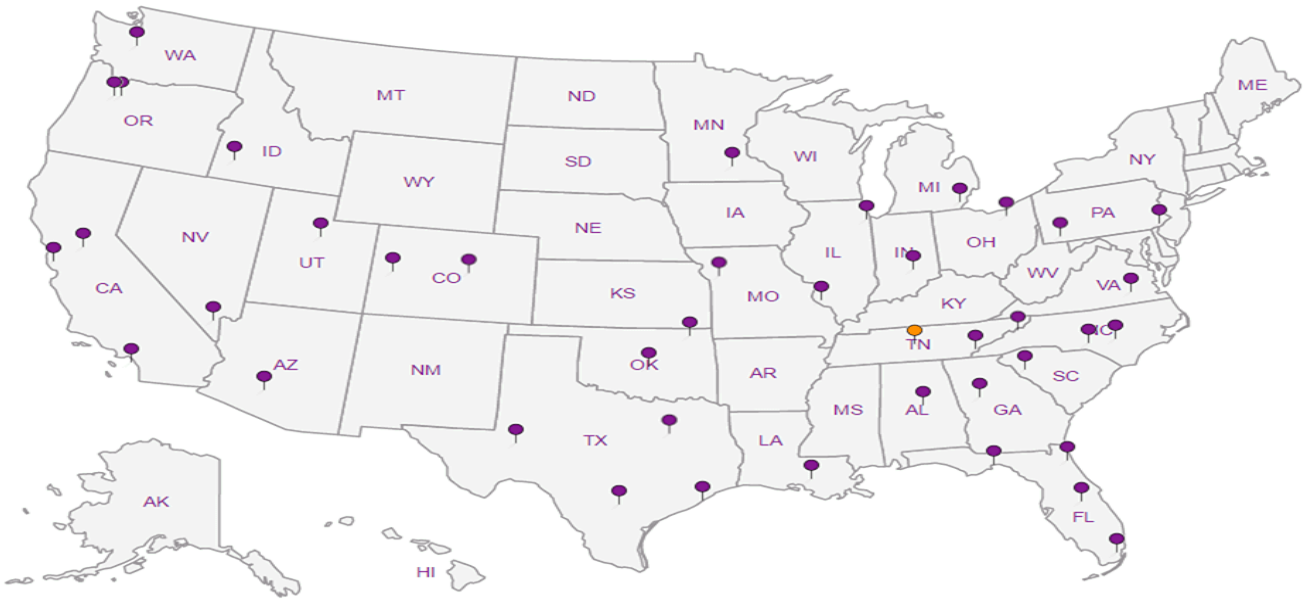
Third Party Federal Accreditations

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: 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 # D3161400.A.PN.EV, LDOMR.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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk
							X	X	X	X	
MW-29-030519	GRAB	GW	NA	03/05/19	1250	3				X	
MW-19-030519		GW			1300	7	X	X	X	X	
MW-20-030519		GW			1320	7	X	X	X	X	
MW-26B-030519		GW			1335	3				X	
MW-23-030519		GW			1355	3				X	
MW-23B-030519		GW			1400	3				X	
MW-23-D-030519		GW			1356	3				X	
MW-45-030519		GW			1415	3				X	
MW-45B-030519		GW			1420	3				X	
MW-46-030519		GW			1435	3				X	

Chain of Custody Page 1 of 3

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# 1075738
H062

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-186
Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	01
	02
	03
	04
	05
	06
	07
	08
	09
	10

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 4876 1076 2604

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
RAD SCREEN: <0.5 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
	03/05/19	1730		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
				1.0-0.1=0.9	85
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:
				3/6/19	0930

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 # D3161400.A.PN.EV.LDOMR.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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-26-030519	GRAB	GW	NA	03/05/19	1340	3				X			11
MW-21-030519		GW			1445	3				X			12
MW-17-030519		GW			1500	3				X			13
MW-17B-030519		GW			1505	3				X			14
MW-22-030519		GW			1520	7	X	X	X	X			15
MW-44-030519		GW			1540	3				X			16
MW-44B-030519		GW			1550	3				X			17
MW-01-030519		GW			1600	7	X	X	X	X			18
MW01B-030519		GW			1630	3				X			19
MW-27-030519		GW			1620	3				X			20

Chain of Custody Page 1 of 3

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# 1075738

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-186

Shipped Via: FedEX Ground

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS ✓ 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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) No HCl / MeoH TBR
	03/05/19	1730		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				1.0-0.1=0.9 85
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				3/6/19 0930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Kinder Morgan- Atlanta, GA	Billing Information:
6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328	Accounts Payable 1000 Windward Concourse Ste 450 Alpharetta, GA 30005
Report to: Bethany Garvey	Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Chain of Custody Page 3 of 3

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

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project #: D3161400.A.~~LA~~ PN.EV.LDOMR.GW

Lab Project #: KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID #: LEWIS DRIVE

P.O. #

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

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

L# 1075738
Table #
Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18
Shipped Via: FedEX Ground

Analysis / Container / Preservative (Pres Chk: X X)

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-27-D-030519	GRAB	GW	NA	03/05/19	1621	3				X								21
MW-27B-030519	↓	GW	↓	↓	~~1630~~ 1610	3				X								22
FB01-030519		GW			1605	3				X								23
TB01-030519	↓	GW	↓	↓	1615	1					X						TB	24
		GW																
		GW																
		GW																
		GW																
		GW																
		GW																

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH ______ Temp ______
Flow ______ Other ______

Samples returned via:
__ UPS __ 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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCL / MeoH TBR 1	
[signature]	03/05/19	1730			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.0+0.1=0.9 °C Bottles Received: 85	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 3/6/19 Time: 0930	Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 14, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1076187
Samples Received:	03/07/2019
Project Number:	D3161400.A.PN.EV.LDO
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:

Jason Romer
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-11-030619 L1076187-01 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 09:50 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 22:42	03/13/19 22:42	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 22:42	03/13/19 22:42	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 18:15	03/07/19 18:15	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 13:49	03/08/19 13:49	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	200	03/08/19 04:28	03/08/19 04:28	JCP	Mt. Juliet, TN

MW-12-030619 L1076187-02 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:55 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 22:48	03/13/19 22:48	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 22:48	03/13/19 22:48	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 18:31	03/07/19 18:31	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 13:52	03/08/19 13:52	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 04:48	03/08/19 04:48	JCP	Mt. Juliet, TN

MW-12B-030619 L1076187-03 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 11:05 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 05:08	03/08/19 05:08	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248366	10	03/13/19 00:56	03/13/19 00:56	DWR	Mt. Juliet, TN

MW-28-030619 L1076187-04 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:20 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 22:55	03/13/19 22:55	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 22:55	03/13/19 22:55	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 18:46	03/07/19 18:46	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 13:54	03/08/19 13:54	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 05:28	03/08/19 05:28	JCP	Mt. Juliet, TN

MW-49-030619 L1076187-05 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:35 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 05:48	03/08/19 05:48	JCP	Mt. Juliet, TN

MW-35-030619 L1076187-06 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:30 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 23:18	03/13/19 23:18	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 23:18	03/13/19 23:18	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 19:02	03/07/19 19:02	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 13:57	03/08/19 13:57	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 06:08	03/08/19 06:08	JCP	Mt. Juliet, TN

MW-25B-030619 L1076187-07 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:40 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 06:29	03/08/19 06:29	JCP	Mt. Juliet, TN

MW-25B-D-030619 L1076187-08 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:41 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 06:49	03/08/19 06:49	JCP	Mt. Juliet, TN

MW-25-030619 L1076187-09 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 10:55 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 23:24	03/13/19 23:24	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 23:24	03/13/19 23:24	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 19:17	03/07/19 19:17	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 13:59	03/08/19 13:59	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 07:09	03/08/19 07:09	JCP	Mt. Juliet, TN

MW-42-030619 L1076187-10 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 11:10 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 23:31	03/13/19 23:31	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 23:31	03/13/19 23:31	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 19:32	03/07/19 19:32	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 14:07	03/08/19 14:07	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 07:29	03/08/19 07:29	JCP	Mt. Juliet, TN

MW-41-030619 L1076187-11 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 11:20 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 07:49	03/08/19 07:49	JCP	Mt. Juliet, TN

MW-40-030619 L1076187-12 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 11:35 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 23:38	03/13/19 23:38	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 23:38	03/13/19 23:38	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 19:48	03/07/19 19:48	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 14:09	03/08/19 14:09	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 08:42	03/08/19 08:42	JCP	Mt. Juliet, TN

MW-15-030619 L1076187-13 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 11:40 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1248732	1	03/13/19 23:44	03/13/19 23:44	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1248732	1	03/13/19 23:44	03/13/19 23:44	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1246539	1	03/07/19 20:03	03/07/19 20:03	ST	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1246646	1	03/08/19 14:14	03/08/19 14:14	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 09:02	03/08/19 09:02	JCP	Mt. Juliet, TN

MW-39-030619 L1076187-14 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 13:45 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 09:22	03/08/19 09:22	JCP	Mt. Juliet, TN

MW-34-030619 L1076187-15 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 13:25 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 09:43	03/08/19 09:43	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248366	10	03/13/19 01:18	03/13/19 01:18	DWR	Mt. Juliet, TN

MW-15B-030619 L1076187-16 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 13:55 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1249043	1	03/13/19 12:59	03/13/19 12:59	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1249369	25	03/13/19 15:48	03/13/19 15:48	BMB	Mt. Juliet, TN

MW-15B-D-030619 L1076187-17 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 13:56 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 12:03	03/08/19 12:03	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1249043	25	03/13/19 13:18	03/13/19 13:18	JAH	Mt. Juliet, TN

MW-24-030619 L1076187-18 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 14:20 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 12:23	03/08/19 12:23	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1249043	1	03/13/19 13:56	03/13/19 13:56	JAH	Mt. Juliet, TN

MW-24B-030619 L1076187-19 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 14:10 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 12:43	03/08/19 12:43	JCP	Mt. Juliet, TN

MW-43-030619 L1076187-20 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 14:40 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246907	1	03/08/19 13:03	03/08/19 13:03	JCP	Mt. Juliet, TN

MW-43B-030619 L1076187-21 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 14:30 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 06:16	03/08/19 06:16	TJJ	Mt. Juliet, TN

MW-38-030619 L1076187-22 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 14:50 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 06:36	03/08/19 06:36	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247808	5	03/10/19 14:43	03/10/19 14:43	BMB	Mt. Juliet, TN

MW-37-030619 L1076187-23 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 14:45 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 06:56	03/08/19 06:56	TJJ	Mt. Juliet, TN

MW-51-030619 L1076187-24 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:00 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 07:16	03/08/19 07:16	TJJ	Mt. Juliet, TN

MW-52-030619 L1076187-25 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:10 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 07:36	03/08/19 07:36	TJJ	Mt. Juliet, TN

MW-14-030619 L1076187-26 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:15 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 07:56	03/08/19 07:56	TJJ	Mt. Juliet, TN

MW-14B-030619 L1076187-27 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:20 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 08:16	03/08/19 08:16	TJJ	Mt. Juliet, TN

MW-13-030619 L1076187-28 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:25 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 08:36	03/08/19 08:36	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247808	5	03/10/19 15:04	03/10/19 15:04	BMB	Mt. Juliet, TN

MW-13B-030619 L1076187-29 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:30 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 08:56	03/08/19 08:56	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247808	5	03/10/19 15:25	03/10/19 15:25	BMB	Mt. Juliet, TN

FB01-030619 L1076187-30 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:57 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 09:16	03/08/19 09:16	TJJ	Mt. Juliet, TN

TB01-030619 L1076187-31 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 15:58 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247226	1	03/08/19 13:58	03/08/19 13:58	BMB	Mt. Juliet, TN

MW-50B-030619 L1076187-32 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 16:20 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 09:36	03/08/19 09:36	TJJ	Mt. Juliet, TN

MW-48B-030619 L1076187-33 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 16:30 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 09:56	03/08/19 09:56	TJJ	Mt. Juliet, TN

MW-33T-030619 L1076187-34 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 16:10 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 10:16	03/08/19 10:16	TJJ	Mt. Juliet, TN

MW-31-030619 L1076187-35 GW

Collected by: Melissa Warren | Collected date/time: 03/06/19 16:00 | Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 10:36	03/08/19 10:36	TJJ	Mt. Juliet, TN

MW-47-030619 L1076187-36 GW

Collected by: Melissa Warren
Collected date/time: 03/06/19 15:55
Received date/time: 03/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1246914	1	03/08/19 10:57	03/08/19 10:57	TJJ	Mt. Juliet, TN

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.

Jason Romer
Project Manager

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/13/2019 22:42	WG1248732

Sample Narrative:
L1076187-01 WG1248732: 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	31600	T8	20000	1	03/13/2019 22:42	WG1248732

Sample Narrative:
L1076187-01 WG1248732: 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	03/07/2019 18:15	WG1246539
Sulfate	ND		5000	1	03/07/2019 18:15	WG1246539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	48.8		10.0	1	03/08/2019 13:49	WG1246646

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	8260		200	200	03/08/2019 04:28	WG1246907
Toluene	30300		200	200	03/08/2019 04:28	WG1246907
Ethylbenzene	1990		200	200	03/08/2019 04:28	WG1246907
Total Xylenes	11900		600	200	03/08/2019 04:28	WG1246907
Methyl tert-butyl ether	ND		200	200	03/08/2019 04:28	WG1246907
Naphthalene	ND		1000	200	03/08/2019 04:28	WG1246907
1,2-Dichloroethane	ND		200	200	03/08/2019 04:28	WG1246907
(S) Toluene-d8	*107*		*80.0-120*		*03/08/2019 04:28*	WG1246907
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/08/2019 04:28*	WG1246907
(S) 1,2-Dichloroethane-d4	*95.0*		*70.0-130*		*03/08/2019 04:28*	WG1246907

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	03/13/2019 22:48	WG1248732

Sample Narrative:
L1076187-02 WG1248732: 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	03/13/2019 22:48	WG1248732

Sample Narrative:
L1076187-02 WG1248732: 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)	ND		100	1	03/07/2019 18:31	WG1246539
Sulfate	ND		5000	1	03/07/2019 18:31	WG1246539

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	03/08/2019 13:52	WG1246646

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	03/08/2019 04:48	WG1246907
Toluene	3.94		1.00	1	03/08/2019 04:48	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 04:48	WG1246907
Total Xylenes	4.86		3.00	1	03/08/2019 04:48	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 04:48	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 04:48	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 04:48	WG1246907
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 04:48*	WG1246907
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*03/08/2019 04:48*	WG1246907
(S) 1,2-Dichloroethane-d4	*97.8*		*70.0-130*		*03/08/2019 04:48*	WG1246907

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	309		10.0	10	03/13/2019 00:56	WG1248366
Toluene	19.6		1.00	1	03/08/2019 05:08	WG1246907
Ethylbenzene	70.4		1.00	1	03/08/2019 05:08	WG1246907
Total Xylenes	201		3.00	1	03/08/2019 05:08	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 05:08	WG1246907
Naphthalene	36.7		5.00	1	03/08/2019 05:08	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 05:08	WG1246907
(S) Toluene-d8	*99.9*		*80.0-120*		*03/08/2019 05:08*	WG1246907
(S) Toluene-d8	*100*		*80.0-120*		*03/13/2019 00:56*	WG1248366
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/08/2019 05:08*	WG1246907
(S) 4-Bromofluorobenzene	*96.2*		*77.0-126*		*03/13/2019 00:56*	WG1248366
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/08/2019 05:08*	WG1246907
(S) 1,2-Dichloroethane-d4	*109*		*70.0-130*		*03/13/2019 00:56*	WG1248366

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/13/2019 22:55	WG1248732

Sample Narrative:
L1076187-04 WG1248732: 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	03/13/2019 22:55	WG1248732

Sample Narrative:
L1076187-04 WG1248732: 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)	426		100	1	03/07/2019 18:46	WG1246539
Sulfate	5090		5000	1	03/07/2019 18:46	WG1246539

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	03/08/2019 13:54	WG1246646

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	03/08/2019 05:28	WG1246907
Toluene	ND		1.00	1	03/08/2019 05:28	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 05:28	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 05:28	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 05:28	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 05:28	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 05:28	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 05:28*	WG1246907
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*03/08/2019 05:28*	WG1246907
(S) 1,2-Dichloroethane-d4	*99.6*		*70.0-130*		*03/08/2019 05:28*	WG1246907

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	03/08/2019 05:48	WG1246907
Toluene	ND		1.00	1	03/08/2019 05:48	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 05:48	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 05:48	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 05:48	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 05:48	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 05:48	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 05:48*	WG1246907
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/08/2019 05:48*	WG1246907
(S) 1,2-Dichloroethane-d4	*95.7*		*70.0-130*		*03/08/2019 05:48*	WG1246907

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/13/2019 23:18	WG1248732

Sample Narrative:
L1076187-06 WG1248732: 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	03/13/2019 23:18	WG1248732

Sample Narrative:
L1076187-06 WG1248732: 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)	1210		100	1	03/07/2019 19:02	WG1246539
Sulfate	ND		5000	1	03/07/2019 19:02	WG1246539

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	03/08/2019 13:57	WG1246646

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	03/08/2019 06:08	WG1246907
Toluene	ND		1.00	1	03/08/2019 06:08	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 06:08	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 06:08	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 06:08	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 06:08	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 06:08	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 06:08*	WG1246907
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*03/08/2019 06:08*	WG1246907
(S) 1,2-Dichloroethane-d4	*98.2*		*70.0-130*		*03/08/2019 06:08*	WG1246907

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	03/08/2019 06:29	WG1246907
Toluene	ND		1.00	1	03/08/2019 06:29	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 06:29	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 06:29	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 06:29	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 06:29	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 06:29	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 06:29*	WG1246907
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/08/2019 06:29*	WG1246907
(S) 1,2-Dichloroethane-d4	*98.2*		*70.0-130*		*03/08/2019 06:29*	WG1246907

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	03/08/2019 06:49	WG1246907
Toluene	ND		1.00	1	03/08/2019 06:49	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 06:49	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 06:49	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 06:49	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 06:49	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 06:49	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 06:49*	WG1246907
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*03/08/2019 06:49*	WG1246907
(S) 1,2-Dichloroethane-d4	*98.9*		*70.0-130*		*03/08/2019 06:49*	WG1246907

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	03/13/2019 23:24	WG1248732

Sample Narrative:
L1076187-09 WG1248732: 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	03/13/2019 23:24	WG1248732

Sample Narrative:
L1076187-09 WG1248732: 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)	635		100	1	03/07/2019 19:17	WG1246539
Sulfate	ND		5000	1	03/07/2019 19:17	WG1246539

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	03/08/2019 13:59	WG1246646

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	03/08/2019 07:09	WG1246907
Toluene	ND		1.00	1	03/08/2019 07:09	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 07:09	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 07:09	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 07:09	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 07:09	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 07:09	WG1246907
(S) Toluene-d8	*107*		*80.0-120*		*03/08/2019 07:09*	WG1246907
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*03/08/2019 07:09*	WG1246907
(S) 1,2-Dichloroethane-d4	*98.6*		*70.0-130*		*03/08/2019 07:09*	WG1246907

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	03/13/2019 23:31	WG1248732

Sample Narrative:
L1076187-10 WG1248732: 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	03/13/2019 23:31	WG1248732

Sample Narrative:
L1076187-10 WG1248732: 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)	437		100	1	03/07/2019 19:32	WG1246539
Sulfate	ND		5000	1	03/07/2019 19:32	WG1246539

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	03/08/2019 14:07	WG1246646

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	03/08/2019 07:29	WG1246907
Toluene	ND		1.00	1	03/08/2019 07:29	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 07:29	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 07:29	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 07:29	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 07:29	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 07:29	WG1246907
(S) Toluene-d8	*107*		*80.0-120*		*03/08/2019 07:29*	WG1246907
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*03/08/2019 07:29*	WG1246907
(S) 1,2-Dichloroethane-d4	*97.8*		*70.0-130*		*03/08/2019 07:29*	WG1246907

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	03/08/2019 07:49	WG1246907
Toluene	ND		1.00	1	03/08/2019 07:49	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 07:49	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 07:49	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 07:49	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 07:49	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 07:49	WG1246907
(S) Toluene-d8	*107*		*80.0-120*		*03/08/2019 07:49*	WG1246907
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/08/2019 07:49*	WG1246907
(S) 1,2-Dichloroethane-d4	*94.6*		*70.0-130*		*03/08/2019 07:49*	WG1246907

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/13/2019 23:38	WG1248732

Sample Narrative:
L1076187-12 WG1248732: 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	03/13/2019 23:38	WG1248732

Sample Narrative:
L1076187-12 WG1248732: 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	03/07/2019 19:48	WG1246539
Sulfate	ND		5000	1	03/07/2019 19:48	WG1246539

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	03/08/2019 14:09	WG1246646

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	03/08/2019 08:42	WG1246907
Toluene	ND		1.00	1	03/08/2019 08:42	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 08:42	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 08:42	WG1246907
Methyl tert-butyl ether	3.73		1.00	1	03/08/2019 08:42	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 08:42	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 08:42	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 08:42*	WG1246907
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*03/08/2019 08:42*	WG1246907
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/08/2019 08:42*	WG1246907

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	03/13/2019 23:44	WG1248732

Sample Narrative:
L1076187-13 WG1248732: 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	03/13/2019 23:44	WG1248732

Sample Narrative:
L1076187-13 WG1248732: 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)	1460		100	1	03/07/2019 20:03	WG1246539
Sulfate	11300		5000	1	03/07/2019 20:03	WG1246539

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	03/08/2019 14:14	WG1246646

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	03/08/2019 09:02	WG1246907
Toluene	ND		1.00	1	03/08/2019 09:02	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 09:02	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 09:02	WG1246907
Methyl tert-butyl ether	2.57		1.00	1	03/08/2019 09:02	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 09:02	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 09:02	WG1246907
(S) Toluene-d8	*104*		*80.0-120*		*03/08/2019 09:02*	WG1246907
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/08/2019 09:02*	WG1246907
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/08/2019 09:02*	WG1246907

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.91		1.00	1	03/08/2019 09:22	WG1246907
Toluene	1.01		1.00	1	03/08/2019 09:22	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 09:22	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 09:22	WG1246907
Methyl tert-butyl ether	61.0		1.00	1	03/08/2019 09:22	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 09:22	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 09:22	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 09:22*	WG1246907
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*03/08/2019 09:22*	WG1246907
(S) 1,2-Dichloroethane-d4	*99.9*		*70.0-130*		*03/08/2019 09:22*	WG1246907

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	42.4		1.00	1	03/08/2019 09:43	WG1246907
Toluene	ND		1.00	1	03/08/2019 09:43	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 09:43	WG1246907
Total Xylenes	5.32		3.00	1	03/08/2019 09:43	WG1246907
Methyl tert-butyl ether	242		10.0	10	03/13/2019 01:18	WG1248366
Naphthalene	ND		5.00	1	03/08/2019 09:43	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 09:43	WG1246907
(S) Toluene-d8	*104*		*80.0-120*		*03/08/2019 09:43*	WG1246907
(S) Toluene-d8	*99.4*		*80.0-120*		*03/13/2019 01:18*	WG1248366
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*03/08/2019 09:43*	WG1246907
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/13/2019 01:18*	WG1248366
(S) 1,2-Dichloroethane-d4	*96.2*		*70.0-130*		*03/08/2019 09:43*	WG1246907
(S) 1,2-Dichloroethane-d4	*112*		*70.0-130*		*03/13/2019 01:18*	WG1248366

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	729		25.0	25	03/13/2019 15:48	WG1249369
Toluene	1580		25.0	25	03/13/2019 15:48	WG1249369
Ethylbenzene	78.3		1.00	1	03/13/2019 12:59	WG1249043
Total Xylenes	649		75.0	25	03/13/2019 15:48	WG1249369
Methyl tert-butyl ether	91.2		1.00	1	03/13/2019 12:59	WG1249043
Naphthalene	15.4		5.00	1	03/13/2019 12:59	WG1249043
1,2-Dichloroethane	ND		1.00	1	03/13/2019 12:59	WG1249043
(S) Toluene-d8	*98.4*		*80.0-120*		*03/13/2019 12:59*	WG1249043
(S) Toluene-d8	*102*		*80.0-120*		*03/13/2019 15:48*	WG1249369
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/13/2019 12:59*	WG1249043
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/13/2019 15:48*	WG1249369
(S) 1,2-Dichloroethane-d4	*95.6*		*70.0-130*		*03/13/2019 12:59*	WG1249043
(S) 1,2-Dichloroethane-d4	*90.9*		*70.0-130*		*03/13/2019 15:48*	WG1249369

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	817		25.0	25	03/13/2019 13:18	WG1249043
Toluene	1710		25.0	25	03/13/2019 13:18	WG1249043
Ethylbenzene	81.0		1.00	1	03/08/2019 12:03	WG1246907
Total Xylenes	718		75.0	25	03/13/2019 13:18	WG1249043
Methyl tert-butyl ether	110		1.00	1	03/08/2019 12:03	WG1246907
Naphthalene	16.2		5.00	1	03/08/2019 12:03	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 12:03	WG1246907
(S) Toluene-d8	*99.0*		*80.0-120*		*03/08/2019 12:03*	WG1246907
(S) Toluene-d8	*102*		*80.0-120*		*03/13/2019 13:18*	WG1249043
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*03/08/2019 12:03*	WG1246907
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/13/2019 13:18*	WG1249043
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*03/08/2019 12:03*	WG1246907
(S) 1,2-Dichloroethane-d4	*90.0*		*70.0-130*		*03/13/2019 13:18*	WG1249043

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	03/08/2019 12:23	WG1246907
Toluene	ND		1.00	1	03/13/2019 13:56	WG1249043
Ethylbenzene	ND		1.00	1	03/08/2019 12:23	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 12:23	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 12:23	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 12:23	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 12:23	WG1246907
(S) Toluene-d8	*103*		*80.0-120*		*03/08/2019 12:23*	WG1246907
(S) Toluene-d8	*105*		*80.0-120*		*03/13/2019 13:56*	WG1249043
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/08/2019 12:23*	WG1246907
(S) 4-Bromofluorobenzene	*94.1*		*77.0-126*		*03/13/2019 13:56*	WG1249043
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/08/2019 12:23*	WG1246907
(S) 1,2-Dichloroethane-d4	*87.8*		*70.0-130*		*03/13/2019 13:56*	WG1249043

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	03/08/2019 12:43	WG1246907
Toluene	ND		1.00	1	03/08/2019 12:43	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 12:43	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 12:43	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 12:43	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 12:43	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 12:43	WG1246907
(S) Toluene-d8	*103*		*80.0-120*		*03/08/2019 12:43*	WG1246907
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/08/2019 12:43*	WG1246907
(S) 1,2-Dichloroethane-d4	*99.5*		*70.0-130*		*03/08/2019 12:43*	WG1246907

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	03/08/2019 13:03	WG1246907
Toluene	ND		1.00	1	03/08/2019 13:03	WG1246907
Ethylbenzene	ND		1.00	1	03/08/2019 13:03	WG1246907
Total Xylenes	ND		3.00	1	03/08/2019 13:03	WG1246907
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 13:03	WG1246907
Naphthalene	ND		5.00	1	03/08/2019 13:03	WG1246907
1,2-Dichloroethane	ND		1.00	1	03/08/2019 13:03	WG1246907
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 13:03*	WG1246907
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/08/2019 13:03*	WG1246907
(S) 1,2-Dichloroethane-d4	*97.2*		*70.0-130*		*03/08/2019 13:03*	WG1246907

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	03/08/2019 06:16	WG1246914
Toluene	ND		1.00	1	03/08/2019 06:16	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 06:16	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 06:16	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 06:16	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 06:16	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 06:16	WG1246914
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 06:16*	WG1246914
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 06:16*	WG1246914
(S) 1,2-Dichloroethane-d4	*109*		*70.0-130*		*03/08/2019 06:16*	WG1246914

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	849		5.00	5	03/10/2019 14:43	WG1247808
Toluene	2.55		1.00	1	03/08/2019 06:36	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 06:36	WG1246914
Total Xylenes	278		15.0	5	03/10/2019 14:43	WG1247808
Methyl tert-butyl ether	96.7		1.00	1	03/08/2019 06:36	WG1246914
Naphthalene	18.0		5.00	1	03/08/2019 06:36	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 06:36	WG1246914
(S) Toluene-d8	*103*		*80.0-120*		*03/08/2019 06:36*	WG1246914
(S) Toluene-d8	*96.7*		*80.0-120*		*03/10/2019 14:43*	WG1247808
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/08/2019 06:36*	WG1246914
(S) 4-Bromofluorobenzene	*97.7*		*77.0-126*		*03/10/2019 14:43*	WG1247808
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/08/2019 06:36*	WG1246914
(S) 1,2-Dichloroethane-d4	*86.5*		*70.0-130*		*03/10/2019 14:43*	WG1247808

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	03/08/2019 06:56	WG1246914
Toluene	ND		1.00	1	03/08/2019 06:56	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 06:56	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 06:56	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 06:56	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 06:56	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 06:56	WG1246914
(S) Toluene-d8	*104*		*80.0-120*		*03/08/2019 06:56*	WG1246914
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/08/2019 06:56*	WG1246914
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/08/2019 06:56*	WG1246914

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	03/08/2019 07:16	WG1246914
Toluene	ND		1.00	1	03/08/2019 07:16	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 07:16	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 07:16	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 07:16	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 07:16	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 07:16	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 07:16*	WG1246914
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 07:16*	WG1246914
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*03/08/2019 07:16*	WG1246914

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	03/08/2019 07:36	WG1246914
Toluene	ND		1.00	1	03/08/2019 07:36	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 07:36	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 07:36	WG1246914
Methyl tert-butyl ether	1.32		1.00	1	03/08/2019 07:36	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 07:36	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 07:36	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 07:36*	WG1246914
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/08/2019 07:36*	WG1246914
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*03/08/2019 07:36*	WG1246914

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	03/08/2019 07:56	WG1246914
Toluene	ND		1.00	1	03/08/2019 07:56	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 07:56	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 07:56	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 07:56	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 07:56	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 07:56	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 07:56*	WG1246914
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/08/2019 07:56*	WG1246914
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/08/2019 07:56*	WG1246914

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.70		1.00	1	03/08/2019 08:16	WG1246914
Toluene	ND		1.00	1	03/08/2019 08:16	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 08:16	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 08:16	WG1246914
Methyl tert-butyl ether	8.83		1.00	1	03/08/2019 08:16	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 08:16	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 08:16	WG1246914
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 08:16*	WG1246914
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 08:16*	WG1246914
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*03/08/2019 08:16*	WG1246914

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	326		5.00	5	03/10/2019 15:04	WG1247808
Toluene	132		1.00	1	03/08/2019 08:36	WG1246914
Ethylbenzene	10.9		1.00	1	03/08/2019 08:36	WG1246914
Total Xylenes	120		3.00	1	03/08/2019 08:36	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 08:36	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 08:36	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 08:36	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 08:36*	WG1246914
(S) Toluene-d8	*97.6*		*80.0-120*		*03/10/2019 15:04*	WG1247808
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 08:36*	WG1246914
(S) 4-Bromofluorobenzene	*92.4*		*77.0-126*		*03/10/2019 15:04*	WG1247808
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/08/2019 08:36*	WG1246914
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/10/2019 15:04*	WG1247808

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	445		5.00	5	03/10/2019 15:25	WG1247808
Toluene	679		5.00	5	03/10/2019 15:25	WG1247808
Ethylbenzene	53.1		1.00	1	03/08/2019 08:56	WG1246914
Total Xylenes	383		3.00	1	03/08/2019 08:56	WG1246914
Methyl tert-butyl ether	143		1.00	1	03/08/2019 08:56	WG1246914
Naphthalene	8.60		5.00	1	03/08/2019 08:56	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 08:56	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 08:56*	WG1246914
(S) Toluene-d8	*94.7*		*80.0-120*		*03/10/2019 15:25*	WG1247808
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/08/2019 08:56*	WG1246914
(S) 4-Bromofluorobenzene	*92.0*		*77.0-126*		*03/10/2019 15:25*	WG1247808
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/08/2019 08:56*	WG1246914
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/10/2019 15:25*	WG1247808

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	03/08/2019 09:16	WG1246914
Toluene	ND		1.00	1	03/08/2019 09:16	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 09:16	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 09:16	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 09:16	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 09:16	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 09:16	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 09:16*	WG1246914
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/08/2019 09:16*	WG1246914
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/08/2019 09:16*	WG1246914

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	03/08/2019 13:58	WG1247226
Benzene	ND		1.00	1	03/08/2019 13:58	WG1247226
Bromochloromethane	ND		1.00	1	03/08/2019 13:58	WG1247226
Bromodichloromethane	ND		1.00	1	03/08/2019 13:58	WG1247226
Bromoform	ND		1.00	1	03/08/2019 13:58	WG1247226
Bromomethane	ND		5.00	1	03/08/2019 13:58	WG1247226
Carbon disulfide	ND		1.00	1	03/08/2019 13:58	WG1247226
Carbon tetrachloride	ND		1.00	1	03/08/2019 13:58	WG1247226
Chlorobenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
Chlorodibromomethane	ND		1.00	1	03/08/2019 13:58	WG1247226
Chloroethane	ND		5.00	1	03/08/2019 13:58	WG1247226
Chloroform	ND		5.00	1	03/08/2019 13:58	WG1247226
Chloromethane	ND		2.50	1	03/08/2019 13:58	WG1247226
Cyclohexane	ND		1.00	1	03/08/2019 13:58	WG1247226
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/08/2019 13:58	WG1247226
1,2-Dibromoethane	ND		1.00	1	03/08/2019 13:58	WG1247226
1,2-Dichlorobenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,3-Dichlorobenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,4-Dichlorobenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
Dichlorodifluoromethane	ND		5.00	1	03/08/2019 13:58	WG1247226
1,1-Dichloroethane	ND		1.00	1	03/08/2019 13:58	WG1247226
1,2-Dichloroethane	ND		1.00	1	03/08/2019 13:58	WG1247226
1,1-Dichloroethene	ND		1.00	1	03/08/2019 13:58	WG1247226
cis-1,2-Dichloroethene	ND		1.00	1	03/08/2019 13:58	WG1247226
trans-1,2-Dichloroethene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,2-Dichloropropane	ND		1.00	1	03/08/2019 13:58	WG1247226
cis-1,3-Dichloropropene	ND		1.00	1	03/08/2019 13:58	WG1247226
trans-1,3-Dichloropropene	ND		1.00	1	03/08/2019 13:58	WG1247226
Ethylbenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
2-Hexanone	ND		10.0	1	03/08/2019 13:58	WG1247226
Isopropylbenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
2-Butanone (MEK)	ND		10.0	1	03/08/2019 13:58	WG1247226
Methyl Acetate	ND		20.0	1	03/08/2019 13:58	WG1247226
Methyl Cyclohexane	ND		1.00	1	03/08/2019 13:58	WG1247226
Methylene Chloride	ND		5.00	1	03/08/2019 13:58	WG1247226
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/08/2019 13:58	WG1247226
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 13:58	WG1247226
Styrene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/08/2019 13:58	WG1247226
Tetrachloroethene	ND		1.00	1	03/08/2019 13:58	WG1247226
Toluene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,2,3-Trichlorobenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,2,4-Trichlorobenzene	ND		1.00	1	03/08/2019 13:58	WG1247226
1,1,1-Trichloroethane	ND		1.00	1	03/08/2019 13:58	WG1247226
1,1,2-Trichloroethane	ND		1.00	1	03/08/2019 13:58	WG1247226
Trichloroethene	ND		1.00	1	03/08/2019 13:58	WG1247226
Trichlorofluoromethane	ND		5.00	1	03/08/2019 13:58	WG1247226
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/08/2019 13:58	WG1247226
Vinyl chloride	ND		1.00	1	03/08/2019 13:58	WG1247226
Xylenes, Total	ND		3.00	1	03/08/2019 13:58	WG1247226
(S) Toluene-d8	*101*		*80.0-120*		*03/08/2019 13:58*	WG1247226
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*03/08/2019 13:58*	WG1247226
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 13:58*	WG1247226
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/08/2019 13:58*	WG1247226

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.18		1.00	1	03/08/2019 09:36	WG1246914
Toluene	ND		1.00	1	03/08/2019 09:36	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 09:36	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 09:36	WG1246914
Methyl tert-butyl ether	43.9		1.00	1	03/08/2019 09:36	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 09:36	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 09:36	WG1246914
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 09:36*	WG1246914
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/08/2019 09:36*	WG1246914
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/08/2019 09:36*	WG1246914

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	03/08/2019 09:56	WG1246914
Toluene	ND		1.00	1	03/08/2019 09:56	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 09:56	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 09:56	WG1246914
Methyl tert-butyl ether	1.64		1.00	1	03/08/2019 09:56	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 09:56	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 09:56	WG1246914
(S) Toluene-d8	*105*		*80.0-120*		*03/08/2019 09:56*	WG1246914
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 09:56*	WG1246914
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/08/2019 09:56*	WG1246914

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	03/08/2019 10:16	WG1246914
Toluene	ND		1.00	1	03/08/2019 10:16	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 10:16	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 10:16	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 10:16	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 10:16	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 10:16	WG1246914
(S) Toluene-d8	*104*		*80.0-120*		*03/08/2019 10:16*	WG1246914
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/08/2019 10:16*	WG1246914
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*03/08/2019 10:16*	WG1246914

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	03/08/2019 10:36	WG1246914
Toluene	ND		1.00	1	03/08/2019 10:36	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 10:36	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 10:36	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 10:36	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 10:36	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 10:36	WG1246914
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 10:36*	WG1246914
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 10:36*	WG1246914
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/08/2019 10:36*	WG1246914

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	03/08/2019 10:57	WG1246914
Toluene	ND		1.00	1	03/08/2019 10:57	WG1246914
Ethylbenzene	ND		1.00	1	03/08/2019 10:57	WG1246914
Total Xylenes	ND		3.00	1	03/08/2019 10:57	WG1246914
Methyl tert-butyl ether	ND		1.00	1	03/08/2019 10:57	WG1246914
Naphthalene	ND		5.00	1	03/08/2019 10:57	WG1246914
1,2-Dichloroethane	ND		1.00	1	03/08/2019 10:57	WG1246914
(S) Toluene-d8	*106*		*80.0-120*		*03/08/2019 10:57*	WG1246914
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/08/2019 10:57*	WG1246914
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*03/08/2019 10:57*	WG1246914

Method Blank (MB)

(MB) R3391486-1 03/13/19 21:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	3120	J	2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1076569-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076569-01 03/13/19 22:05 • (DUP) R3391486-3 03/13/19 22:12

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	17300	17500	1	1.44	J	20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1076569-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1076569-03 03/14/19 00:47 • (DUP) R3391486-6 03/14/19 00:54

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	14800	14400	1	2.73	J	20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3391486-5 03/13/19 23:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	103000	103	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3391486-2 03/13/19 21:57

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

L1076569-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076569-01 03/13/19 22:05 • (DUP) R3391486-4 03/13/19 22:12

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 headspace

DUP: Endpoint pH 4.5

L1076569-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1076569-03 03/14/19 00:47 • (DUP) R3391486-7 03/14/19 00:54

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 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3389782-1 03/07/19 13:56

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

L1076173-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076173-01 03/07/19 16:12 • (DUP) R3389782-3 03/07/19 16:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	302	301	1	0.133		15
Sulfate	107000	107000	1	0.00422	E	15

L1076191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076191-01 03/07/19 20:19 • (DUP) R3389782-6 03/07/19 20:34

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
Sulfate	ND	2600	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3389782-2 03/07/19 14:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Nitrate	8000	8070	101	80.0-120	
Sulfate	40000	40500	101	80.0-120	

L1076173-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1076173-01 03/07/19 16:12 • (MS) R3389782-4 03/07/19 16:43 • (MSD) R3389782-5 03/07/19 16:58

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	302	5170	5180	97.3	97.6	1	80.0-120			0.309	15
Sulfate	50000	107000	151000	151000	87.9	88.4	1	80.0-120	E	E	0.158	15

L1076191-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1076191-01 03/07/19 20:19 • (MS) R3389782-7 03/07/19 21:20

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	ND	4910	98.2	1	80.0-120	
Sulfate	50000	ND	52900	100	1	80.0-120	

Method Blank (MB)

(MB) R3390015-1 03/08/19 13:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1076183-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076183-01 03/08/19 13:45 • (DUP) R3390015-2 03/08/19 14:25

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

L1076191-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1076191-03 03/08/19 14:55 • (DUP) R3390015-3 03/08/19 14:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	20.3	20.6	1	1.54		20

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

(LCS) R3390015-4 03/08/19 15:01 • (LCSD) R3390015-5 03/08/19 15:04

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	74.1	77.4	109	114	85.0-115			4.30	20

Method Blank (MB)

(MB) R3390587-3 03/08/19 04:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*

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

(LCS) R3390587-1 03/08/19 03:07 • (LCSD) R3390587-2 03/08/19 03:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.5	22.7	94.0	90.9	70.0-123			3.32	20
1,2-Dichloroethane	25.0	23.3	22.9	93.3	91.6	70.0-128			1.83	20
Ethylbenzene	25.0	24.7	23.3	98.9	93.2	79.0-123			5.97	20
Methyl tert-butyl ether	25.0	25.5	24.7	102	99.0	68.0-125			2.83	20
Naphthalene	25.0	23.3	22.4	93.2	89.5	54.0-135			4.02	20
Toluene	25.0	23.3	22.0	93.2	88.0	79.0-120			5.73	20
Xylenes, Total	75.0	77.7	72.8	104	97.1	79.0-123			6.51	20
(S) Toluene-d8				*101*	*98.7*	*80.0-120*				
(S) 4-Bromofluorobenzene				*107*	*106*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*96.3*	*99.0*	*70.0-130*				

Method Blank (MB)

(MB) R3390161-3 03/08/19 04:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

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

(LCS) R3390161-1 03/08/19 03:17 • (LCSD) R3390161-2 03/08/19 03:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.8	24.0	95.4	96.1	70.0-123			0.748	20
1,2-Dichloroethane	25.0	22.2	22.5	88.8	90.1	70.0-128			1.55	20
Ethylbenzene	25.0	22.4	22.9	89.7	91.6	79.0-123			2.11	20
Methyl tert-butyl ether	25.0	23.7	24.5	95.0	98.0	68.0-125			3.14	20
Naphthalene	25.0	23.8	24.3	95.2	97.3	54.0-135			2.10	20
Toluene	25.0	23.0	23.5	92.0	94.1	79.0-120			2.29	20
Xylenes, Total	75.0	67.7	69.3	90.3	92.4	79.0-123			2.34	20
(S) Toluene-d8				*101*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*107*	*106*	*70.0-130*				

Method Blank (MB)

(MB) R3390215-4 03/08/19 11:16

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
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl Cyclohexane	U		0.380	1.00
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) R3390215-4 03/08/19 11:16

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	*102*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

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

(LCS) R3390215-1 03/08/19 09:35 • (LCSD) R3390215-2 03/08/19 09:55

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 %
Acetone	125	114	119	91.0	95.4	19.0-160			4.76	27
Benzene	25.0	24.8	25.3	99.1	101	70.0-123			1.96	20
Bromodichloromethane	25.0	26.5	27.8	106	111	75.0-120			4.88	20
Bromoform	25.0	22.9	23.6	91.5	94.4	68.0-132			3.02	20
Bromomethane	25.0	28.2	34.1	113	136	10.0-160			18.8	25
Carbon disulfide	25.0	21.3	21.9	85.2	87.6	61.0-128			2.72	20
Carbon tetrachloride	25.0	26.0	26.7	104	107	68.0-126			2.66	20
Chlorobenzene	25.0	25.8	26.7	103	107	80.0-121			3.42	20
Chlorodibromomethane	25.0	25.5	26.8	102	107	77.0-125			4.66	20
Chloroethane	25.0	24.6	25.3	98.4	101	47.0-150			2.58	20
Bromochloromethane	25.0	25.4	26.2	102	105	76.0-122			3.08	20
Chloroform	25.0	26.2	27.1	105	108	73.0-120			3.16	20
Chloromethane	25.0	27.7	29.6	111	119	41.0-142			6.67	20
1,2-Dibromo-3-Chloropropane	25.0	23.0	24.4	92.1	97.6	58.0-134			5.74	20
1,2-Dibromoethane	25.0	26.2	27.9	105	111	80.0-122			6.00	20
1,2-Dichlorobenzene	25.0	24.6	26.3	98.4	105	79.0-121			6.67	20
1,3-Dichlorobenzene	25.0	26.0	26.3	104	105	79.0-120			0.936	20
1,4-Dichlorobenzene	25.0	24.3	25.5	97.1	102	79.0-120			4.93	20
Dichlorodifluoromethane	25.0	30.7	32.1	123	128	51.0-149			4.21	20

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

(LCS) R3390215-1 03/08/19 09:35 • (LCSD) R3390215-2 03/08/19 09:55

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 %
1,1-Dichloroethane	25.0	25.8	26.1	103	104	70.0-126			0.826	20
1,2-Dichloroethane	25.0	26.4	27.4	106	110	70.0-128			3.61	20
1,1-Dichloroethene	25.0	23.1	24.3	92.4	97.1	71.0-124			4.93	20
cis-1,2-Dichloroethene	25.0	25.9	27.3	104	109	73.0-120			5.18	20
trans-1,2-Dichloroethene	25.0	24.4	25.6	97.7	103	73.0-120			4.86	20
1,2-Dichloropropane	25.0	26.4	27.0	106	108	77.0-125			2.21	20
cis-1,3-Dichloropropene	25.0	26.5	27.1	106	109	80.0-123			2.29	20
trans-1,3-Dichloropropene	25.0	26.0	26.7	104	107	78.0-124			2.51	20
Ethylbenzene	25.0	25.8	26.4	103	106	79.0-123			2.46	20
Isopropylbenzene	25.0	26.8	26.1	107	104	76.0-127			2.74	20
2-Butanone (MEK)	125	124	130	98.9	104	44.0-160			4.68	20
Methylene Chloride	25.0	24.3	24.2	97.4	96.7	67.0-120			0.754	20
4-Methyl-2-pentanone (MIBK)	125	124	127	99.5	102	68.0-142			2.34	20
Methyl tert-butyl ether	25.0	25.1	26.3	101	105	68.0-125			4.48	20
2-Hexanone	125	129	133	103	106	67.0-149			2.82	20
Styrene	25.0	26.6	26.7	106	107	73.0-130			0.330	20
1,1,2,2-Tetrachloroethane	25.0	25.2	24.7	101	98.8	65.0-130			1.86	20
Tetrachloroethene	25.0	26.2	27.4	105	110	72.0-132			4.48	20
Toluene	25.0	24.9	25.4	99.7	101	79.0-120			1.67	20
1,1,2-Trichlorotrifluoroethane	25.0	24.9	24.8	99.7	99.1	69.0-132			0.587	20
1,2,3-Trichlorobenzene	25.0	27.8	28.6	111	115	50.0-138			3.05	20
1,2,4-Trichlorobenzene	25.0	26.3	29.3	105	117	57.0-137			11.1	20
1,1,1-Trichloroethane	25.0	25.7	26.8	103	107	73.0-124			4.25	20
1,1,2-Trichloroethane	25.0	25.4	26.4	102	106	80.0-120			3.78	20
Trichloroethene	25.0	26.1	26.7	104	107	78.0-124			2.52	20
Trichlorofluoromethane	25.0	28.0	28.1	112	112	59.0-147			0.357	20
Vinyl chloride	25.0	29.7	29.9	119	120	67.0-131			0.799	20
Xylenes, Total	75.0	79.6	78.6	106	105	79.0-123			1.26	20
(S) Toluene-d8				*100*	*102*	*80.0-120*				
(S) a,a,a-Trifluorotoluene				*104*	*109*	*80.0-120*				
(S) 4-Bromofluorobenzene				*107*	*98.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*113*	*110*	*70.0-130*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3390958-2 03/10/19 12:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*98.0*			*80.0-120*
(S) 4-Bromofluorobenzene	*87.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*87.5*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3390958-1 03/10/19 11:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	24.9	99.6	70.0-123	
Toluene	25.0	25.1	100	79.0-120	
Xylenes, Total	75.0	74.0	98.7	79.0-123	
(S) Toluene-d8			*97.2*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*81.7*	*70.0-130*	

Method Blank (MB)

(MB) R3391167-2 03/12/19 19:15

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	*97.9*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3391167-1 03/12/19 18:29

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Benzene	25.0	25.9	104	70.0-123	
Methyl tert-butyl ether	25.0	30.2	121	68.0-125	
(S) Toluene-d8			*99.1*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*109*	*70.0-130*	

Method Blank (MB)

(MB) R3391231-3 03/13/19 09:51

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) 4-Bromofluorobenzene	*99.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*96.2*			*70.0-130*

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

(LCS) R3391231-1 03/13/19 08:55 • (LCSD) R3391231-2 03/13/19 09:13

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	22.5	22.3	89.8	89.1	70.0-123			0.855	20
1,2-Dichloroethane	25.0	22.6	22.5	90.4	90.1	70.0-128			0.333	20
Ethylbenzene	25.0	22.6	22.7	90.3	90.9	79.0-123			0.747	20
Methyl tert-butyl ether	25.0	24.5	26.3	98.1	105	68.0-125			7.06	20
Naphthalene	25.0	22.0	24.2	88.2	96.9	54.0-135			9.39	20
Toluene	25.0	22.4	22.7	89.6	90.7	79.0-120			1.21	20
Xylenes, Total	75.0	73.0	73.8	97.3	98.4	79.0-123			1.09	20
(S) Toluene-d8				*99.3*	*99.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*100*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*108*	*105*	*70.0-130*				

Method Blank (MB)

(MB) R3391591-3 03/13/19 09:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*96.2*			*70.0-130*

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

(LCS) R3391591-1 03/13/19 08:55 • (LCSD) R3391591-2 03/13/19 09:13

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	22.5	22.3	89.8	89.1	70.0-123			0.855	20
Toluene	25.0	22.4	22.7	89.6	90.7	79.0-120			1.21	20
Xylenes, Total	75.0	73.0	73.8	97.3	98.4	79.0-123			1.09	20
(S) Toluene-d8				*99.3*	*99.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*100*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*108*	*105*	*70.0-130*				

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
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	T104704245-18-15
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

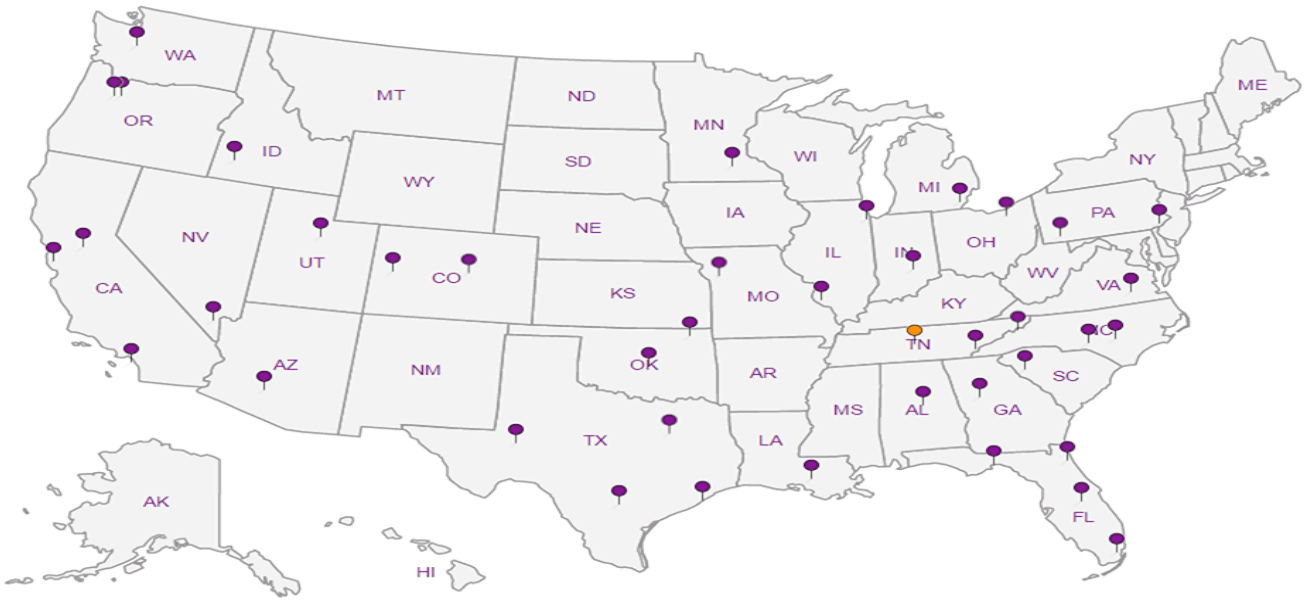
Third Party Federal Accreditations

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: 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 # D3161400.A.PN, EV, LDOMR.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

Chain of Custody Page 1 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# L1076187
B080

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-186
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-11-030619	GRAB	GW	NA	03/06/19	0950	~~7~~ 7		X	X	X	X			-01
MW-12-030619		GW			1055	~~7~~ 7		X	X	X	X			-02
MW-12B-030619		GW			1105	3					X			-03
MW-28-030619		GW			1020	7		X	X	X	X			-04
MW-49-030619		GW			1035	3					X			-05
MW-35-030619		GW			1030	7		X	X	X	X			-06
MW-25B-030619		GW			1040	3					X			-07
MW-25B-D-030619		GW			1041	~~3~~ 3					X			-08
MW-25-030619		GW			1055	~~7~~ 7		X	X	X	X			-09
MW-42-030619	↓	GW	↓	↓	1110	7		X	X	X	X			-10

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

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
RAD SCREEN: <0.5 mR/hr

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

Tracking # 4876 1076 2470

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	03/06/19	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			KWillis

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

Temp: 0.4-0.6 °C Bottles Received: 37

Date: 3/7/19 Time: 900

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 # D3161400.A.PN.EV.LDOMR.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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk
MW-41-030619	GRAB	GW	NA	03/06/19	1120	3				X	
MW-40-030619		GW			1135	7	X	X	X	X	
MW-15-030619		GW			1140	7	X	X	X	X	
MW-39-030619		GW			1345	3				X	
MW-34-030619		GW			1325	3				X	
MW-15B-030619		GW			1355	3				X	
MW-15B-D-030619		GW			1356	3				X	
MW-24-030619		GW			1420	3				X	
MW-24B-030619		GW			1410	3				X	
MW-43-030619		GW			1440	3				X	

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# L1076187

Table #

Acctnum: KINCH2MGA

Template: T130277

Prelogin: P668773

TSR: 526 - Chris McCord

PB: 8-28-186

Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	-11
	-12
	-13
	-14
	-15
	-16
	-17
	-18
	-19
	-20

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # SAME

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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	03/06/19	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Kwillis

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

Temp: °C Bottles Received: 0.4 0.1-0.3 kg 137

Date: 3/7/19 Time: 900

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 # D3161400.A.PN.EV, LDOMR.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

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-43B-030619	GRAB	GW	NA	03/06/19	1430	3				X			-21
MW-38-030619		GW			1450	3				X			-22
MW-37-030619		GW			1445	3				X			-23
MW-51-030619		GW			1500	3				X			-24
MW-52-030619		GW			1510	3				X			-25
MW-14-030619		GW			1515	3				X			-26
MW-14B-030619		GW			1520	3				X			-27
MW-13-030619		GW			1525	3				X			-28
MW-13B-030619		GW			1530	3				X			-29
FB01-030619		GW			1557	3				X			-30

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # SAME

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
RAD SCREEN: <0.5 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
	03/06/19	1730			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 0.4-0.1-0.3 15 37	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) CWillis	Date: 3/7/19 Time: 909	Hold: Condition: NCF / OK

Chain of Custody Page 3 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 # L1076187

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-19
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 # D3161400.A.PN.EV.LDOMR.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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
TB01-030619	GRAB	GW	NA	03/06/19	1558	1					X		-31
MW-50B-030619		GW			1620	3				X			-32
MW-48B-030619		GW			1630	3				X			-33
MW-33T-030619		GW			1610	3				X			-34
MW-31-030619		GW			1600	3				X			-35
MW-47-030619		GW			1555	3				X			-36
		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# L1076187

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-19C

Shipped Via: FedEX Ground

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # SAME

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

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	03/06/19	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			KWillis

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

Temp: 0.4-0.1=0.3 °C Bottles Received: 137

Date: 3/7/19 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 15, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1076801
Samples Received:	03/08/2019
Project Number:	D3161400.A.PN.EV.LDO
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:

Jason Romer
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-03-030719 L1076801-01 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:00 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:21	03/14/19 19:21	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:21	03/14/19 19:21	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247179	1	03/08/19 17:29	03/08/19 17:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:07	03/09/19 08:07	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 05:33	03/10/19 05:33	DWR	Mt. Juliet, TN

MW-30-030719 L1076801-02 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:25 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 05:52	03/10/19 05:52	DWR	Mt. Juliet, TN

MW-54-030719 L1076801-03 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:35 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 06:11	03/10/19 06:11	DWR	Mt. Juliet, TN

MW-53-030719 L1076801-04 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:45 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 06:29	03/10/19 06:29	DWR	Mt. Juliet, TN

MW-04-030719 L1076801-05 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:00 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:28	03/14/19 19:28	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:28	03/14/19 19:28	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247179	1	03/08/19 18:01	03/08/19 18:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:09	03/09/19 08:09	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 06:48	03/10/19 06:48	DWR	Mt. Juliet, TN

MW-05-030719 L1076801-06 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:20 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 07:07	03/10/19 07:07	DWR	Mt. Juliet, TN

MW-02B-030719 L1076801-07 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:40 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 07:26	03/10/19 07:26	DWR	Mt. Juliet, TN

MW-09B-030719 L1076801-08 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 11:00 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 07:45	03/10/19 07:45	DWR	Mt. Juliet, TN

MW-09-030719 L1076801-09 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 11:15 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:34	03/14/19 19:34	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:34	03/14/19 19:34	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247179	1	03/08/19 18:12	03/08/19 18:12	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:15	03/09/19 08:15	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 08:04	03/10/19 08:04	DWR	Mt. Juliet, TN

MW-02-030719 L1076801-10 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 11:30 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:40	03/14/19 19:40	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:40	03/14/19 19:40	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247285	1	03/08/19 14:39	03/08/19 14:39	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:17	03/09/19 08:17	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 08:22	03/10/19 08:22	DWR	Mt. Juliet, TN

MW-06-030719 L1076801-11 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 13:10 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 08:41	03/10/19 08:41	DWR	Mt. Juliet, TN

MW-06B-030719 L1076801-12 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 13:15 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 09:00	03/10/19 09:00	DWR	Mt. Juliet, TN

MW-07-030719 L1076801-13 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 13:20 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 09:18	03/10/19 09:18	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248033	50	03/11/19 11:39	03/11/19 11:39	BMB	Mt. Juliet, TN

MW-07-D-030719 L1076801-14 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 13:21 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 09:37	03/10/19 09:37	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248033	50	03/11/19 11:59	03/11/19 11:59	BMB	Mt. Juliet, TN

MW-16-030719 L1076801-15 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 13:35 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:46	03/14/19 19:46	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:46	03/14/19 19:46	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247285	1	03/08/19 14:54	03/08/19 14:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:20	03/09/19 08:20	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 09:56	03/10/19 09:56	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248033	5	03/11/19 12:18	03/11/19 12:18	BMB	Mt. Juliet, TN

MW-18-030719 L1076801-16 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 13:50 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:53	03/14/19 19:53	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:53	03/14/19 19:53	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247285	1	03/08/19 15:10	03/08/19 15:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:22	03/09/19 08:22	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 10:15	03/10/19 10:15	DWR	Mt. Juliet, TN

MW-08-030719 L1076801-17 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 14:05 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 19:59	03/14/19 19:59	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 19:59	03/14/19 19:59	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247285	1	03/08/19 15:26	03/08/19 15:26	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:26	03/09/19 08:26	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 10:33	03/10/19 10:33	DWR	Mt. Juliet, TN

MW-10-030719 L1076801-18 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 14:20 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 20:05	03/14/19 20:05	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 20:05	03/14/19 20:05	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247285	1	03/08/19 17:01	03/08/19 17:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:30	03/09/19 08:30	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 10:52	03/10/19 10:52	DWR	Mt. Juliet, TN

MW-32-030719 L1076801-19 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 14:40 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1249186	1	03/14/19 20:19	03/14/19 20:19	GB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG1249186	1	03/14/19 20:19	03/14/19 20:19	GB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1247285	1	03/08/19 17:17	03/08/19 17:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1247346	1	03/09/19 08:32	03/09/19 08:32	MEL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 11:11	03/10/19 11:11	DWR	Mt. Juliet, TN

MW-36-030719 L1076801-20 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 15:15 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247668	1	03/10/19 11:29	03/10/19 11:29	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1248033	5	03/11/19 12:38	03/11/19 12:38	BMB	Mt. Juliet, TN

MW-36B-030719 L1076801-21 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 15:20 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 13:01	03/10/19 13:01	BMB	Mt. Juliet, TN

MW-36B-D-030719 L1076801-22 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 15:21 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 13:21	03/10/19 13:21	BMB	Mt. Juliet, TN

FB01-030719 L1076801-23 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 15:45 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 13:40	03/10/19 13:40	BMB	Mt. Juliet, TN

TB01-030719 L1076801-24 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 15:50 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247987	1	03/10/19 17:43	03/10/19 17:43	CAH	Mt. Juliet, TN

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.

Jason Romer
Project Manager

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 19:21	WG1249186

Sample Narrative:
L1076801-01 WG1249186: 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	03/14/2019 19:21	WG1249186

Sample Narrative:
L1076801-01 WG1249186: 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)	774		100	1	03/08/2019 17:29	WG1247179
Sulfate	ND		5000	1	03/08/2019 17:29	WG1247179

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	03/09/2019 08:07	WG1247346

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	03/10/2019 05:33	WG1247668
Toluene	ND		1.00	1	03/10/2019 05:33	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 05:33	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 05:33	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 05:33	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 05:33	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 05:33	WG1247668
(S) Toluene-d8	*101*		*80.0-120*		*03/10/2019 05:33*	WG1247668
(S) 4-Bromofluorobenzene	*98.2*		*77.0-126*		*03/10/2019 05:33*	WG1247668
(S) 1,2-Dichloroethane-d4	*93.6*		*70.0-130*		*03/10/2019 05:33*	WG1247668

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	03/10/2019 05:52	WG1247668
Toluene	ND		1.00	1	03/10/2019 05:52	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 05:52	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 05:52	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 05:52	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 05:52	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 05:52	WG1247668
(S) Toluene-d8	*99.5*		*80.0-120*		*03/10/2019 05:52*	WG1247668
(S) 4-Bromofluorobenzene	*97.4*		*77.0-126*		*03/10/2019 05:52*	WG1247668
(S) 1,2-Dichloroethane-d4	*91.3*		*70.0-130*		*03/10/2019 05:52*	WG1247668

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	03/10/2019 06:11	WG1247668
Toluene	ND		1.00	1	03/10/2019 06:11	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 06:11	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 06:11	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 06:11	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 06:11	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 06:11	WG1247668
(S) Toluene-d8	*104*		*80.0-120*		*03/10/2019 06:11*	WG1247668
(S) 4-Bromofluorobenzene	*98.1*		*77.0-126*		*03/10/2019 06:11*	WG1247668
(S) 1,2-Dichloroethane-d4	*90.8*		*70.0-130*		*03/10/2019 06:11*	WG1247668

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	03/10/2019 06:29	WG1247668
Toluene	ND		1.00	1	03/10/2019 06:29	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 06:29	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 06:29	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 06:29	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 06:29	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 06:29	WG1247668
(S) Toluene-d8	*99.6*		*80.0-120*		*03/10/2019 06:29*	WG1247668
(S) 4-Bromofluorobenzene	*96.1*		*77.0-126*		*03/10/2019 06:29*	WG1247668
(S) 1,2-Dichloroethane-d4	*95.9*		*70.0-130*		*03/10/2019 06:29*	WG1247668

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	03/14/2019 19:28	WG1249186

Sample Narrative:
L1076801-05 WG1249186: 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	03/14/2019 19:28	WG1249186

Sample Narrative:
L1076801-05 WG1249186: 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	03/08/2019 18:01	WG1247179
Sulfate	ND		5000	1	03/08/2019 18:01	WG1247179

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	03/09/2019 08:09	WG1247346

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	03/10/2019 06:48	WG1247668
Toluene	ND		1.00	1	03/10/2019 06:48	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 06:48	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 06:48	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 06:48	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 06:48	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 06:48	WG1247668
(S) Toluene-d8	*100*		*80.0-120*		*03/10/2019 06:48*	WG1247668
(S) 4-Bromofluorobenzene	*98.4*		*77.0-126*		*03/10/2019 06:48*	WG1247668
(S) 1,2-Dichloroethane-d4	*95.5*		*70.0-130*		*03/10/2019 06:48*	WG1247668

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	03/10/2019 07:07	WG1247668
Toluene	ND		1.00	1	03/10/2019 07:07	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 07:07	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 07:07	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 07:07	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 07:07	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 07:07	WG1247668
(S) Toluene-d8	*99.8*		*80.0-120*		*03/10/2019 07:07*	WG1247668
(S) 4-Bromofluorobenzene	*98.5*		*77.0-126*		*03/10/2019 07:07*	WG1247668
(S) 1,2-Dichloroethane-d4	*91.2*		*70.0-130*		*03/10/2019 07:07*	WG1247668

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	03/10/2019 07:26	WG1247668
Toluene	ND		1.00	1	03/10/2019 07:26	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 07:26	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 07:26	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 07:26	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 07:26	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 07:26	WG1247668
(S) Toluene-d8	*102*		*80.0-120*		*03/10/2019 07:26*	WG1247668
(S) 4-Bromofluorobenzene	*98.8*		*77.0-126*		*03/10/2019 07:26*	WG1247668
(S) 1,2-Dichloroethane-d4	*86.1*		*70.0-130*		*03/10/2019 07:26*	WG1247668

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	13.2		1.00	1	03/10/2019 07:45	WG1247668
Toluene	51.1		1.00	1	03/10/2019 07:45	WG1247668
Ethylbenzene	13.7		1.00	1	03/10/2019 07:45	WG1247668
Total Xylenes	110		3.00	1	03/10/2019 07:45	WG1247668
Methyl tert-butyl ether	2.46		1.00	1	03/10/2019 07:45	WG1247668
Naphthalene	6.54		5.00	1	03/10/2019 07:45	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 07:45	WG1247668
(S) Toluene-d8	*98.1*		*80.0-120*		*03/10/2019 07:45*	WG1247668
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/10/2019 07:45*	WG1247668
(S) 1,2-Dichloroethane-d4	*88.9*		*70.0-130*		*03/10/2019 07:45*	WG1247668

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 19:34	WG1249186

Sample Narrative:
L1076801-09 WG1249186: 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	03/14/2019 19:34	WG1249186

Sample Narrative:
L1076801-09 WG1249186: 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	03/08/2019 18:12	WG1247179
Sulfate	ND		5000	1	03/08/2019 18:12	WG1247179

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	03/09/2019 08:15	WG1247346

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	6.24		1.00	1	03/10/2019 08:04	WG1247668
Toluene	64.3		1.00	1	03/10/2019 08:04	WG1247668
Ethylbenzene	3.80		1.00	1	03/10/2019 08:04	WG1247668
Total Xylenes	52.7		3.00	1	03/10/2019 08:04	WG1247668
Methyl tert-butyl ether	5.90		1.00	1	03/10/2019 08:04	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 08:04	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 08:04	WG1247668
(S) Toluene-d8	*103*		*80.0-120*		*03/10/2019 08:04*	WG1247668
(S) 4-Bromofluorobenzene	*99.0*		*77.0-126*		*03/10/2019 08:04*	WG1247668
(S) 1,2-Dichloroethane-d4	*89.1*		*70.0-130*		*03/10/2019 08:04*	WG1247668

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 19:40	WG1249186

Sample Narrative:
L1076801-10 WG1249186: 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	03/14/2019 19:40	WG1249186

Sample Narrative:
L1076801-10 WG1249186: 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	03/08/2019 14:39	WG1247285
Sulfate	6680		5000	1	03/08/2019 14:39	WG1247285

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	03/09/2019 08:17	WG1247346

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	03/10/2019 08:22	WG1247668
Toluene	ND		1.00	1	03/10/2019 08:22	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 08:22	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 08:22	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 08:22	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 08:22	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 08:22	WG1247668
(S) Toluene-d8	*99.9*		*80.0-120*		*03/10/2019 08:22*	WG1247668
(S) 4-Bromofluorobenzene	*99.8*		*77.0-126*		*03/10/2019 08:22*	WG1247668
(S) 1,2-Dichloroethane-d4	*97.1*		*70.0-130*		*03/10/2019 08:22*	WG1247668

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	03/10/2019 08:41	WG1247668
Toluene	ND		1.00	1	03/10/2019 08:41	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 08:41	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 08:41	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 08:41	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 08:41	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 08:41	WG1247668
(S) Toluene-d8	*100*		*80.0-120*		*03/10/2019 08:41*	WG1247668
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/10/2019 08:41*	WG1247668
(S) 1,2-Dichloroethane-d4	*91.8*		*70.0-130*		*03/10/2019 08:41*	WG1247668

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	03/10/2019 09:00	WG1247668
Toluene	1.42		1.00	1	03/10/2019 09:00	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 09:00	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 09:00	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 09:00	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 09:00	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 09:00	WG1247668
(S) Toluene-d8	*97.6*		*80.0-120*		*03/10/2019 09:00*	WG1247668
(S) 4-Bromofluorobenzene	*98.9*		*77.0-126*		*03/10/2019 09:00*	WG1247668
(S) 1,2-Dichloroethane-d4	*93.1*		*70.0-130*		*03/10/2019 09:00*	WG1247668

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3110		50.0	50	03/11/2019 11:39	WG1248033
Toluene	5780		50.0	50	03/11/2019 11:39	WG1248033
Ethylbenzene	147		1.00	1	03/10/2019 09:18	WG1247668
Total Xylenes	4110		150	50	03/11/2019 11:39	WG1248033
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 09:18	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 09:18	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 09:18	WG1247668
(S) Toluene-d8	*89.7*		*80.0-120*		*03/10/2019 09:18*	WG1247668
(S) Toluene-d8	*100*		*80.0-120*		*03/11/2019 11:39*	WG1248033
(S) 4-Bromofluorobenzene	*97.1*		*77.0-126*		*03/10/2019 09:18*	WG1247668
(S) 4-Bromofluorobenzene	*99.0*		*77.0-126*		*03/11/2019 11:39*	WG1248033
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*03/10/2019 09:18*	WG1247668
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/11/2019 11:39*	WG1248033

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2990		50.0	50	03/11/2019 11:59	WG1248033
Toluene	5390		50.0	50	03/11/2019 11:59	WG1248033
Ethylbenzene	150		1.00	1	03/10/2019 09:37	WG1247668
Total Xylenes	3750		150	50	03/11/2019 11:59	WG1248033
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 09:37	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 09:37	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 09:37	WG1247668
(S) Toluene-d8	*89.2*		*80.0-120*		*03/10/2019 09:37*	WG1247668
(S) Toluene-d8	*101*		*80.0-120*		*03/11/2019 11:59*	WG1248033
(S) 4-Bromofluorobenzene	*99.6*		*77.0-126*		*03/10/2019 09:37*	WG1247668
(S) 4-Bromofluorobenzene	*98.7*		*77.0-126*		*03/11/2019 11:59*	WG1248033
(S) 1,2-Dichloroethane-d4	*125*		*70.0-130*		*03/10/2019 09:37*	WG1247668
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/11/2019 11:59*	WG1248033

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 19:46	WG1249186

Sample Narrative:
L1076801-15 WG1249186: 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	03/14/2019 19:46	WG1249186

Sample Narrative:
L1076801-15 WG1249186: 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	03/08/2019 14:54	WG1247285
Sulfate	ND		5000	1	03/08/2019 14:54	WG1247285

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	03/09/2019 08:20	WG1247346

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	9.06		1.00	1	03/10/2019 09:56	WG1247668
Toluene	74.1		1.00	1	03/10/2019 09:56	WG1247668
Ethylbenzene	15.7		1.00	1	03/10/2019 09:56	WG1247668
Total Xylenes	186		3.00	1	03/10/2019 09:56	WG1247668
Methyl tert-butyl ether	1.02		1.00	1	03/10/2019 09:56	WG1247668
Naphthalene	398		25.0	5	03/11/2019 12:18	WG1248033
1,2-Dichloroethane	ND		1.00	1	03/10/2019 09:56	WG1247668
(S) Toluene-d8	*97.0*		*80.0-120*		*03/10/2019 09:56*	WG1247668
(S) Toluene-d8	*98.9*		*80.0-120*		*03/11/2019 12:18*	WG1248033
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*03/10/2019 09:56*	WG1247668
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/11/2019 12:18*	WG1248033
(S) 1,2-Dichloroethane-d4	*89.5*		*70.0-130*		*03/10/2019 09:56*	WG1247668
(S) 1,2-Dichloroethane-d4	*96.3*		*70.0-130*		*03/11/2019 12:18*	WG1248033

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 19:53	WG1249186

Sample Narrative:
L1076801-16 WG1249186: 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	25500	T8	20000	1	03/14/2019 19:53	WG1249186

Sample Narrative:
L1076801-16 WG1249186: 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	03/08/2019 15:10	WG1247285
Sulfate	ND		5000	1	03/08/2019 15:10	WG1247285

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	10.9		10.0	1	03/09/2019 08:22	WG1247346

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.47		1.00	1	03/10/2019 10:15	WG1247668
Toluene	60.4		1.00	1	03/10/2019 10:15	WG1247668
Ethylbenzene	8.16		1.00	1	03/10/2019 10:15	WG1247668
Total Xylenes	141		3.00	1	03/10/2019 10:15	WG1247668
Methyl tert-butyl ether	13.5		1.00	1	03/10/2019 10:15	WG1247668
Naphthalene	72.7		5.00	1	03/10/2019 10:15	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 10:15	WG1247668
(S) Toluene-d8	*98.6*		*80.0-120*		*03/10/2019 10:15*	WG1247668
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*03/10/2019 10:15*	WG1247668
(S) 1,2-Dichloroethane-d4	*88.0*		*70.0-130*		*03/10/2019 10:15*	WG1247668

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	03/14/2019 19:59	WG1249186

Sample Narrative:
L1076801-17 WG1249186: 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	03/14/2019 19:59	WG1249186

Sample Narrative:
L1076801-17 WG1249186: 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	03/08/2019 15:26	WG1247285
Sulfate	ND		5000	1	03/08/2019 15:26	WG1247285

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	03/09/2019 08:26	WG1247346

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	03/10/2019 10:33	WG1247668
Toluene	ND		1.00	1	03/10/2019 10:33	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 10:33	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 10:33	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 10:33	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 10:33	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 10:33	WG1247668
(S) Toluene-d8	*98.8*		*80.0-120*		*03/10/2019 10:33*	WG1247668
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/10/2019 10:33*	WG1247668
(S) 1,2-Dichloroethane-d4	*79.9*		*70.0-130*		*03/10/2019 10:33*	WG1247668

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 20:05	WG1249186

Sample Narrative:
L1076801-18 WG1249186: 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	32900	T8	20000	1	03/14/2019 20:05	WG1249186

Sample Narrative:
L1076801-18 WG1249186: 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	03/08/2019 17:01	WG1247285
Sulfate	ND		5000	1	03/08/2019 17:01	WG1247285

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	03/09/2019 08:30	WG1247346

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	03/10/2019 10:52	WG1247668
Toluene	ND		1.00	1	03/10/2019 10:52	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 10:52	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 10:52	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 10:52	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 10:52	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 10:52	WG1247668
(S) Toluene-d8	*101*		*80.0-120*		*03/10/2019 10:52*	WG1247668
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/10/2019 10:52*	WG1247668
(S) 1,2-Dichloroethane-d4	*83.4*		*70.0-130*		*03/10/2019 10:52*	WG1247668

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	03/14/2019 20:19	WG1249186

Sample Narrative:
L1076801-19 WG1249186: 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	03/14/2019 20:19	WG1249186

Sample Narrative:
L1076801-19 WG1249186: 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)	418		100	1	03/08/2019 17:17	WG1247285
Sulfate	ND		5000	1	03/08/2019 17:17	WG1247285

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	03/09/2019 08:32	WG1247346

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	03/10/2019 11:11	WG1247668
Toluene	ND		1.00	1	03/10/2019 11:11	WG1247668
Ethylbenzene	ND		1.00	1	03/10/2019 11:11	WG1247668
Total Xylenes	ND		3.00	1	03/10/2019 11:11	WG1247668
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 11:11	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 11:11	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 11:11	WG1247668
(S) Toluene-d8	*99.4*		*80.0-120*		*03/10/2019 11:11*	WG1247668
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/10/2019 11:11*	WG1247668
(S) 1,2-Dichloroethane-d4	*84.6*		*70.0-130*		*03/10/2019 11:11*	WG1247668

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	223		5.00	5	03/11/2019 12:38	WG1248033
Toluene	210		5.00	5	03/11/2019 12:38	WG1248033
Ethylbenzene	ND		1.00	1	03/10/2019 11:29	WG1247668
Total Xylenes	161		3.00	1	03/10/2019 11:29	WG1247668
Methyl tert-butyl ether	2.67		1.00	1	03/10/2019 11:29	WG1247668
Naphthalene	ND		5.00	1	03/10/2019 11:29	WG1247668
1,2-Dichloroethane	ND		1.00	1	03/10/2019 11:29	WG1247668
(S) Toluene-d8	*98.3*		*80.0-120*		*03/10/2019 11:29*	WG1247668
(S) Toluene-d8	*98.2*		*80.0-120*		*03/11/2019 12:38*	WG1248033
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/10/2019 11:29*	WG1247668
(S) 4-Bromofluorobenzene	*95.0*		*77.0-126*		*03/11/2019 12:38*	WG1248033
(S) 1,2-Dichloroethane-d4	*91.4*		*70.0-130*		*03/10/2019 11:29*	WG1247668
(S) 1,2-Dichloroethane-d4	*95.1*		*70.0-130*		*03/11/2019 12:38*	WG1248033

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	03/10/2019 13:01	WG1247678
Toluene	ND		1.00	1	03/10/2019 13:01	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 13:01	WG1247678
Total Xylenes	ND		3.00	1	03/10/2019 13:01	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 13:01	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 13:01	WG1247678
1,2-Dichloroethane	ND		1.00	1	03/10/2019 13:01	WG1247678
(S) Toluene-d8	*105*		*80.0-120*		*03/10/2019 13:01*	WG1247678
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*03/10/2019 13:01*	WG1247678
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/10/2019 13:01*	WG1247678

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	03/10/2019 13:21	WG1247678
Toluene	ND		1.00	1	03/10/2019 13:21	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 13:21	WG1247678
Total Xylenes	ND		3.00	1	03/10/2019 13:21	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 13:21	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 13:21	WG1247678
1,2-Dichloroethane	ND		1.00	1	03/10/2019 13:21	WG1247678
(S) Toluene-d8	*106*		*80.0-120*		*03/10/2019 13:21*	WG1247678
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/10/2019 13:21*	WG1247678
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*03/10/2019 13:21*	WG1247678

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	03/10/2019 13:40	WG1247678
Toluene	ND		1.00	1	03/10/2019 13:40	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 13:40	WG1247678
Total Xylenes	ND		3.00	1	03/10/2019 13:40	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 13:40	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 13:40	WG1247678
1,2-Dichloroethane	ND		1.00	1	03/10/2019 13:40	WG1247678
(S) Toluene-d8	*103*		*80.0-120*		*03/10/2019 13:40*	WG1247678
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/10/2019 13:40*	WG1247678
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*03/10/2019 13:40*	WG1247678

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	03/10/2019 17:43	WG1247987
Benzene	ND		1.00	1	03/10/2019 17:43	WG1247987
Bromochloromethane	ND		1.00	1	03/10/2019 17:43	WG1247987
Bromodichloromethane	ND		1.00	1	03/10/2019 17:43	WG1247987
Bromoform	ND		1.00	1	03/10/2019 17:43	WG1247987
Bromomethane	ND		5.00	1	03/10/2019 17:43	WG1247987
Carbon disulfide	ND		1.00	1	03/10/2019 17:43	WG1247987
Carbon tetrachloride	ND		1.00	1	03/10/2019 17:43	WG1247987
Chlorobenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
Chlorodibromomethane	ND		1.00	1	03/10/2019 17:43	WG1247987
Chloroethane	ND		5.00	1	03/10/2019 17:43	WG1247987
Chloroform	ND		5.00	1	03/10/2019 17:43	WG1247987
Chloromethane	ND		2.50	1	03/10/2019 17:43	WG1247987
Cyclohexane	ND		1.00	1	03/10/2019 17:43	WG1247987
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/10/2019 17:43	WG1247987
1,2-Dibromoethane	ND		1.00	1	03/10/2019 17:43	WG1247987
1,2-Dichlorobenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,3-Dichlorobenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,4-Dichlorobenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
Dichlorodifluoromethane	ND		5.00	1	03/10/2019 17:43	WG1247987
1,1-Dichloroethane	ND		1.00	1	03/10/2019 17:43	WG1247987
1,2-Dichloroethane	ND		1.00	1	03/10/2019 17:43	WG1247987
1,1-Dichloroethene	ND		1.00	1	03/10/2019 17:43	WG1247987
cis-1,2-Dichloroethene	ND		1.00	1	03/10/2019 17:43	WG1247987
trans-1,2-Dichloroethene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,2-Dichloropropane	ND		1.00	1	03/10/2019 17:43	WG1247987
cis-1,3-Dichloropropene	ND		1.00	1	03/10/2019 17:43	WG1247987
trans-1,3-Dichloropropene	ND		1.00	1	03/10/2019 17:43	WG1247987
Ethylbenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
2-Hexanone	ND		10.0	1	03/10/2019 17:43	WG1247987
Isopropylbenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
2-Butanone (MEK)	ND		10.0	1	03/10/2019 17:43	WG1247987
Methyl Acetate	ND		20.0	1	03/10/2019 17:43	WG1247987
Methyl Cyclohexane	ND		1.00	1	03/10/2019 17:43	WG1247987
Methylene Chloride	ND		5.00	1	03/10/2019 17:43	WG1247987
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/10/2019 17:43	WG1247987
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 17:43	WG1247987
Styrene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/10/2019 17:43	WG1247987
Tetrachloroethene	ND		1.00	1	03/10/2019 17:43	WG1247987
Toluene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,2,3-Trichlorobenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,2,4-Trichlorobenzene	ND		1.00	1	03/10/2019 17:43	WG1247987
1,1,1-Trichloroethane	ND		1.00	1	03/10/2019 17:43	WG1247987
1,1,2-Trichloroethane	ND		1.00	1	03/10/2019 17:43	WG1247987
Trichloroethene	ND		1.00	1	03/10/2019 17:43	WG1247987
Trichlorofluoromethane	ND		5.00	1	03/10/2019 17:43	WG1247987
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/10/2019 17:43	WG1247987
Vinyl chloride	ND		1.00	1	03/10/2019 17:43	WG1247987
Xylenes, Total	ND		3.00	1	03/10/2019 17:43	WG1247987
(S) Toluene-d8	*101*		*80.0-120*		*03/10/2019 17:43*	WG1247987
(S) a,a,a-Trifluorotoluene	*108*		*80.0-120*		*03/10/2019 17:43*	WG1247987
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*03/10/2019 17:43*	WG1247987
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*03/10/2019 17:43*	WG1247987

Method Blank (MB)

(MB) R3391896-1 03/14/19 17:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	3280	J	2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1077102-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1077102-01 03/14/19 17:48 • (DUP) R3391896-3 03/14/19 17:56

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	206000	207000	1	0.563		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1077131-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1077131-05 03/14/19 20:26 • (DUP) R3391896-6 03/14/19 20:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	12200	12300	1	0.541	J	20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3391896-5 03/14/19 18:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	102000	102	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3391896-2 03/14/19 17:41

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

L1077102-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1077102-01 03/14/19 17:48 • (DUP) R3391896-4 03/14/19 17:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	U	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1077131-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1077131-05 03/14/19 20:26 • (DUP) R3391896-7 03/14/19 20:33

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 HEADSPACE

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3390097-1 03/08/19 09:44

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

Laboratory Control Sample (LCS)

(LCS) R3390097-2 03/08/19 09:55

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Nitrate	8000	7890	98.6	80.0-120	
Sulfate	40000	40200	100	80.0-120	

L1076699-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1076699-02 03/08/19 12:14 • (MS) R3390097-4 03/08/19 12:36 • (MSD) R3390097-5 03/08/19 12:46

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	4630	4580	92.6	91.5	1	80.0-120			1.13	15
Sulfate	50000	23800	73000	72200	98.3	96.6	1	80.0-120			1.12	15

Original Sample (OS) • Matrix Spike (MS)

(OS) • (MS) R3390097-7 03/08/19 16:24

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l		ug/l	%		%	
Nitrate	5000		4990	95.5	1	80.0-120	
Sulfate	50000		53900	97.3	1	80.0-120	

Method Blank (MB)

(MB) R3390085-1 03/08/19 11:44

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

L1076801-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1076801-17 03/08/19 15:26 • (DUP) R3390085-3 03/08/19 15:42

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	ND	297	1	0.000		15

L1076816-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1076816-03 03/08/19 20:28 • (DUP) R3390085-6 03/08/19 20:44

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	549	548	1	0.200		15
Sulfate	1610000	1610000	1	0.0904	E	15

Laboratory Control Sample (LCS)

(LCS) R3390085-2 03/08/19 12:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate	8000	8170	102	80.0-120	
Sulfate	40000	40300	101	80.0-120	

L1076801-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1076801-17 03/08/19 15:26 • (MS) R3390085-4 03/08/19 15:58 • (MSD) R3390085-5 03/08/19 16:13

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	ND	4930	4910	98.7	98.2	1	80.0-120			0.510	15
Sulfate	50000	ND	49700	49300	98.8	98.0	1	80.0-120			0.820	15

L1076816-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1076816-03 03/08/19 20:28 • (MS) R3390085-7 03/08/19 21:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	549	5050	90.1	1	80.0-120	
Sulfate	50000	1610000	1590000	0.000	1	80.0-120	E V

Method Blank (MB)

(MB) R3390096-1 03/09/19 08:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1076782-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076782-01 03/09/19 08:40 • (DUP) R3390096-2 03/09/19 08:43

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

L1076786-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1076786-01 03/09/19 08:46 • (DUP) R3390096-3 03/09/19 09:08

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) R3390096-4 03/09/19 09:11 • (LCSD) R3390096-5 03/09/19 09:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	73.0	75.2	108	111	85.0-115			2.93	20

Method Blank (MB)

(MB) R3390276-3 03/10/19 05:15

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	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.8*			*70.0-130*

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

(LCS) R3390276-1 03/10/19 04:18 • (LCSD) R3390276-2 03/10/19 04:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.4	22.5	93.5	89.9	70.0-123			3.97	20
1,2-Dichloroethane	25.0	23.0	22.1	92.1	88.2	70.0-128			4.32	20
Ethylbenzene	25.0	22.8	22.4	91.0	89.7	79.0-123			1.41	20
Methyl tert-butyl ether	25.0	24.6	24.1	98.6	96.4	68.0-125			2.26	20
Naphthalene	25.0	21.8	23.4	87.2	93.5	54.0-135			6.91	20
Toluene	25.0	23.1	22.5	92.6	89.9	79.0-120			2.95	20
Xylenes, Total	75.0	74.2	72.6	98.9	96.8	79.0-123			2.18	20
(S) Toluene-d8				*97.7*	*100*	*80.0-120*				
(S) 4-Bromofluorobenzene				*101*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*98.1*	*97.6*	*70.0-130*				

Method Blank (MB)

(MB) R3391753-3 03/10/19 10:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.8*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

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

(LCS) R3391753-1 03/10/19 09:25 • (LCSD) R3391753-2 03/10/19 09:45

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	24.8	24.7	99.1	98.9	70.0-123			0.154	20
1,2-Dichloroethane	25.0	25.2	24.8	101	99.3	70.0-128			1.70	20
Ethylbenzene	25.0	24.5	24.5	98.0	98.0	79.0-123			0.0343	20
Methyl tert-butyl ether	25.0	26.2	27.0	105	108	68.0-125			2.79	20
Naphthalene	25.0	25.9	27.3	104	109	54.0-135			5.06	20
Toluene	25.0	22.4	22.6	89.6	90.4	79.0-120			0.911	20
Xylenes, Total	75.0	72.5	74.4	96.7	99.2	79.0-123			2.59	20
(S) Toluene-d8				*93.9*	*95.4*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.3*	*99.5*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*114*	*115*	*70.0-130*				

Method Blank (MB)

(MB) R3390919-2 03/10/19 17:03

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) R3390919-2 03/10/19 17:03

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	*102*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3390919-1 03/10/19 16:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	101	81.0	19.0-160	
Benzene	25.0	22.5	90.0	70.0-123	
Bromodichloromethane	25.0	26.5	106	75.0-120	
Bromochloromethane	25.0	24.9	99.6	76.0-122	
Bromoform	25.0	21.3	85.0	68.0-132	
Bromomethane	25.0	27.7	111	10.0-160	
Carbon disulfide	25.0	16.8	67.0	61.0-128	
Carbon tetrachloride	25.0	26.2	105	68.0-126	
Chlorobenzene	25.0	22.7	90.9	80.0-121	
Chlorodibromomethane	25.0	24.6	98.2	77.0-125	
Chloroethane	25.0	25.1	100	47.0-150	
Chloroform	25.0	25.4	102	73.0-120	
Chloromethane	25.0	21.6	86.5	41.0-142	
1,2-Dibromo-3-Chloropropane	25.0	22.4	89.8	58.0-134	
1,2-Dibromoethane	25.0	23.4	93.7	80.0-122	
1,2-Dichlorobenzene	25.0	24.3	97.0	79.0-121	
1,3-Dichlorobenzene	25.0	25.8	103	79.0-120	
1,4-Dichlorobenzene	25.0	24.4	97.7	79.0-120	
Dichlorodifluoromethane	25.0	30.5	122	51.0-149	

Laboratory Control Sample (LCS)

(LCS) R3390919-1 03/10/19 16:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1-Dichloroethane	25.0	23.4	93.4	70.0-126	
1,2-Dichloroethane	25.0	26.8	107	70.0-128	
1,1-Dichloroethene	25.0	21.1	84.5	71.0-124	
cis-1,2-Dichloroethene	25.0	25.1	100	73.0-120	
trans-1,2-Dichloroethene	25.0	22.7	91.0	73.0-120	
1,2-Dichloropropane	25.0	23.6	94.3	77.0-125	
cis-1,3-Dichloropropene	25.0	25.1	100	80.0-123	
trans-1,3-Dichloropropene	25.0	23.9	95.6	78.0-124	
Ethylbenzene	25.0	23.3	93.2	79.0-123	
2-Hexanone	125	104	82.9	67.0-149	
Isopropylbenzene	25.0	24.3	97.0	76.0-127	
2-Butanone (MEK)	125	107	85.3	44.0-160	
Methylene Chloride	25.0	21.8	87.3	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	105	84.2	68.0-142	
Methyl tert-butyl ether	25.0	24.8	99.0	68.0-125	
Styrene	25.0	23.6	94.2	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	22.5	90.0	65.0-130	
Tetrachloroethene	25.0	23.3	93.3	72.0-132	
Toluene	25.0	21.7	86.8	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.4	93.6	69.0-132	
1,2,3-Trichlorobenzene	25.0	26.9	108	50.0-138	
1,2,4-Trichlorobenzene	25.0	27.3	109	57.0-137	
1,1,1-Trichloroethane	25.0	27.5	110	73.0-124	
1,1,2-Trichloroethane	25.0	22.2	88.9	80.0-120	
Trichloroethene	25.0	24.2	96.7	78.0-124	
Trichlorofluoromethane	25.0	29.7	119	59.0-147	
Vinyl chloride	25.0	25.8	103	67.0-131	
Xylenes, Total	75.0	69.8	93.1	79.0-123	
(S) Toluene-d8			*96.8*	*80.0-120*	
(S) a,a,a-Trifluorotoluene			*110*	*80.0-120*	
(S) 4-Bromofluorobenzene			*102*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*117*	*70.0-130*	

Method Blank (MB)

(MB) R3391761-3 03/11/19 04:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

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

(LCS) R3391761-1 03/11/19 03:27 • (LCSD) R3391761-2 03/11/19 03:47

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	24.8	24.1	99.3	96.2	70.0-123			3.16	20
Naphthalene	25.0	26.9	26.9	107	108	54.0-135			0.0393	20
Toluene	25.0	23.2	23.5	93.0	94.0	79.0-120			1.09	20
Xylenes, Total	75.0	75.6	74.6	101	99.5	79.0-123			1.33	20
(S) Toluene-d8				*96.9*	*99.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*101*	*100*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*112*	*97.0*	*70.0-130*				

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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	T104704245-18-15
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

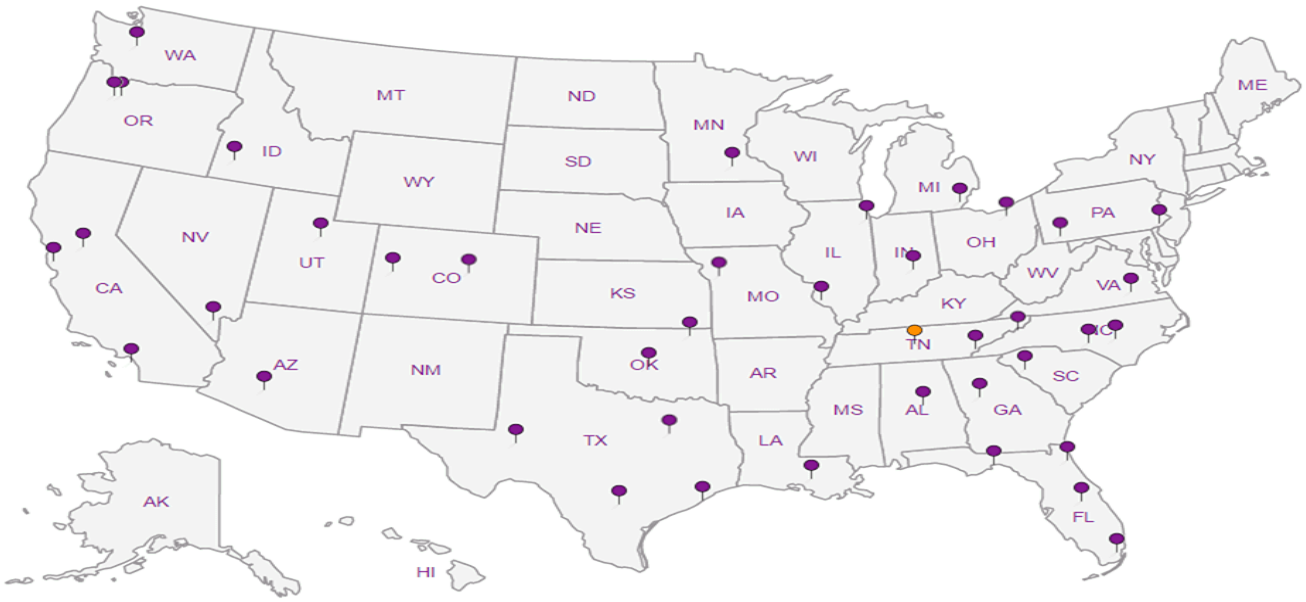
Third Party Federal Accreditations

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: 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 # D3161400.A.PN.EV.LDOMR.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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-03-030719	GRAB	GW	NA	03/07/19	0900	7	X	X	X	X			-01
MW-30-030719		GW			0925	3				X			-02
MW-54-030719		GW			0935	3				X			-03
MW-53-030719		GW			0945	3				X			-04
MW-04-030719		GW			1000	7	X	X	X	X			-05
MW-05-030719		GW			1020	3				X			-06
MW-02B-030719		GW			1040	3				X			-07
MW-09B-030719		GW			1100	3				X			-08
MW-09-030719		GW			1115	7	X	X	X	X			-09
MW-02-030719		GW			1130	7	X	X	X	X			-10

Chain of Custody Page 1 of 3

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# 1076801

E238

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P695785
TSR: 526 - Chris McCord
PB: 2-27196

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.

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

Tracking # FedEx 4876 1076 2615

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
RAD SCREEN: <0.5 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
	03/07/19	1730			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
				0.3-0.1=0.2 17 10S	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:
				3/8/19	8:45

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 # D3161400.A.PN.EN.LDOMR.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 Y

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)
MW-06-030719	GRAB	GW	NA	03/07/19	1310	3				Y			-11
MW-06B-030719		GW			1315	3				Y			-12
MW-07-030719		GW			1320	3				Y			-13
MW-07-D-030719		GW			1321	3				Y			-14
MW-16-030719		GW			1335	7	Y	Y	Y	Y			-15
MW-18-030719		GW			1350	7	Y	Y	Y	Y		SHEEN	-16
MW-08-030719		GW			1405	7	Y	Y	Y	Y			-17
MW-10-030719		GW			1420	7	Y	Y	Y	Y			-18
MW-32-030719		GW			1440	7	Y	Y	Y	Y			-19
MW-36-030719		GW			1515	3				Y			-20

50

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ 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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	03/07/19	1730		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				0.3 0.1 0.2 0.2 3 10S
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				3/8/19 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 2 of 3

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# 1076801

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P695785
TSR: 526 - Chris McCord
PB:

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

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Phone: 770-604-9182
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Client Project # D3161400.A.PN.EV.LDOMR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

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

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-36B-030719	GRAB	GW	NA	03/07/19	1520	3				X			-21
MW-36B-D-030719		GW			1521	3				X			-22
FB01-030719		GW			1545	3				X			-23
TB01-030719		GW			1550	1					X		-24
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											

Chain of Custody Page 3 of 3

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# 1076801

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P695785
TSR: 526 - Chris McCord
PB:

Shipped Via: FedEX Ground

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

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ 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
RAD SCREEN: <0.5 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
	03/07/19	1730			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 0.5-0.1 2 Pkg 10S	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/8/19 Time: 8:45	Hold: Condition: 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

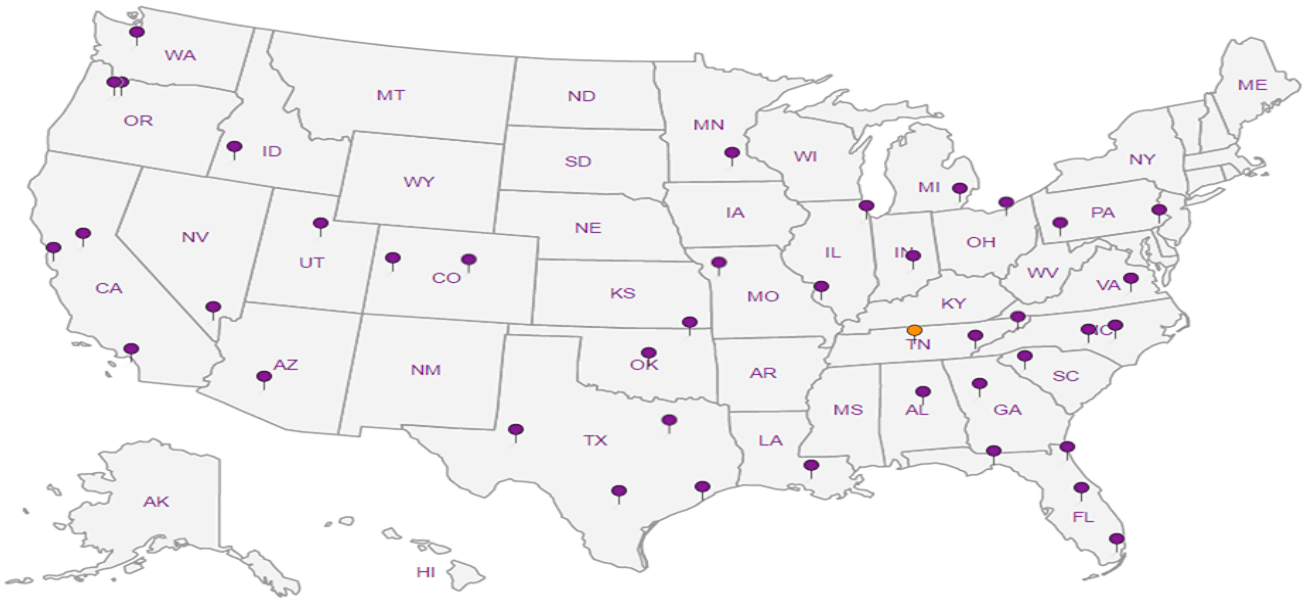
Third Party Federal Accreditations

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
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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:

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 20, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1078393
Samples Received:	03/13/2019
Project Number:	D3161400B.PN.GENLDMR
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

MW57-0.3-0.8-031219 L1078393-01 Solid

Collected by: K Taylor
Collected date/time: 03/12/19 10:10
Received date/time: 03/13/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1250484	1	03/18/19 10:42	03/18/19 10:53	JD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1250986	1	03/12/19 10:10	03/16/19 15:31	BMB	Mt. Juliet, TN

MW57-0.3-0.8-031219-DUP L1078393-02 Solid

Collected by: K Taylor
Collected date/time: 03/12/19 10:10
Received date/time: 03/13/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1250484	1	03/18/19 10:42	03/18/19 10:53	JD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1250986	1	03/12/19 10:10	03/16/19 15:52	BMB	Mt. Juliet, TN

TRIPBLANK L1078393-03 GW

Collected by: K Taylor
Collected date/time: 03/12/19 00:00
Received date/time: 03/13/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1250591	1	03/15/19 16:17	03/15/19 16:17	KMC	Mt. Juliet, TN

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	90.8		1	03/18/2019 10:53	WG1250484

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		1.10	1	03/16/2019 15:31	WG1250986
Toluene	ND		5.51	1	03/16/2019 15:31	WG1250986
Ethylbenzene	ND		2.75	1	03/16/2019 15:31	WG1250986
o-Xylene	ND		2.75	1	03/16/2019 15:31	WG1250986
m&p-Xylenes	5.23		4.41	1	03/16/2019 15:31	WG1250986
Xylenes, Total	ND		7.16	1	03/16/2019 15:31	WG1250986
Naphthalene	ND		13.8	1	03/16/2019 15:31	WG1250986
(S) Toluene-d8	*105*		*75.0-131*		*03/16/2019 15:31*	WG1250986
(S) Dibromofluoromethane	*98.2*		*65.0-129*		*03/16/2019 15:31*	WG1250986
(S) a,a,a-Trifluorotoluene	*99.5*		*80.0-120*		*03/16/2019 15:31*	WG1250986
(S) 4-Bromofluorobenzene	*117*		*67.0-138*		*03/16/2019 15:31*	WG1250986

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.8		1	03/18/2019 10:53	WG1250484

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		1.10	1	03/16/2019 15:52	WG1250986
Toluene	ND		5.51	1	03/16/2019 15:52	WG1250986
Ethylbenzene	ND		2.75	1	03/16/2019 15:52	WG1250986
o-Xylene	ND		2.75	1	03/16/2019 15:52	WG1250986
m&p-Xylenes	ND		4.41	1	03/16/2019 15:52	WG1250986
Xylenes, Total	ND		7.16	1	03/16/2019 15:52	WG1250986
Naphthalene	ND		13.8	1	03/16/2019 15:52	WG1250986
(S) Toluene-d8	*105*		*75.0-131*		*03/16/2019 15:52*	WG1250986
(S) Dibromofluoromethane	*98.4*		*65.0-129*		*03/16/2019 15:52*	WG1250986
(S) a,a,a-Trifluorotoluene	*98.0*		*80.0-120*		*03/16/2019 15:52*	WG1250986
(S) 4-Bromofluorobenzene	*118*		*67.0-138*		*03/16/2019 15:52*	WG1250986

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	03/15/2019 16:17	WG1250591
Toluene	ND		1.00	1	03/15/2019 16:17	WG1250591
Ethylbenzene	ND		1.00	1	03/15/2019 16:17	WG1250591
o-Xylene	ND		1.00	1	03/15/2019 16:17	WG1250591
m&p-Xylene	ND		2.00	1	03/15/2019 16:17	WG1250591
Xylenes, Total	ND		3.00	1	03/15/2019 16:17	WG1250591
Naphthalene	ND		5.00	1	03/15/2019 16:17	WG1250591
(S) Toluene-d8	*99.7*		*80.0-120*		*03/15/2019 16:17*	WG1250591
(S) a,a,a-Trifluorotoluene	*97.9*		*80.0-120*		*03/15/2019 16:17*	WG1250591
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*03/15/2019 16:17*	WG1250591
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/15/2019 16:17*	WG1250591

Method Blank (MB)

(MB) R3392814-1 03/18/19 10:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1078393-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1078393-01 03/18/19 10:53 • (DUP) R3392814-3 03/18/19 10:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.8	90.4	1	0.421		10

Laboratory Control Sample (LCS)

(LCS) R3392814-2 03/18/19 10:53

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) R3392170-3 03/15/19 13:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*101*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*97.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

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

(LCS) R3392170-1 03/15/19 12:32 • (LCSD) R3392170-2 03/15/19 12:52

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	23.0	22.1	91.9	88.3	70.0-123			4.04	20
Ethylbenzene	25.0	24.2	23.4	96.9	93.6	79.0-123			3.50	20
Naphthalene	25.0	24.1	26.0	96.4	104	54.0-135			7.53	20
o-Xylene	25.0	23.6	22.9	94.4	91.7	80.0-122			2.89	20
m&p-Xylenes	50.0	47.8	46.1	95.5	92.1	80.0-122			3.62	20
Toluene	25.0	22.5	21.7	89.9	86.7	79.0-120			3.66	20
Xylenes, Total	75.0	71.4	69.0	95.2	92.0	79.0-123			3.42	20
(S) Toluene-d8				*100*	*98.2*	*80.0-120*				
(S) a,a,a-Trifluorotoluene				*96.9*	*98.8*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.8*	*99.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*101*	*101*	*70.0-130*				

Method Blank (MB)

(MB) R3392363-3 03/16/19 13:51

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	*98.8*			*65.0-129*
(S) 4-Bromofluorobenzene	*117*			*67.0-138*
(S) a,a,a-Trifluorotoluene	*100*			*80.0-120*

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

(LCS) R3392363-1 03/16/19 12:17 • (LCSD) R3392363-2 03/16/19 12:37

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	116	120	93.0	96.1	70.0-130			3.22	20
Ethylbenzene	125	96.9	104	77.5	83.1	70.0-130			6.94	20
Naphthalene	125	88.9	90.2	71.1	72.1	70.0-130			1.43	20
Toluene	125	107	110	85.8	88.2	70.0-130			2.69	20
Xylenes, Total	375	307	317	81.9	84.5	70.0-130			3.21	20
o-Xylene	125	114	116	91.4	93.0	70.0-130			1.71	20
m&p-Xylenes	250	193	201	77.1	80.4	70.0-130			4.09	20
(S) Toluene-d8				*97.6*	*97.8*	*75.0-131*				
(S) Dibromofluoromethane				*108*	*105*	*65.0-129*				
(S) 4-Bromofluorobenzene				*120*	*120*	*67.0-138*				
(S) a,a,a-Trifluorotoluene				*95.9*	*97.2*	*80.0-120*				

L1078952-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1078952-04 03/16/19 19:12 • (MS) R3392363-4 03/16/19 20:53 • (MSD) R3392363-5 03/16/19 21:14

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	125	42900	272000	486000	45.8	88.6	4000	10.0-149		J3	56.5	37
Ethylbenzene	125	93100	303000	495000	42.1	80.3	4000	10.0-160		J3	47.9	38
Naphthalene	125	370000	733000	708000	72.5	67.5	4000	10.0-160			3.48	36
Toluene	125	21200	224000	421000	40.5	79.9	4000	10.0-156		J3	61.1	38
Xylenes, Total	375	335000	1090000	1620000	50.4	85.5	4000	10.0-160		J3	38.9	38

L1078952-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1078952-04 03/16/19 19:12 • (MS) R3392363-4 03/16/19 20:53 • (MSD) R3392363-5 03/16/19 21:14

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
o-Xylene	125	59200	311000	498000	50.3	87.8	4000	10.0-156		J3	46.4	40
m&p-Xylenes	250	276000	780000	1120000	50.4	84.0	4000	10.0-156			35.4	40
(S) Toluene-d8					*97.9*	*96.0*		*75.0-131*				
(S) Dibromofluoromethane					*106*	*107*		*65.0-129*				
(S) 4-Bromofluorobenzene					*118*	*118*		*67.0-138*				
(S) α,α,α-Trifluorotoluene					*98.0*	*98.8*		*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

(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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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	T104704245-18-15
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

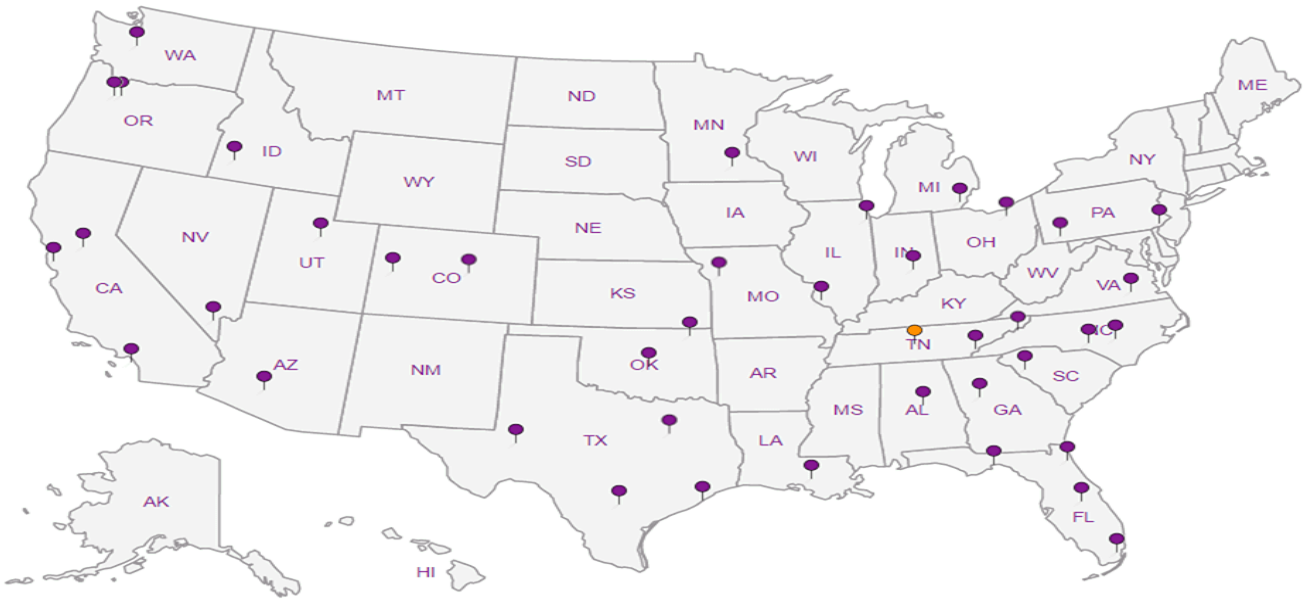
Third Party Federal Accreditations

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 CC: BILL WALDRON
Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com WWALDRON@JACOBS.COM

Project Description: Lewis Drive Site
City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # D316140008.AN.GEN.LOCAL6
Lab Project # KINCH2MGA-LEWISSOIL

Collected by (print): KYLE TAYLOR
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 X STANDARD TURNAROUND
Quote #
Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	TS 4ozClr-NoPres	V8260BTEXNSC 40mlAmb/MeOH5ml/Syr	V8260BTEXNSC - TB - HCL BLANK	Remarks	Sample # (lab only)
MW57-03-08-031219	GRAB	SS	03'-08'	03/12/19	1010	2		X	X			-01
MW57-03-08-031219-DUP		SS	03'-08'	03/12/19	1010	2		X	X			-02
TRIP BLANK		~~OT~~ SS				~~2~~ 1		~~X~~	~~X~~	X	1 VIAL - HCL	

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# L1078393
E079

Acctnum: KINCH2MGA
Template: T147291
Prelogin: P698538
TSR: 526 - Chris McCord
PB: 3-7-19
Shipped Via: FedEX Standard

* 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 # FedEx 7859 9141 2870

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
RAD SCREEN: <0.5 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
	3/12/19	1800		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.6 °C Bottles Received: 4	
				1.7 AM AS	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/13/19 Time: 8:45	Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 31, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1063771
Samples Received:	01/24/2019
Project Number:	D3161400.B.PN.GEN.LD
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

SW12-012319 L1063771-01 GW

Collected by: Melissa Warren
Collected date/time: 01/23/19 13:30
Received date/time: 01/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228392	1	01/25/19 13:12	01/25/19 13:12	ACG

TB01-012319 L1063771-02 GW

Collected by: Melissa Warren
Collected date/time: 01/23/19 13:35
Received date/time: 01/24/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228392	1	01/25/19 12:13	01/25/19 12:13	ACG

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. 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	01/25/2019 13:12	WG1228392
Toluene	ND		1.00	1	01/25/2019 13:12	WG1228392
Ethylbenzene	ND		1.00	1	01/25/2019 13:12	WG1228392
o-Xylene	ND		1.00	1	01/25/2019 13:12	WG1228392
m&p-Xylene	ND		2.00	1	01/25/2019 13:12	WG1228392
Total Xylenes	ND		3.00	1	01/25/2019 13:12	WG1228392
Methyl tert-butyl ether	ND		1.00	1	01/25/2019 13:12	WG1228392
Naphthalene	ND		5.00	1	01/25/2019 13:12	WG1228392
(S) Toluene-d8	*101*		*80.0-120*		*01/25/2019 13:12*	WG1228392
(S) Dibromofluoromethane	*101*		*75.0-120*		*01/25/2019 13:12*	WG1228392
(S) a,a,a-Trifluorotoluene	*98.0*		*80.0-120*		*01/25/2019 13:12*	WG1228392
(S) 4-Bromofluorobenzene	*97.3*		*77.0-126*		*01/25/2019 13:12*	WG1228392

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	01/25/2019 12:13	WG1228392
Toluene	2.76		1.00	1	01/25/2019 12:13	WG1228392
Ethylbenzene	ND		1.00	1	01/25/2019 12:13	WG1228392
o-Xylene	ND		1.00	1	01/25/2019 12:13	WG1228392
m&p-Xylene	ND		2.00	1	01/25/2019 12:13	WG1228392
Total Xylenes	ND		3.00	1	01/25/2019 12:13	WG1228392
Methyl tert-butyl ether	ND		1.00	1	01/25/2019 12:13	WG1228392
Naphthalene	ND		5.00	1	01/25/2019 12:13	WG1228392
(S) Toluene-d8	*104*		*80.0-120*		*01/25/2019 12:13*	WG1228392
(S) Dibromofluoromethane	*100*		*75.0-120*		*01/25/2019 12:13*	WG1228392
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*01/25/2019 12:13*	WG1228392
(S) 4-Bromofluorobenzene	*94.9*		*77.0-126*		*01/25/2019 12:13*	WG1228392

Method Blank (MB)

(MB) R3379182-2 01/25/19 10:16

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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*101*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*98.9*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*

Laboratory Control Sample (LCS)

(LCS) R3379182-1 01/25/19 09:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	23.9	95.6	70.0-123	
Ethylbenzene	25.0	26.2	105	79.0-123	
Methyl tert-butyl ether	25.0	25.3	101	68.0-125	
Naphthalene	25.0	22.5	90.1	54.0-135	
o-Xylene	25.0	26.7	107	80.0-122	
m&p-Xylenes	50.0	51.3	103	80.0-122	
Toluene	25.0	24.6	98.3	79.0-120	
Xylenes, Total	75.0	78.0	104	79.0-123	
(S) Toluene-d8			*100*	*80.0-120*	
(S) Dibromofluoromethane			*98.6*	*75.0-120*	
(S) a,a,a-Trifluorotoluene			*99.9*	*80.0-120*	
(S) 4-Bromofluorobenzene			*100*	*77.0-126*	

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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.
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Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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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.

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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

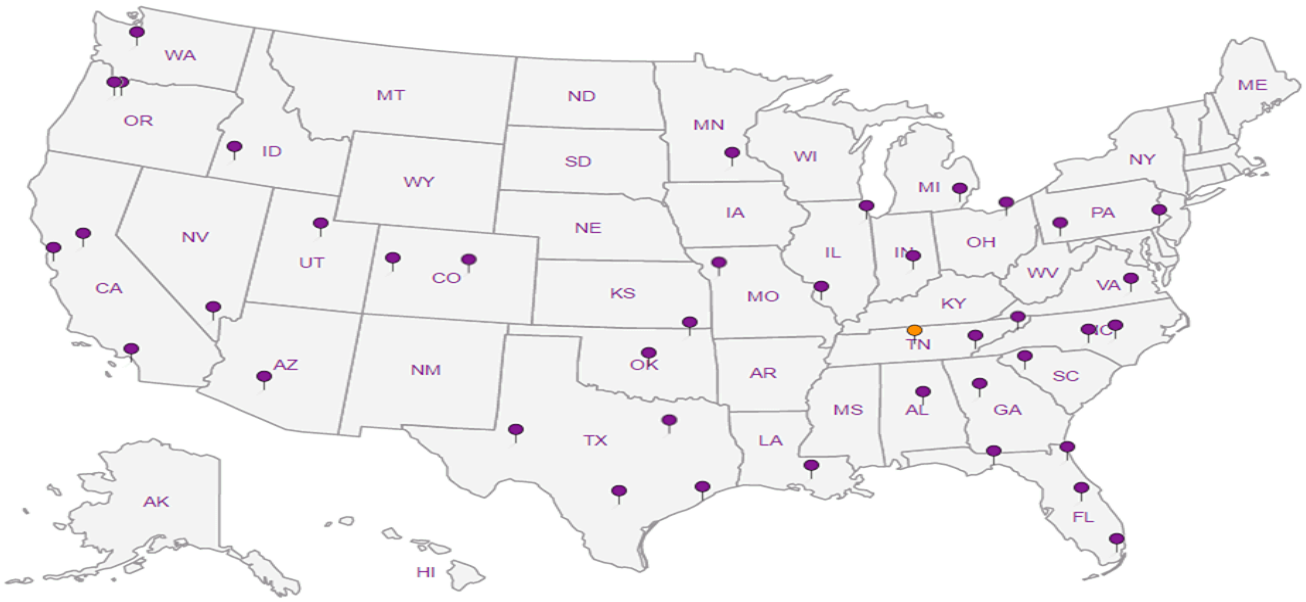
Third Party Federal Accreditations

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; scott.powell@ch2m.com;

Project Description: Lewis Drive Surface Water

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # D3161400, B.PN.GEN, LDOMR.GW

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	V8260 BTEX MNSC 40mlAmb-HCl (BLANK)	Remarks	Sample # (lab only)
SW12-012319	GRAB	GW	NA	1/23/19	1330	3	X			-01
TB01-012319	GRAB	GW	NA	1/23/19	1335	3	X	X	TRIP BLANK	-02
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

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

L# 106377 1

T A148

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

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,Naphthalene,MTBE

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 6214 9981

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

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1/23/19	1600	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No (1) HCL / MeoH TBR

Temp: 0.5+0.1=0.6 °C Bottles Received: 3+1 4/3

Date: 01/24/19 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 27, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1071906
Samples Received:	02/20/2019
Project Number:	D3161400.B.PN.EV.LDO
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

SW14-021919 L1071906-01 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 14:25 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1239994	1	02/20/19 22:24	02/20/19 22:24	TJJ

SW05-021919 L1071906-02 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 14:10 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1239994	1	02/20/19 22:45	02/20/19 22:45	TJJ

SW02-021919 L1071906-03 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:20 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241247	1	02/23/19 11:47	02/23/19 11:47	JAH

SW04-021919 L1071906-04 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:25 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1241247	1	02/23/19 12:07	02/23/19 12:07	JAH

SW13-021919 L1071906-05 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:35 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1239994	1	02/20/19 23:04	02/20/19 23:04	TJJ

SW01-021919 L1071906-06 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:45 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1239994	1	02/20/19 23:24	02/20/19 23:24	TJJ

SW12-021919 L1071906-07 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 13:50 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1239994	1	02/20/19 23:45	02/20/19 23:45	TJJ

TB01-021919 L1071906-08 GW

Collected by: Melissa Warren | Collected date/time: 02/19/19 15:50 | Received date/time: 02/20/19 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1239994	1	02/20/19 17:42	02/20/19 17:42	TJJ

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	02/20/2019 22:24	WG1239994
Toluene	ND		1.00	1	02/20/2019 22:24	WG1239994
Ethylbenzene	ND		1.00	1	02/20/2019 22:24	WG1239994
o-Xylene	ND		1.00	1	02/20/2019 22:24	WG1239994
m&p-Xylene	ND		2.00	1	02/20/2019 22:24	WG1239994
Total Xylenes	ND		3.00	1	02/20/2019 22:24	WG1239994
Methyl tert-butyl ether	1.19		1.00	1	02/20/2019 22:24	WG1239994
Naphthalene	ND		5.00	1	02/20/2019 22:24	WG1239994
(S) Toluene-d8	*96.0*		*80.0-120*		*02/20/2019 22:24*	WG1239994
(S) 4-Bromofluorobenzene	*92.3*		*77.0-126*		*02/20/2019 22:24*	WG1239994
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*02/20/2019 22:24*	WG1239994

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	02/20/2019 22:45	WG1239994
Toluene	ND		1.00	1	02/20/2019 22:45	WG1239994
Ethylbenzene	ND		1.00	1	02/20/2019 22:45	WG1239994
o-Xylene	ND		1.00	1	02/20/2019 22:45	WG1239994
m&p-Xylene	ND		2.00	1	02/20/2019 22:45	WG1239994
Total Xylenes	ND		3.00	1	02/20/2019 22:45	WG1239994
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 22:45	WG1239994
Naphthalene	ND		5.00	1	02/20/2019 22:45	WG1239994
(S) Toluene-d8	*93.8*		*80.0-120*		*02/20/2019 22:45*	WG1239994
(S) 4-Bromofluorobenzene	*92.5*		*77.0-126*		*02/20/2019 22:45*	WG1239994
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*02/20/2019 22:45*	WG1239994

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	19.7		1.00	1	02/23/2019 11:47	WG1241247
Toluene	2.67		1.00	1	02/23/2019 11:47	WG1241247
Ethylbenzene	ND		1.00	1	02/23/2019 11:47	WG1241247
o-Xylene	4.44		1.00	1	02/23/2019 11:47	WG1241247
m&p-Xylene	4.60		2.00	1	02/23/2019 11:47	WG1241247
Total Xylenes	9.04		3.00	1	02/23/2019 11:47	WG1241247
Methyl tert-butyl ether	2.12		1.00	1	02/23/2019 11:47	WG1241247
Naphthalene	ND		5.00	1	02/23/2019 11:47	WG1241247
(S) Toluene-d8	*104*		*80.0-120*		*02/23/2019 11:47*	WG1241247
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*02/23/2019 11:47*	WG1241247
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*02/23/2019 11:47*	WG1241247

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.47		1.00	1	02/23/2019 12:07	WG1241247
Toluene	ND		1.00	1	02/23/2019 12:07	WG1241247
Ethylbenzene	ND		1.00	1	02/23/2019 12:07	WG1241247
o-Xylene	ND		1.00	1	02/23/2019 12:07	WG1241247
m&p-Xylene	ND		2.00	1	02/23/2019 12:07	WG1241247
Total Xylenes	ND		3.00	1	02/23/2019 12:07	WG1241247
Methyl tert-butyl ether	ND		1.00	1	02/23/2019 12:07	WG1241247
Naphthalene	ND		5.00	1	02/23/2019 12:07	WG1241247
(S) Toluene-d8	*101*		*80.0-120*		*02/23/2019 12:07*	WG1241247
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*02/23/2019 12:07*	WG1241247
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*02/23/2019 12:07*	WG1241247

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	02/20/2019 23:04	WG1239994
Toluene	ND		1.00	1	02/20/2019 23:04	WG1239994
Ethylbenzene	ND		1.00	1	02/20/2019 23:04	WG1239994
o-Xylene	ND		1.00	1	02/20/2019 23:04	WG1239994
m&p-Xylene	ND		2.00	1	02/20/2019 23:04	WG1239994
Total Xylenes	ND		3.00	1	02/20/2019 23:04	WG1239994
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 23:04	WG1239994
Naphthalene	ND		5.00	1	02/20/2019 23:04	WG1239994
(S) Toluene-d8	*91.5*		*80.0-120*		*02/20/2019 23:04*	WG1239994
(S) 4-Bromofluorobenzene	*91.8*		*77.0-126*		*02/20/2019 23:04*	WG1239994
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*02/20/2019 23:04*	WG1239994

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	02/20/2019 23:24	WG1239994
Toluene	ND		1.00	1	02/20/2019 23:24	WG1239994
Ethylbenzene	ND		1.00	1	02/20/2019 23:24	WG1239994
o-Xylene	ND		1.00	1	02/20/2019 23:24	WG1239994
m&p-Xylene	ND		2.00	1	02/20/2019 23:24	WG1239994
Total Xylenes	ND		3.00	1	02/20/2019 23:24	WG1239994
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 23:24	WG1239994
Naphthalene	ND		5.00	1	02/20/2019 23:24	WG1239994
(S) Toluene-d8	*112*		*80.0-120*		*02/20/2019 23:24*	WG1239994
(S) 4-Bromofluorobenzene	*93.1*		*77.0-126*		*02/20/2019 23:24*	WG1239994
(S) 1,2-Dichloroethane-d4	*112*		*70.0-130*		*02/20/2019 23:24*	WG1239994

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	02/20/2019 23:45	WG1239994
Toluene	ND		1.00	1	02/20/2019 23:45	WG1239994
Ethylbenzene	ND		1.00	1	02/20/2019 23:45	WG1239994
o-Xylene	ND		1.00	1	02/20/2019 23:45	WG1239994
m&p-Xylene	ND		2.00	1	02/20/2019 23:45	WG1239994
Total Xylenes	ND		3.00	1	02/20/2019 23:45	WG1239994
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 23:45	WG1239994
Naphthalene	ND		5.00	1	02/20/2019 23:45	WG1239994
(S) Toluene-d8	*94.2*		*80.0-120*		*02/20/2019 23:45*	WG1239994
(S) 4-Bromofluorobenzene	*93.1*		*77.0-126*		*02/20/2019 23:45*	WG1239994
(S) 1,2-Dichloroethane-d4	*110*		*70.0-130*		*02/20/2019 23:45*	WG1239994

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	02/20/2019 17:42	WG1239994
Benzene	ND		1.00	1	02/20/2019 17:42	WG1239994
Bromochloromethane	ND		1.00	1	02/20/2019 17:42	WG1239994
Bromodichloromethane	ND		1.00	1	02/20/2019 17:42	WG1239994
Bromoform	ND		1.00	1	02/20/2019 17:42	WG1239994
Bromomethane	ND		5.00	1	02/20/2019 17:42	WG1239994
Carbon disulfide	ND		1.00	1	02/20/2019 17:42	WG1239994
Carbon tetrachloride	ND		1.00	1	02/20/2019 17:42	WG1239994
Chlorobenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
Chlorodibromomethane	ND		1.00	1	02/20/2019 17:42	WG1239994
Chloroethane	ND		5.00	1	02/20/2019 17:42	WG1239994
Chloroform	ND		5.00	1	02/20/2019 17:42	WG1239994
Chloromethane	ND	J4	2.50	1	02/20/2019 17:42	WG1239994
Cyclohexane	ND		1.00	1	02/20/2019 17:42	WG1239994
1,2-Dibromo-3-Chloropropane	ND		5.00	1	02/20/2019 17:42	WG1239994
1,2-Dibromoethane	ND		1.00	1	02/20/2019 17:42	WG1239994
1,2-Dichlorobenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,3-Dichlorobenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,4-Dichlorobenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
Dichlorodifluoromethane	ND	J4	5.00	1	02/20/2019 17:42	WG1239994
1,1-Dichloroethane	ND		1.00	1	02/20/2019 17:42	WG1239994
1,2-Dichloroethane	ND		1.00	1	02/20/2019 17:42	WG1239994
1,1-Dichloroethene	ND		1.00	1	02/20/2019 17:42	WG1239994
cis-1,2-Dichloroethene	ND		1.00	1	02/20/2019 17:42	WG1239994
trans-1,2-Dichloroethene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,2-Dichloropropane	ND		1.00	1	02/20/2019 17:42	WG1239994
cis-1,3-Dichloropropene	ND		1.00	1	02/20/2019 17:42	WG1239994
trans-1,3-Dichloropropene	ND		1.00	1	02/20/2019 17:42	WG1239994
Ethylbenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
2-Hexanone	ND		10.0	1	02/20/2019 17:42	WG1239994
Isopropylbenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
2-Butanone (MEK)	ND		10.0	1	02/20/2019 17:42	WG1239994
Methyl Acetate	ND		20.0	1	02/20/2019 17:42	WG1239994
Methyl Cyclohexane	ND		1.00	1	02/20/2019 17:42	WG1239994
Methylene Chloride	ND		5.00	1	02/20/2019 17:42	WG1239994
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	02/20/2019 17:42	WG1239994
Methyl tert-butyl ether	ND		1.00	1	02/20/2019 17:42	WG1239994
Styrene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,1,2,2-Tetrachloroethane	ND		1.00	1	02/20/2019 17:42	WG1239994
Tetrachloroethene	ND		1.00	1	02/20/2019 17:42	WG1239994
Toluene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,2,3-Trichlorobenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,2,4-Trichlorobenzene	ND		1.00	1	02/20/2019 17:42	WG1239994
1,1,1-Trichloroethane	ND		1.00	1	02/20/2019 17:42	WG1239994
1,1,2-Trichloroethane	ND		1.00	1	02/20/2019 17:42	WG1239994
Trichloroethene	ND		1.00	1	02/20/2019 17:42	WG1239994
Trichlorofluoromethane	ND		5.00	1	02/20/2019 17:42	WG1239994
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	02/20/2019 17:42	WG1239994
Vinyl chloride	ND	J4	1.00	1	02/20/2019 17:42	WG1239994
Xylenes, Total	ND		3.00	1	02/20/2019 17:42	WG1239994
(S) Toluene-d8	*95.8*		*80.0-120*		*02/20/2019 17:42*	WG1239994
(S) a,a,a-Trifluorotoluene	*94.7*		*80.0-120*		*02/20/2019 17:42*	WG1239994
(S) 4-Bromofluorobenzene	*91.7*		*77.0-126*		*02/20/2019 17:42*	WG1239994
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*02/20/2019 17:42*	WG1239994

Method Blank (MB)

(MB) R3386138-2 02/20/19 17:02

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) R3386138-2 02/20/19 17:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.372	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
Toluene	U		0.412	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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	*94.9*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*94.0*			*80.0-120*
(S) 4-Bromofluorobenzene	*91.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3386138-1 02/20/19 16:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	126	101	19.0-160	
Bromodichloromethane	25.0	26.0	104	75.0-120	
Bromochloromethane	25.0	23.1	92.6	76.0-122	
Bromoform	25.0	23.7	94.6	68.0-132	
Bromomethane	25.0	31.9	128	10.0-160	
Carbon disulfide	25.0	25.1	100	61.0-128	
Carbon tetrachloride	25.0	23.6	94.4	68.0-126	
Chlorobenzene	25.0	24.1	96.5	80.0-121	
Chlorodibromomethane	25.0	25.4	102	77.0-125	
Benzene	25.0	23.7	94.8	70.0-123	
Chloroethane	25.0	31.7	127	47.0-150	
Chloroform	25.0	25.5	102	73.0-120	
Chloromethane	25.0	38.6	154	41.0-142	J4
1,2-Dibromo-3-Chloropropane	25.0	25.6	102	58.0-134	
1,2-Dibromoethane	25.0	24.0	96.0	80.0-122	
1,2-Dichlorobenzene	25.0	24.5	98.0	79.0-121	

Laboratory Control Sample (LCS)

(LCS) R3386138-1 02/20/19 16:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,3-Dichlorobenzene	25.0	26.5	106	79.0-120	
1,4-Dichlorobenzene	25.0	25.2	101	79.0-120	
Dichlorodifluoromethane	25.0	42.7	171	51.0-149	J4
1,1-Dichloroethane	25.0	26.2	105	70.0-126	
1,2-Dichloroethane	25.0	24.7	98.8	70.0-128	
1,1-Dichloroethene	25.0	25.9	103	71.0-124	
cis-1,2-Dichloroethene	25.0	24.9	99.8	73.0-120	
trans-1,2-Dichloroethene	25.0	24.7	98.9	73.0-120	
1,2-Dichloropropane	25.0	26.0	104	77.0-125	
cis-1,3-Dichloropropene	25.0	26.2	105	80.0-123	
trans-1,3-Dichloropropene	25.0	25.9	104	78.0-124	
2-Hexanone	125	147	117	67.0-149	
Isopropylbenzene	25.0	24.9	99.7	76.0-127	
2-Butanone (MEK)	125	151	121	44.0-160	
Methylene Chloride	25.0	25.0	99.9	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	146	117	68.0-142	
Ethylbenzene	25.0	23.8	95.1	79.0-123	
Naphthalene	25.0	22.1	88.5	54.0-135	
Styrene	25.0	26.2	105	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	25.6	103	65.0-130	
Tetrachloroethene	25.0	22.2	88.8	72.0-132	
1,1,2-Trichlorotrifluoroethane	25.0	23.8	95.2	69.0-132	
1,2,3-Trichlorobenzene	25.0	22.0	88.2	50.0-138	
1,2,4-Trichlorobenzene	25.0	23.1	92.4	57.0-137	
1,1,1-Trichloroethane	25.0	25.2	101	73.0-124	
1,1,2-Trichloroethane	25.0	24.2	97.0	80.0-120	
Methyl tert-butyl ether	25.0	24.9	99.7	68.0-125	
Trichloroethene	25.0	23.5	93.8	78.0-124	
Trichlorofluoromethane	25.0	26.9	108	59.0-147	
Vinyl chloride	25.0	35.3	141	67.0-131	J4
Toluene	25.0	23.3	93.2	79.0-120	
Xylenes, Total	75.0	72.7	96.9	79.0-123	
o-Xylene	25.0	24.6	98.4	80.0-122	
m&p-Xylenes	50.0	48.1	96.2	80.0-122	
(S) Toluene-d8			*93.3*	*80.0-120*	
(S) a,a,a-Trifluorotoluene			*90.9*	*80.0-120*	
(S) 4-Bromofluorobenzene			*88.1*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*101*	*70.0-130*	

Method Blank (MB)

(MB) R3386462-2 02/23/19 09:42

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	2.66	J	1.00	5.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*96.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3386462-1 02/23/19 08:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	23.7	94.7	70.0-123	
Methyl tert-butyl ether	25.0	24.7	98.8	68.0-125	
Ethylbenzene	25.0	23.7	95.0	79.0-123	
Naphthalene	25.0	17.7	70.7	54.0-135	
o-Xylene	25.0	25.2	101	80.0-122	
m&p-Xylenes	50.0	48.6	97.3	80.0-122	
Toluene	25.0	22.8	91.2	79.0-120	
Xylenes, Total	75.0	73.8	98.4	79.0-123	
(S) Toluene-d8			*98.0*	*80.0-120*	
(S) 4-Bromofluorobenzene			*100*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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	T104704245-18-15
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

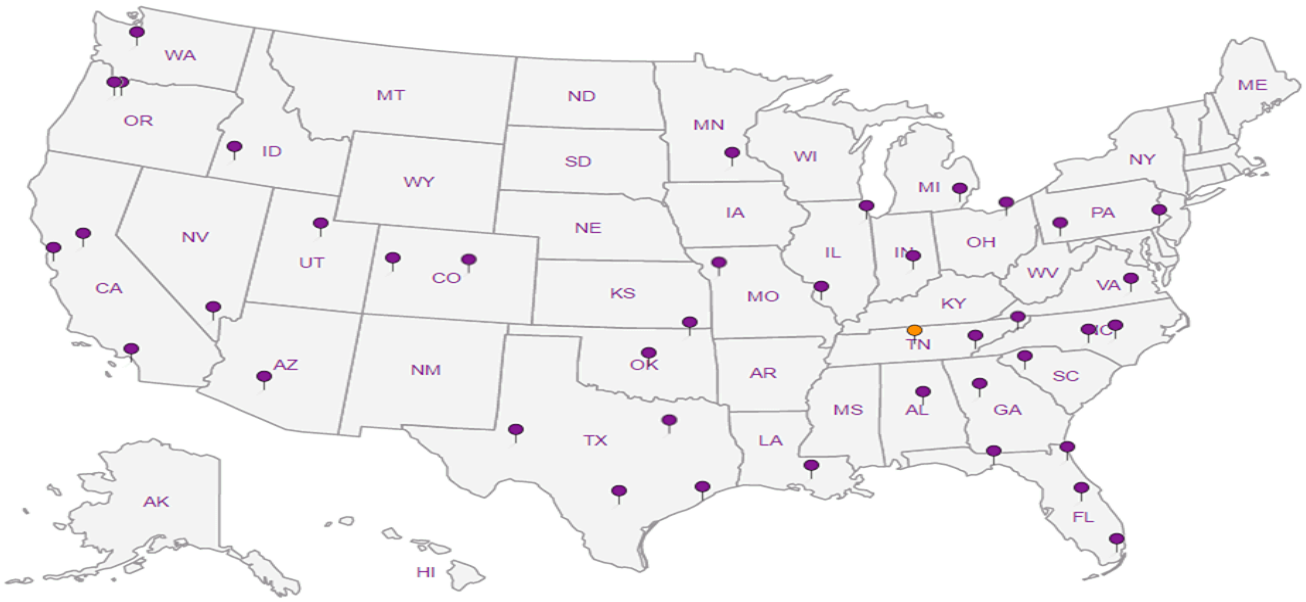
Third Party Federal Accreditations

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: 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 # D3161400.A.PN.EV.LOOMR.GW

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

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-BLK										
SW14-021919	GRAB	GW	NA	02/19/19	1425	3	X											01
SW05-021919		GW			1410	3	X											02
SW02-021919		GW			1320	3	X											03
SW04-021919		GW			1325	3	X											04
SW13-021919		GW			1335	3	X											06
SW01-021919		GW			1345	3	X											07
SW12-021919		GW			1350	3	X											05
TB01-021919		GW			1550	1	X	X										08

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# 107196

G192

Acctnum: KINCH2MGA
Template: T146014
Prelogin: P693484
TSR: 526 - Chris McCord
PB: 2/7/19 mc
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:

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 4624 3008 4290

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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	02/19/19	1730		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 27
				1.9+.1=2.0
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/20/19 Time: 945

If preservation required by Login: Date/Time

Hold:

NCF

Katie Ingram

Login #:1071906	Client: KINCH2MGA	Date:2/20	Evaluated by:Matt S

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	x	Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courier
	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: IDs SW02-021819 and SW04-021819 not on COC

Client informed by:	x	Call		Email		Voice Mail		Date:2/20/19	Time:15:02
TSR Initials:CM	Client Contact: Melissa Warren								

Login Instructions:

Please dispose of those IDs.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

March 15, 2019

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1076815
Samples Received:	03/08/2019
Project Number:	D3161400. A.PN. EV.
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:

Jason Romer
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.

SW11-030719 L1076815-01 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:30 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 14:00	03/10/19 14:00	BMB	Mt. Juliet, TN

SW10-030719 L1076815-02 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:40 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 14:19	03/10/19 14:19	BMB	Mt. Juliet, TN

SW09-030719 L1076815-03 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:45 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 14:39	03/10/19 14:39	BMB	Mt. Juliet, TN

SW08-030719 L1076815-04 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 09:55 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 14:59	03/10/19 14:59	BMB	Mt. Juliet, TN

SW13-030719 L1076815-05 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:05 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 15:18	03/10/19 15:18	BMB	Mt. Juliet, TN

SW04-030719 L1076815-06 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:15 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 15:38	03/10/19 15:38	BMB	Mt. Juliet, TN

SW02-030719 L1076815-07 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:20 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 15:57	03/10/19 15:57	BMB	Mt. Juliet, TN

SW07-030719 L1076815-08 GW

Collected by: Melissa Warren | Collected date/time: 03/07/19 10:30 | Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 16:17	03/10/19 16:17	BMB	Mt. Juliet, TN

SW14-030719 L1076815-09 GW

Collected by: Melissa Warren
Collected date/time: 03/07/19 10:40
Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 16:36	03/10/19 16:36	BMB	Mt. Juliet, TN

SW05-030719 L1076815-10 GW

Collected by: Melissa Warren
Collected date/time: 03/07/19 10:55
Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247678	1	03/10/19 16:56	03/10/19 16:56	BMB	Mt. Juliet, TN

TB02-030719 L1076815-11 GW

Collected by: Melissa Warren
Collected date/time: 03/07/19 11:00
Received date/time: 03/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1247987	1	03/10/19 18:04	03/10/19 18:04	CAH	Mt. Juliet, TN

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.

Jason Romer
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	03/10/2019 14:00	WG1247678
Toluene	ND		1.00	1	03/10/2019 14:00	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 14:00	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 14:00	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 14:00	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 14:00	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 14:00	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 14:00	WG1247678
(S) Toluene-d8	*102*		*80.0-120*		*03/10/2019 14:00*	WG1247678
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*03/10/2019 14:00*	WG1247678
(S) 4-Bromofluorobenzene	*99.2*		*77.0-126*		*03/10/2019 14:00*	WG1247678
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*03/10/2019 14:00*	WG1247678

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	03/10/2019 14:19	WG1247678
Toluene	ND		1.00	1	03/10/2019 14:19	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 14:19	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 14:19	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 14:19	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 14:19	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 14:19	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 14:19	WG1247678
(S) Toluene-d8	*104*		*80.0-120*		*03/10/2019 14:19*	WG1247678
(S) a,a,a-Trifluorotoluene	*107*		*80.0-120*		*03/10/2019 14:19*	WG1247678
(S) 4-Bromofluorobenzene	*99.2*		*77.0-126*		*03/10/2019 14:19*	WG1247678
(S) 1,2-Dichloroethane-d4	*96.7*		*70.0-130*		*03/10/2019 14:19*	WG1247678

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.88		1.00	1	03/10/2019 14:39	WG1247678
Toluene	ND		1.00	1	03/10/2019 14:39	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 14:39	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 14:39	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 14:39	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 14:39	WG1247678
Methyl tert-butyl ether	1.07		1.00	1	03/10/2019 14:39	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 14:39	WG1247678
(S) Toluene-d8	*103*		*80.0-120*		*03/10/2019 14:39*	WG1247678
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*03/10/2019 14:39*	WG1247678
(S) 4-Bromofluorobenzene	*96.3*		*77.0-126*		*03/10/2019 14:39*	WG1247678
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*03/10/2019 14:39*	WG1247678

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.45		1.00	1	03/10/2019 14:59	WG1247678
Toluene	ND		1.00	1	03/10/2019 14:59	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 14:59	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 14:59	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 14:59	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 14:59	WG1247678
Methyl tert-butyl ether	1.17		1.00	1	03/10/2019 14:59	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 14:59	WG1247678
(S) Toluene-d8	*101*		*80.0-120*		*03/10/2019 14:59*	WG1247678
(S) a,a,a-Trifluorotoluene	*102*		*80.0-120*		*03/10/2019 14:59*	WG1247678
(S) 4-Bromofluorobenzene	*97.7*		*77.0-126*		*03/10/2019 14:59*	WG1247678
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/10/2019 14:59*	WG1247678

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	03/10/2019 15:18	WG1247678
Toluene	ND		1.00	1	03/10/2019 15:18	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 15:18	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 15:18	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 15:18	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 15:18	WG1247678
Methyl tert-butyl ether	11.0		1.00	1	03/10/2019 15:18	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 15:18	WG1247678
(S) Toluene-d8	*104*		*80.0-120*		*03/10/2019 15:18*	WG1247678
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*03/10/2019 15:18*	WG1247678
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/10/2019 15:18*	WG1247678
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/10/2019 15:18*	WG1247678

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3.11		1.00	1	03/10/2019 15:38	WG1247678
Toluene	ND		1.00	1	03/10/2019 15:38	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 15:38	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 15:38	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 15:38	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 15:38	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 15:38	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 15:38	WG1247678
(S) Toluene-d8	*103*		*80.0-120*		*03/10/2019 15:38*	WG1247678
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*03/10/2019 15:38*	WG1247678
(S) 4-Bromofluorobenzene	*92.9*		*77.0-126*		*03/10/2019 15:38*	WG1247678
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*03/10/2019 15:38*	WG1247678

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	22.3		1.00	1	03/10/2019 15:57	WG1247678
Toluene	3.58		1.00	1	03/10/2019 15:57	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 15:57	WG1247678
o-Xylene	4.32		1.00	1	03/10/2019 15:57	WG1247678
m&p-Xylene	4.71		2.00	1	03/10/2019 15:57	WG1247678
Xylenes, Total	9.03		3.00	1	03/10/2019 15:57	WG1247678
Methyl tert-butyl ether	2.46		1.00	1	03/10/2019 15:57	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 15:57	WG1247678
(S) Toluene-d8	*101*		*80.0-120*		*03/10/2019 15:57*	WG1247678
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*03/10/2019 15:57*	WG1247678
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*03/10/2019 15:57*	WG1247678
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/10/2019 15:57*	WG1247678

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	03/10/2019 16:17	WG1247678
Toluene	ND		1.00	1	03/10/2019 16:17	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 16:17	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 16:17	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 16:17	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 16:17	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 16:17	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 16:17	WG1247678
(S) Toluene-d8	*102*		*80.0-120*		*03/10/2019 16:17*	WG1247678
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*03/10/2019 16:17*	WG1247678
(S) 4-Bromofluorobenzene	*99.2*		*77.0-126*		*03/10/2019 16:17*	WG1247678
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*03/10/2019 16:17*	WG1247678

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	03/10/2019 16:36	WG1247678
Toluene	ND		1.00	1	03/10/2019 16:36	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 16:36	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 16:36	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 16:36	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 16:36	WG1247678
Methyl tert-butyl ether	1.68		1.00	1	03/10/2019 16:36	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 16:36	WG1247678
(S) Toluene-d8	*104*		*80.0-120*		*03/10/2019 16:36*	WG1247678
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*03/10/2019 16:36*	WG1247678
(S) 4-Bromofluorobenzene	*97.1*		*77.0-126*		*03/10/2019 16:36*	WG1247678
(S) 1,2-Dichloroethane-d4	*98.6*		*70.0-130*		*03/10/2019 16:36*	WG1247678

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	03/10/2019 16:56	WG1247678
Toluene	ND		1.00	1	03/10/2019 16:56	WG1247678
Ethylbenzene	ND		1.00	1	03/10/2019 16:56	WG1247678
o-Xylene	ND		1.00	1	03/10/2019 16:56	WG1247678
m&p-Xylene	ND		2.00	1	03/10/2019 16:56	WG1247678
Xylenes, Total	ND		3.00	1	03/10/2019 16:56	WG1247678
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 16:56	WG1247678
Naphthalene	ND		5.00	1	03/10/2019 16:56	WG1247678
(S) Toluene-d8	*99.2*		*80.0-120*		*03/10/2019 16:56*	WG1247678
(S) a,a,a-Trifluorotoluene	*107*		*80.0-120*		*03/10/2019 16:56*	WG1247678
(S) 4-Bromofluorobenzene	*96.7*		*77.0-126*		*03/10/2019 16:56*	WG1247678
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*03/10/2019 16:56*	WG1247678

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	03/10/2019 18:04	WG1247987
Benzene	ND		1.00	1	03/10/2019 18:04	WG1247987
Bromodichloromethane	ND		1.00	1	03/10/2019 18:04	WG1247987
Bromoform	ND		1.00	1	03/10/2019 18:04	WG1247987
Bromomethane	ND		5.00	1	03/10/2019 18:04	WG1247987
Carbon disulfide	ND		1.00	1	03/10/2019 18:04	WG1247987
Carbon tetrachloride	ND		1.00	1	03/10/2019 18:04	WG1247987
Chlorobenzene	ND		1.00	1	03/10/2019 18:04	WG1247987
Chlorodibromomethane	ND		1.00	1	03/10/2019 18:04	WG1247987
Chloroethane	ND		5.00	1	03/10/2019 18:04	WG1247987
Chloroform	ND		5.00	1	03/10/2019 18:04	WG1247987
Chloromethane	ND		2.50	1	03/10/2019 18:04	WG1247987
1,2-Dibromo-3-Chloropropane	ND		5.00	1	03/10/2019 18:04	WG1247987
1,2-Dibromoethane	ND		1.00	1	03/10/2019 18:04	WG1247987
1,2-Dichlorobenzene	ND		1.00	1	03/10/2019 18:04	WG1247987
1,3-Dichlorobenzene	ND		1.00	1	03/10/2019 18:04	WG1247987
1,4-Dichlorobenzene	ND		1.00	1	03/10/2019 18:04	WG1247987
1,1-Dichloroethane	ND		1.00	1	03/10/2019 18:04	WG1247987
1,2-Dichloroethane	ND		1.00	1	03/10/2019 18:04	WG1247987
1,1-Dichloroethene	ND		1.00	1	03/10/2019 18:04	WG1247987
cis-1,2-Dichloroethene	ND		1.00	1	03/10/2019 18:04	WG1247987
trans-1,2-Dichloroethene	ND		1.00	1	03/10/2019 18:04	WG1247987
1,2-Dichloropropane	ND		1.00	1	03/10/2019 18:04	WG1247987
cis-1,3-Dichloropropene	ND		1.00	1	03/10/2019 18:04	WG1247987
trans-1,3-Dichloropropene	ND		1.00	1	03/10/2019 18:04	WG1247987
Di-isopropyl ether	ND		1.00	1	03/10/2019 18:04	WG1247987
Ethylbenzene	ND		1.00	1	03/10/2019 18:04	WG1247987
2-Butanone (MEK)	ND		10.0	1	03/10/2019 18:04	WG1247987
2-Hexanone	ND		10.0	1	03/10/2019 18:04	WG1247987
Methylene Chloride	ND		5.00	1	03/10/2019 18:04	WG1247987
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	03/10/2019 18:04	WG1247987
Methyl tert-butyl ether	ND		1.00	1	03/10/2019 18:04	WG1247987
Naphthalene	ND		5.00	1	03/10/2019 18:04	WG1247987
Styrene	ND		1.00	1	03/10/2019 18:04	WG1247987
1,1,2,2-Tetrachloroethane	ND		1.00	1	03/10/2019 18:04	WG1247987
Tetrachloroethene	ND		1.00	1	03/10/2019 18:04	WG1247987
Toluene	ND		1.00	1	03/10/2019 18:04	WG1247987
1,1,1-Trichloroethane	ND		1.00	1	03/10/2019 18:04	WG1247987
1,1,2-Trichloroethane	ND		1.00	1	03/10/2019 18:04	WG1247987
Trichloroethene	ND		1.00	1	03/10/2019 18:04	WG1247987
Vinyl chloride	ND		1.00	1	03/10/2019 18:04	WG1247987
o-Xylene	ND		1.00	1	03/10/2019 18:04	WG1247987
m&p-Xylene	ND		2.00	1	03/10/2019 18:04	WG1247987
Xylenes, Total	ND		3.00	1	03/10/2019 18:04	WG1247987
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	03/10/2019 18:04	WG1247987
1,2,3-Trimethylbenzene	ND		1.00	1	03/10/2019 18:04	WG1247987
(S) Toluene-d8	*104*		*80.0-120*		*03/10/2019 18:04*	WG1247987
(S) a,a,a-Trifluorotoluene	*110*		*80.0-120*		*03/10/2019 18:04*	WG1247987
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*03/10/2019 18:04*	WG1247987
(S) 1,2-Dichloroethane-d4	*113*		*70.0-130*		*03/10/2019 18:04*	WG1247987

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3391753-3 03/10/19 10:24

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
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*102*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*106*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.8*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

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

(LCS) R3391753-1 03/10/19 09:25 • (LCSD) R3391753-2 03/10/19 09:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	24.8	24.7	99.1	98.9	70.0-123			0.154	20
Ethylbenzene	25.0	24.5	24.5	98.0	98.0	79.0-123			0.0343	20
Methyl tert-butyl ether	25.0	26.2	27.0	105	108	68.0-125			2.79	20
Naphthalene	25.0	25.9	27.3	104	109	54.0-135			5.06	20
o-Xylene	25.0	24.4	25.0	97.5	100	80.0-122			2.52	20
m&p-Xylenes	50.0	48.1	49.4	96.1	98.8	80.0-122			2.75	20
Toluene	25.0	22.4	22.6	89.6	90.4	79.0-120			0.911	20
Xylenes, Total	75.0	72.5	74.4	96.7	99.2	79.0-123			2.59	20
(S) Toluene-d8				*93.9*	*95.4*	*80.0-120*				
(S) a,a,a-Trifluorotoluene				*107*	*109*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.3*	*99.5*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*114*	*115*	*70.0-130*				

Method Blank (MB)

(MB) R3390919-2 03/10/19 17:03

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) R3390919-2 03/10/19 17:03

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) a,a,a-Trifluorotoluene	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3390919-1 03/10/19 16:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	101	81.0	19.0-160	
Benzene	25.0	22.5	90.0	70.0-123	
Bromodichloromethane	25.0	26.5	106	75.0-120	
Bromoform	25.0	21.3	85.0	68.0-132	
Bromomethane	25.0	27.7	111	10.0-160	
Carbon disulfide	25.0	16.8	67.0	61.0-128	
Carbon tetrachloride	25.0	26.2	105	68.0-126	
Chlorobenzene	25.0	22.7	90.9	80.0-121	
Chlorodibromomethane	25.0	24.6	98.2	77.0-125	
Chloroethane	25.0	25.1	100	47.0-150	
Chloroform	25.0	25.4	102	73.0-120	
Chloromethane	25.0	21.6	86.5	41.0-142	
1,2-Dibromo-3-Chloropropane	25.0	22.4	89.8	58.0-134	
1,2-Dibromoethane	25.0	23.4	93.7	80.0-122	
1,2-Dichlorobenzene	25.0	24.3	97.0	79.0-121	
1,3-Dichlorobenzene	25.0	25.8	103	79.0-120	
1,4-Dichlorobenzene	25.0	24.4	97.7	79.0-120	
1,1-Dichloroethane	25.0	23.4	93.4	70.0-126	
1,2-Dichloroethane	25.0	26.8	107	70.0-128	
1,1-Dichloroethene	25.0	21.1	84.5	71.0-124	
cis-1,2-Dichloroethene	25.0	25.1	100	73.0-120	
trans-1,2-Dichloroethene	25.0	22.7	91.0	73.0-120	
1,2-Dichloropropane	25.0	23.6	94.3	77.0-125	

Laboratory Control Sample (LCS)

(LCS) R3390919-1 03/10/19 16:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
cis-1,3-Dichloropropene	25.0	25.1	100	80.0-123	
trans-1,3-Dichloropropene	25.0	23.9	95.6	78.0-124	
Di-isopropyl ether	25.0	23.5	94.2	58.0-138	
Ethylbenzene	25.0	23.3	93.2	79.0-123	
2-Hexanone	125	104	82.9	67.0-149	
2-Butanone (MEK)	125	107	85.3	44.0-160	
Methylene Chloride	25.0	21.8	87.3	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	105	84.2	68.0-142	
Methyl tert-butyl ether	25.0	24.8	99.0	68.0-125	
Naphthalene	25.0	24.2	96.8	54.0-135	
Styrene	25.0	23.6	94.2	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	22.5	90.0	65.0-130	
Tetrachloroethene	25.0	23.3	93.3	72.0-132	
Toluene	25.0	21.7	86.8	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	23.4	93.6	69.0-132	
1,1,1-Trichloroethane	25.0	27.5	110	73.0-124	
1,1,2-Trichloroethane	25.0	22.2	88.9	80.0-120	
Trichloroethene	25.0	24.2	96.7	78.0-124	
1,2,3-Trimethylbenzene	25.0	25.6	103	77.0-120	
Vinyl chloride	25.0	25.8	103	67.0-131	
Xylenes, Total	75.0	69.8	93.1	79.0-123	
o-Xylene	25.0	23.3	93.4	80.0-122	
m&p-Xylenes	50.0	46.5	92.9	80.0-122	
(S) Toluene-d8			*96.8*	*80.0-120*	
(S) a,a,a-Trifluorotoluene			*110*	*80.0-120*	
(S) 4-Bromofluorobenzene			*102*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*117*	*70.0-130*	

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.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
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	T104704245-18-15
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

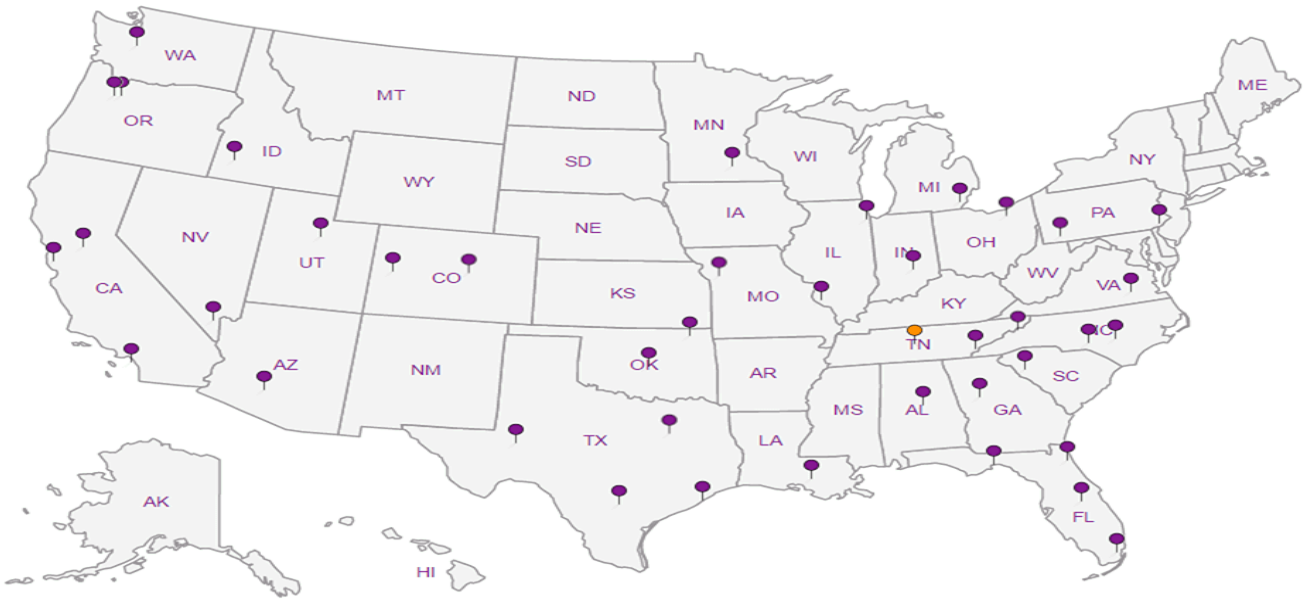
Third Party Federal Accreditations

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: 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 # D3161400.A.PN.EV.LDOMR.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

V8260BTEXNISC-40mlAmb-HCl

Chain of Custody Page 1 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# L1076815

B115

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P695786
TSR: 526 - Chris McCord
PB: 3-27-19

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNISC-40mlAmb-HCl	Remarks	Sample # (lab only)
SW11-030719	GRAB	GW	NA	03/07/19	0930	3	X		-01
SW10-030719		GW			0940	3	X		02
SW09-030719		GW			0945	3	X		03
SW08-030719		GW			0955	3	X		04
SW13-030719		GW			1005	3	X		05
SW04-030719		GW			1015	3	X		06
SW02-030719		GW			1020	3	X		07
SW07-030719		GW			1030	3	X		08
SW14-030719		GW			1040	3	X		09
SW05-030719		GW			1055	3	X		10

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4876 1076 2626

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: X Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	03/07/19	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Ellis

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

Temp: °C Bottles Received: 0.6-0.1:05 3 30

Date: 3/8/19 Time: 845

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

Pres Chk

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

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 #: D3161400.A.PN.EV.LDOMR.SW

Lab Project #: KINCH2MGA-LEWIS

L# L1076815

Table #

Collected by (print): MELISSA WARREN

Site/Facility ID #: LEWIS DRIVE

P.O. #

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P695786
TSR: 526 - Chris McCord
PB: 2-27-19

Shipped Via: FedEX Ground

Collected by (signature): [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: V8260BTEXNSC 40mlAmb-HCl; V8260TCLSC - TB 40mlAmb - NoPres - Blk (Pres Chk: X)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260TCLSC - TB 40mlAmb - NoPres - Blk	Remarks	Sample # (lab only)
TB01-030719	GRAB	GW	NA	03/07/19	1100	1	X			-11
		GW				3	X			
		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:

pH ______ Temp ______
Flow ______ Other ______

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

Tracking # Same

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
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
[signature]	03/07/19	1730		

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
				0.6-0.1=0.5 3 30	

Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition: NCF / OK
			KWillis	3/8/19	845		OK

Appendix C
Operation and Maintenance Logs

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
1/2/19 1400	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03029469 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	13,253:59	13,255:20
Air Compressor 1 Load Time	(hours)	NA	NA	10,011:41	10,013:02
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	184°F	183°
Air Compressor 1 Pressure	(psig)	90 - 110	100	104PSI	105
Air Compressor 2 Run Time	(hours)	NA	NA	11,104:34	11,105:55
Air Compressor 2 Load Time	(hours)	NA	NA	9,697:36	9,698:57
Air Compressor 2 Temp	(F)	60 - 100	110	179°	178°
Air Compressor 2 Pressure	(psig)	90 - 110	100	104	105
Receiver Tank Pressure	(psig)	90 - 110	100	116	118
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	104	105
Manifold Temperature	(F)	60 - 100	110	80	79
Manifold Flow Rate	(scfm)	TBD	TBD	1818	1696
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	525.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.0	527.4
HAS-1 Valve Position	(%)	TBD	TBD	68.4	68.1
HAS-1 Pressure	(psig)	10 - 20	30	25	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	502.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.5	503.4
HAS-2 Valve Position	(%)	TBD	TBD	45.9	47.2
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	249.6	270.6
HAS-3 Valve Position	(%)	TBD	TBD	100	32.9
HAS-3 Pressure	(psig)	10 - 20	30	18	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, 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
1/2/19 1400	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCH603020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-01 Pressure	(psig)	10 - 20	30	19	
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.6	
VAS-02 Pressure	(psig)	10 - 20	30	31	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-03 Pressure	(psig)	10 - 20	30	20	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-04 Pressure	(psig)	10 - 20	30	0	
VAS-05 Flow Rate	(scfm)	TBD	TBD	9.8	9.9
VAS-05 Pressure	(psig)	10 - 20	30	8	8
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.8	9.7
VAS-06 Pressure	(psig)	10 - 20	30	11	9
VAS-07 Flow Rate	(scfm)	TBD	TBD	9.6	10.2
VAS-07 Pressure	(psig)	10 - 20	30	10	10
VAS-08 Flow Rate	(scfm)	TBD	TBD	8.3	9.6
VAS-08 Pressure	(psig)	10 - 20	30	22	22
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.8	9.9
VAS-09 Pressure	(psig)	10 - 20	30	12	12
VAS-10 Flow Rate	(scfm)	TBD	TBD	9.6	10.2
VAS-10 Pressure	(psig)	10 - 20	30	10	10
VAS-11 Flow Rate	(scfm)	TBD	TBD	7.7	
VAS-11 Pressure	(psig)	10 - 20	30	20	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.0	
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, 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
1/2/19 1400	T.HALL/GVL		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		
VAS-22 Pressure	(psig)	10 - 20	30		
VAS-23 Flow Rate	(scfm)	TBD	TBD		
VAS-23 Pressure	(psig)	10 - 20	30		
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-25 Pressure	(psig)	10 - 20	30	22	
VAS-26 Flow Rate	(scfm)	TBD	TBD	1.5	
VAS-26 Pressure	(psig)	10 - 20	30	25	
VAS-27 Flow Rate	(scfm)	TBD	TBD	3.4	
VAS-27 Pressure	(psig)	10 - 20	30	29	
VAS-28 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-28 Pressure	(psig)	10 - 20	30	20	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.1	
VAS-29 Pressure	(psig)	10 - 20	30	14	
VAS-30 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-30 Pressure	(psig)	10 - 20	30	3	
VAS-31 Flow Rate	(scfm)	TBD	TBD	8.0	
VAS-31 Pressure	(psig)	10 - 20	30	29	
VAS-32 Flow Rate	(scfm)	TBD	TBD		
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD	8.6	8.7
VAS-33 Pressure	(psig)	10 - 20	30	17	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	8.8	8.9
VAS-34 Pressure	(psig)	10 - 20	30	20	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
1/2/19 1400	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE0307046-0 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	7.4	6.0
VAS-35 Pressure	(psig)	10 - 20	30	28	28
VAS-36 Flow Rate	(scfm)	TBD	TBD	8.3	9.5
VAS-36 Pressure	(psig)	10 - 20	30	18	18
VAS-37 Flow Rate	(scfm)	TBD	TBD	9.6	10.3
VAS-37 Pressure	(psig)	10 - 20	30	12	10
VAS-38 Flow Rate	(scfm)	TBD	TBD	9.4	9.5
VAS-38 Pressure	(psig)	10 - 20	30	10	11
VAS-39 Flow Rate	(scfm)	TBD	TBD	9.5	9.7
VAS-39 Pressure	(psig)	10 - 20	30	17	17
VAS-40 Flow Rate	(scfm)	TBD	TBD	5.4	7.1
VAS-40 Pressure	(psig)	10 - 20	30	31	31
VAS-41 Flow Rate	(scfm)	TBD	TBD		10.5
VAS-41 Pressure	(psig)	20-Oct	30		15
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.7	9.6
VAS-42 Pressure	(psig)	10 - 20	30	13	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	11.7	10.4
VAS-45 Pressure	(psig)	10 - 20	30	23	22
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	10.3	10.3
BCA-01 Pressure	(psig)	0 - 5	5	11	11
BCA-02 Flow Rate	(scfm)	TBD	TBD	9.0	9.0
BCA-02 Pressure	(psig)	0 - 5	5	11	11
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
1/2/19 1400	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE010204G9 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 ON SITE
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / (No)		
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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 Ainte 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: WATER STILL LOW AT BROWNS CREEK. SOUTH OF LEWIS DRIVE

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
1/3/18/1400	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	YES
Air Compressor 1 Run Time	(hours)	NA	NA	13,373:39	13,374:44
Air Compressor 1 Load Time	(hours)	NA	NA	10,131:21	10,132:26
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	183	182
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	105
Air Compressor 2 Run Time	(hours)	NA	NA	11,224:14	11,225:18
Air Compressor 2 Load Time	(hours)	NA	NA	9,817:16	9,818:21
Air Compressor 2 Temp	(F)	60 - 100	110	181	181
Air Compressor 2 Pressure	(psig)	90 - 110	100	105	105
Receiver Tank Pressure	(psig)	90 - 110	100	118	118
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	108	104
Manifold Temperature	(F)	60 - 100	110	80	84
Manifold Flow Rate	(scfm)	TBD	TBD	1739	1729
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	525.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	526.0	528.0
HAS-1 Valve Position	(%)	TBD	TBD	69.2	69.5
HAS-1 Pressure	(psig)	10 - 20	30	25	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	502.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.3	501.1
HAS-2 Valve Position	(%)	TBD	TBD	47.9	48.6
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	263.6	259.3
HAS-3 Valve Position	(%)	TBD	TBD	35.3	35.5
HAS-3 Pressure	(psig)	10 - 20	30	18	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
1-7-19/1140	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	9.6	9.6
VAS-01 Pressure	(psig)	10 - 20	30		20
VAS-02 Flow Rate	(scfm)	TBD	TBD	DRY	2.5
VAS-02 Pressure	(psig)	10 - 20	30		30
VAS-03 Flow Rate	(scfm)	TBD	TBD	a	9.4
VAS-03 Pressure	(psig)	10 - 20	30		12
VAS-04 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-04 Pressure	(psig)	10 - 20	30		0
VAS-05 Flow Rate	(scfm)	TBD	TBD		9.8
VAS-05 Pressure	(psig)	10 - 20	30		8
VAS-06 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-06 Pressure	(psig)	10 - 20	30		10
VAS-07 Flow Rate	(scfm)	TBD	TBD		10.7
VAS-07 Pressure	(psig)	10 - 20	30		10
VAS-08 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-08 Pressure	(psig)	10 - 20	30		20
VAS-09 Flow Rate	(scfm)	TBD	TBD		9.7
VAS-09 Pressure	(psig)	10 - 20	30		10
VAS-10 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-10 Pressure	(psig)	10 - 20	30		10
VAS-11 Flow Rate	(scfm)	TBD	TBD		10.5
VAS-11 Pressure	(psig)	10 - 20	30		20
VAS-12 Flow Rate	(scfm)	TBD	TBD		10.7
VAS-12 Pressure	(psig)	10 - 20	30		15
VAS-13 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-13 Pressure	(psig)	10 - 20	30	18	
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-14 Pressure	(psig)	10 - 20	30	13	
VAS-15 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-15 Pressure	(psig)	10 - 20	30	10	
VAS-16 Flow Rate	(scfm)	TBD	TBD	11.8	
VAS-16 Pressure	(psig)	10 - 20	30	18	
VAS-17 Flow Rate	(scfm)	TBD	TBD	15.2	
VAS-17 Pressure	(psig)	10 - 20	30	8	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1.7.19/1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE030204/9 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	9.3	
VAS-19 Pressure	(psig)	10 - 20	30	7	
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD		
VAS-22 Pressure	(psig)	10 - 20	30		
VAS-23 Flow Rate	(scfm)	TBD	TBD		
VAS-23 Pressure	(psig)	10 - 20	30		
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD	5.8	11.6
VAS-25 Pressure	(psig)	10 - 20	30	22	25
VAS-26 Flow Rate	(scfm)	TBD	TBD	1.5	3.7
VAS-26 Pressure	(psig)	10 - 20	30	28	29
VAS-27 Flow Rate	(scfm)	TBD	TBD	2.6	2.9
VAS-27 Pressure	(psig)	10 - 20	30	30	30
VAS-28 Flow Rate	(scfm)	TBD	TBD	9.4	9.5
VAS-28 Pressure	(psig)	10 - 20	30	20	20
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.2	9.0
VAS-29 Pressure	(psig)	10 - 20	30	13	15
VAS-30 Flow Rate	(scfm)	TBD	TBD	8.4	9.7
VAS-30 Pressure	(psig)	10 - 20	30	3	5
VAS-31 Flow Rate	(scfm)	TBD	TBD	5.6	5.8
VAS-31 Pressure	(psig)	10 - 20	30	30	30
VAS-32 Flow Rate	(scfm)	TBD	TBD		
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD	8.6	9.2
VAS-33 Pressure	(psig)	10 - 20	30	18	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	8.8	9.2
VAS-34 Pressure	(psig)	10 - 20	30	20	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
1.7.19/440	J. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE030204-9 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		3.7
VAS-35 Pressure	(psig)	10 - 20	30		28
VAS-36 Flow Rate	(scfm)	TBD	TBD		8.8
VAS-36 Pressure	(psig)	10 - 20	30		18
VAS-37 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-37 Pressure	(psig)	10 - 20	30		11
VAS-38 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-38 Pressure	(psig)	10 - 20	30		10
VAS-39 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-39 Pressure	(psig)	10 - 20	30		AMD 15
VAS-40 Flow Rate	(scfm)	TBD	TBD		4.2
VAS-40 Pressure	(psig)	10 - 20	30		30
VAS-41 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-41 Pressure	(psig)	20-Oct	30		17
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.4	9.4
VAS-42 Pressure	(psig)	10 - 20	30	13	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	10.7	9.6
VAS-45 Pressure	(psig)	10 - 20	30	20	18
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	10.4	10.1
BCA-01 Pressure	(psig)	0 - 5	5	11	10
BCA-02 Flow Rate	(scfm)	TBD	TBD	8.9	8.9
BCA-02 Pressure	(psig)	0 - 5	5	11	11
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log Lewis Drive, Belton, South Carolina
Lewis Drive	Belton, SC	Bill Waldron/RAL	~~Jason Powell~~/ATL Tom Wiley/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
1·7·19/1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE030204/9 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) / (NA)	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 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Pass/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1.14.19 / 1100	T. Hall		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHF0302049 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	13540:21	13,542:21
Air Compressor 1 Temp	(F)	60 - 100	110	181	183
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	105
Air Compressor 2 Run Time	(hours)	NA	NA	11,390:55	11,392:55
Air Compressor 2 Temp	(F)	60 - 100	110	177	178
Air Compressor 2 Pressure	(psig)	90 - 110	100	106	105
Receiver Tank Pressure	(psig)	90 - 110	100	118	117
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	103	104
Manifold Temperature	(F)	60 - 100	110	58	60
Manifold Flow Rate	(scfm)	TBD	TBD	1710	1798
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	525.6	527.6
HAS-1 Valve Position	(%)	TBD	TBD	67.8	68.2
HAS-1 Pressure	(psig)	10 - 20	30	26	26
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.9	501.4
HAS-2 Valve Position	(%)	TBD	TBD	43.7	44.5
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	272.5	249.6
HAS-3 Valve Position	(%)	TBD	TBD	29.5	29.7
HAS-3 Pressure	(psig)	10 - 20	30	19	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 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1.14.19/1100	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE0302044/0 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	10.3	10.2
VAS-01 Pressure	(psig)	10 - 20	30	20	20
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.4	2.5
VAS-02 Pressure	(psig)	10 - 20	30	30	36
VAS-03 Flow Rate	(scfm)	TBD	TBD	8.9	9.8
VAS-03 Pressure	(psig)	10 - 20	30	15	15
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.6	10.1
VAS-04 Pressure	(psig)	10 - 20	30	0	0
VAS-05 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-05 Pressure	(psig)	10 - 20	30		16
VAS-06 Flow Rate	(scfm)	TBD	TBD		9.7
VAS-06 Pressure	(psig)	10 - 20	30		11
VAS-07 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-07 Pressure	(psig)	10 - 20	30		12
VAS-08 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-08 Pressure	(psig)	10 - 20	30		24
VAS-09 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-09 Pressure	(psig)	10 - 20	30		12
VAS-10 Flow Rate	(scfm)	TBD	TBD		10.0
VAS-10 Pressure	(psig)	10 - 20	30		10
VAS-11 Flow Rate	(scfm)	TBD	TBD	3.4	3.3
VAS-11 Pressure	(psig)	10 - 20	30	15	15
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.9	9.9
VAS-12 Pressure	(psig)	10 - 20	30	16	15
VAS-13 Flow Rate	(scfm)	TBD	TBD	10.9	10.2
VAS-13 Pressure	(psig)	10 - 20	30	18	15
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-14 Pressure	(psig)	10 - 20	30	15	
VAS-15 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-15 Pressure	(psig)	10 - 20	30	12	
VAS-16 Flow Rate	(scfm)	TBD	TBD	8.2	
VAS-16 Pressure	(psig)	10 - 20	30	18	
VAS-17 Flow Rate	(scfm)	TBD	TBD	6.2	
VAS-17 Pressure	(psig)	10 - 20	30	12	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1.14.19/1100	TJHALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE030704-0 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-19 Pressure	(psig)	10 - 20	30	6	
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD		
VAS-22 Pressure	(psig)	10 - 20	30		
VAS-23 Flow Rate	(scfm)	TBD	TBD		
VAS-23 Pressure	(psig)	10 - 20	30		
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD		11.0
VAS-25 Pressure	(psig)	10 - 20	30		28
VAS-26 Flow Rate	(scfm)	TBD	TBD		5.7
VAS-26 Pressure	(psig)	10 - 20	30		32
VAS-27 Flow Rate	(scfm)	TBD	TBD		4.3
VAS-27 Pressure	(psig)	10 - 20	30		30
VAS-28 Flow Rate	(scfm)	TBD	TBD		5.3
VAS-28 Pressure	(psig)	10 - 20	30		18
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-29 Pressure	(psig)	10 - 20	30		15
VAS-30 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-30 Pressure	(psig)	10 - 20	30		10
VAS-31 Flow Rate	(scfm)	TBD	TBD		7.9
VAS-31 Pressure	(psig)	10 - 20	30		30
VAS-32 Flow Rate	(scfm)	TBD	TBD		
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.1	10.1
VAS-33 Pressure	(psig)	10 - 20	30	19	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.0	10.6
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 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1.14.19/1100	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		6.6
VAS-35 Pressure	(psig)	10 - 20	30		30
VAS-36 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-36 Pressure	(psig)	10 - 20	30		18
VAS-37 Flow Rate	(scfm)	TBD	TBD		9.8
VAS-37 Pressure	(psig)	10 - 20	30		12
VAS-38 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-38 Pressure	(psig)	10 - 20	30		12
VAS-39 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-39 Pressure	(psig)	10 - 20	30		18
VAS-40 Flow Rate	(scfm)	TBD	TBD		5.6
VAS-40 Pressure	(psig)	10 - 20	30		33
VAS-41 Flow Rate	(scfm)	TBD	TBD	12.4	
VAS-41 Pressure	(psig)	10 - 20	30	15	
VAS-42A Flow Rate	(scfm)	TBD	TBD	9.8	9.7
VAS-42A Pressure	(psig)	10 - 20	30	15	15
VAS-43A Flow Rate	(scfm)	TBD	TBD		
VAS-43A Pressure	(psig)	10 - 20	30		
VAS-44A Flow Rate	(scfm)	TBD	TBD		
VAS-44A Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD	8.4	
VAS-45 Pressure	(psig)	10 - 20	30	24	
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
01.14.19/1100	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-52 Flow Rate	(scfm)	TBD	TBD		
VAS-52 Pressure	(psig)	10 - 20	30		
VAS-53 Flow Rate	(scfm)	TBD	TBD		
VAS-53 Pressure	(psig)	10 - 20	30		
VAS-54 Flow Rate	(scfm)	TBD	TBD		
VAS-54 Pressure	(psig)	10 - 20	30		
VAS-55 Flow Rate	(scfm)	TBD	TBD		
VAS-55 Pressure	(psig)	10 - 20	30		
VAS-56 Flow Rate	(scfm)	TBD	TBD		
VAS-56 Pressure	(psig)	10 - 20	30		
VAS-57 Flow Rate	(scfm)	TBD	TBD		
VAS-57 Pressure	(psig)	10 - 20	30		
VAS-58 Flow Rate	(scfm)	TBD	TBD		
VAS-58 Pressure	(psig)	10 - 20	30		
VAS-59 Flow Rate	(scfm)	TBD	TBD		
VAS-59 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	10.8	10.8
BCA-01 Pressure	(psig)	0 - 5	5	12	12
BCA-02 Flow Rate	(scfm)	TBD	TBD	8.8	9.9
BCA-02 Pressure	(psig)	0 - 5	5	12	15
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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
1-14-19/1100	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)		
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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: NEW WELLS [redacted] IN GROUP 7-9 STILL INOPERABLE

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1/21/19 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	YES
Air Compressor 1 Run Time	(hours)	NA	NA	13,710:08	13,712:07
Air Compressor 1 Temp	(F)	60 - 100	110	182	181
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	106
Air Compressor 2 Run Time	(hours)	NA	NA	11,560:42	11,562:41
Air Compressor 2 Temp	(F)	60 - 100	110	177	177
Air Compressor 2 Pressure	(psig)	90 - 110	100	105	106
Receiver Tank Pressure	(psig)	90 - 110	100	118	120
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	108	104
Manifold Temperature	(F)	60 - 100	110	52	58
Manifold Flow Rate	(scfm)	TBD	TBD	1783	1680
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	525.9	523.6
HAS-1 Valve Position	(%)	TBD	TBD	66.9	67.5
HAS-1 Pressure	(psig)	10 - 20	30	25	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	503.5	502.1
HAS-2 Valve Position	(%)	TBD	TBD	42.3	43.4
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	253.3	249.9
HAS-3 Valve Position	(%)	TBD	TBD	28.4	31.6
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, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1/21/19 1400	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	10.2	10.1
VAS-01 Pressure	(psig)	10 - 20	30	20	20
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.1	1.8
VAS-02 Pressure	(psig)	10 - 20	30	31	32
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.5	9.4
VAS-03 Pressure	(psig)	10 - 20	30	20	20
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.4	10.2
VAS-04 Pressure	(psig)	10 - 20	30	2	2
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-05 Pressure	(psig)	10 - 20	30	10	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-06 Pressure	(psig)	10 - 20	30	10	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-07 Pressure	(psig)	10 - 20	30	10	
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-08 Pressure	(psig)	10 - 20	30	24	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-09 Pressure	(psig)	10 - 20	30	12	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-10 Pressure	(psig)	10 - 20	30	12	
VAS-11 Flow Rate	(scfm)	TBD	TBD	3.0	2.8
VAS-11 Pressure	(psig)	10 - 20	30	15	16
VAS-12 Flow Rate	(scfm)	TBD	TBD	8.2	8.2
VAS-12 Pressure	(psig)	10 - 20	30	14	15
VAS-13 Flow Rate	(scfm)	TBD	TBD		8.5
VAS-13 Pressure	(psig)	10 - 20	30		20
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-14 Pressure	(psig)	10 - 20	30		18
VAS-15 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-15 Pressure	(psig)	10 - 20	30		15
VAS-16 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-16 Pressure	(psig)	10 - 20	30		20
VAS-17 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-17 Pressure	(psig)	10 - 20	30		20

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1/21/19 1400	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		9.9
VAS-18 Pressure	(psig)	10 - 20	30		0
VAS-19 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-19 Pressure	(psig)	10 - 20	30		8
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD		
VAS-22 Pressure	(psig)	10 - 20	30		
VAS-23 Flow Rate	(scfm)	TBD	TBD		
VAS-23 Pressure	(psig)	10 - 20	30		
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-25 Pressure	(psig)	10 - 20	30	30	
VAS-26 Flow Rate	(scfm)	TBD	TBD	6.3	
VAS-26 Pressure	(psig)	10 - 20	30	32	
VAS-27 Flow Rate	(scfm)	TBD	TBD	6.3	
VAS-27 Pressure	(psig)	10 - 20	30	31	
VAS-28 Flow Rate	(scfm)	TBD	TBD	5.7	
VAS-28 Pressure	(psig)	10 - 20	30	18	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-30 Pressure	(psig)	10 - 20	30	8	
VAS-31 Flow Rate	(scfm)	TBD	TBD	2.8	
VAS-31 Pressure	(psig)	10 - 20	30	30	
VAS-32 Flow Rate	(scfm)	TBD	TBD	~~8~~	
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.1	10.1
VAS-33 Pressure	(psig)	10 - 20	30	20	20
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.1	10.1
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 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1/21/19 1400	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	7.4	
VAS-35 Pressure	(psig)	10 - 20	30	30	
VAS-36 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-36 Pressure	(psig)	10 - 20	30	20	
VAS-37 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-37 Pressure	(psig)	10 - 20	30	12	
VAS-38 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-38 Pressure	(psig)	10 - 20	30	12	
VAS-39 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-39 Pressure	(psig)	10 - 20	30	20	
VAS-40 Flow Rate	(scfm)	TBD	TBD	6.3	
VAS-40 Pressure	(psig)	10 - 20	30	32	
VAS-41 Flow Rate	(scfm)	TBD	TBD		12.4
VAS-41 Pressure	(psig)	10 - 20	30		15
VAS-42A Flow Rate	(scfm)	TBD	TBD	10.0	9.8
VAS-42A Pressure	(psig)	10 - 20	30	16	15
VAS-43A Flow Rate	(scfm)	TBD	TBD		
VAS-43A Pressure	(psig)	10 - 20	30		
VAS-44A Flow Rate	(scfm)	TBD	TBD		
VAS-44A Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		8.0
VAS-45 Pressure	(psig)	10 - 20	30		25
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model		Permits
1/21/19 1400	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-52 Flow Rate	(scfm)	TBD	TBD			
VAS-52 Pressure	(psig)	10 - 20	30			
VAS-53 Flow Rate	(scfm)	TBD	TBD			
VAS-53 Pressure	(psig)	10 - 20	30			
VAS-54 Flow Rate	(scfm)	TBD	TBD			
VAS-54 Pressure	(psig)	10 - 20	30			
VAS-55 Flow Rate	(scfm)	TBD	TBD			
VAS-55 Pressure	(psig)	10 - 20	30			
VAS-56 Flow Rate	(scfm)	TBD	TBD			
VAS-56 Pressure	(psig)	10 - 20	30			
VAS-57 Flow Rate	(scfm)	TBD	TBD			
VAS-57 Pressure	(psig)	10 - 20	30			
VAS-58 Flow Rate	(scfm)	TBD	TBD			
VAS-58 Pressure	(psig)	10 - 20	30			
VAS-59 Flow Rate	(scfm)	TBD	TBD			
VAS-59 Pressure	(psig)	10 - 20	30			
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**		**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	10.7		10.6
BCA-01 Pressure	(psig)	0 - 5	5	12		12
BCA-02 Flow Rate	(scfm)	TBD	TBD	10.1		10.1
BCA-02 Pressure	(psig)	0 - 5	5	15		15
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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
01/21/19 1400	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		
Activate and inspect condition of receiver auto drain	Each visit	(Yes) / No	Yes / No		SEE NOTES ↓
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / ~~No~~ (TH)	(Yes) / (No)		~~SEE NOTES ↓~~
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / (No)	(Yes) / No		SEE NOTES ↓
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: FLOOR INSIDE COMPOUND FLOODED. USED SHOP VAC TO COLLECT ~ 10 GALLONS OF WATER FROM FLOOR. COULD NOT FIND ANY MAJOR LEAKS AT 2 CONDENSATE TANKS. THINKING THAT WATER FROZE OUTSIDE AT DRAIN LINES AND WOULD NOT LET DRAIN. BACKED UP INTO BUILDING

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1/29/19 0800	T. HILL		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	13,896:55	13,901:18
Air Compressor 1 Temp	(F)	60 - 100	110	181°	182°
Air Compressor 1 Pressure	(psig)	90 - 110	100	107	105
Air Compressor 2 Run Time	(hours)	NA	NA	11,747.28	11,751:53
Air Compressor 2 Temp	(F)	60 - 100	110	178°	177
Air Compressor 2 Pressure	(psig)	90 - 110	100	107	106
Receiver Tank Pressure	(psig)	90 - 110	100	119	118
Receiver Tank Temperature	(F)	60 - 100	110	—	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	106	106
Manifold Temperature	(F)	60 - 100	110	62	63
Manifold Flow Rate	(scfm)	TBD	TBD	1638	1753
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	525
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	524.1	527.7
HAS-1 Valve Position	(%)	TBD	TBD	68.2	67.9
HAS-1 Pressure	(psig)	10 - 20	30	25	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	502.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	500.9	503.3
HAS-2 Valve Position	(%)	TBD	TBD	53.1	47.6
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	270.1	246.5
HAS-3 Valve Position	(%)	TBD	TBD	32.8	32.1
HAS-3 Pressure	(psig)	10 - 20	30	18	18

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

VAS 1 + VAS-6 STUCK OPEN + VAS-13

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1-29-19/0900	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-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		10.6
VAS-13 Pressure	(psig)	10 - 20	30		12
VAS-14 Flow Rate	(scfm)	TBD	TBD		10.6
VAS-14 Pressure	(psig)	10 - 20	30		14
VAS-15 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-15 Pressure	(psig)	10 - 20	30		12
VAS-16 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-16 Pressure	(psig)	10 - 20	30		18
VAS-17 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-17 Pressure	(psig)	10 - 20	30		12

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1/29/19 0900	T. HOLL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03025469 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		8
VAS-20 Flow Rate	(scfm)	TBD	TBD		6.4
VAS-20 Pressure	(psig)	10 - 20	30		28
VAS-21 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-21 Pressure	(psig)	10 - 20	30		28
VAS-22 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-22 Pressure	(psig)	10 - 20	30		24
VAS-23 Flow Rate	(scfm)	TBD	TBD		7.8
VAS-23 Pressure	(psig)	10 - 20	30		32
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD		7.3
VAS-25 Pressure	(psig)	10 - 20	30		29
VAS-26 Flow Rate	(scfm)	TBD	TBD		4.3
VAS-26 Pressure	(psig)	10 - 20	30		32
VAS-27 Flow Rate	(scfm)	TBD	TBD		4.8
VAS-27 Pressure	(psig)	10 - 20	30		30
VAS-28 Flow Rate	(scfm)	TBD	TBD		5.2
VAS-28 Pressure	(psig)	10 - 20	30		18
VAS-29 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-29 Pressure	(psig)	10 - 20	30		15
VAS-30 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-30 Pressure	(psig)	10 - 20	30		10
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-32 Pressure	(psig)	10 - 20	30		30
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.8	9.6
VAS-33 Pressure	(psig)	10 - 20	30	18	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.0	10.6
VAS-34 Pressure	(psig)	10 - 20	30	27	22

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1-29-19/0800	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		
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	12.1	
VAS-41 Pressure	(psig)	10 - 20	30	17	
VAS-42A Flow Rate	(scfm)	TBD	TBD	9.5	9.6
VAS-42A Pressure	(psig)	10 - 20	30	15	15
VAS-43A Flow Rate	(scfm)	TBD	TBD		
VAS-43A Pressure	(psig)	10 - 20	30		
VAS-44A Flow Rate	(scfm)	TBD	TBD		
VAS-44A Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD	7.0	
VAS-45 Pressure	(psig)	10 - 20	30	28	
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
1-29-19/0800	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020459 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-52 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-52 Pressure	(psig)	10 - 20	30	↓	↓
VAS-53 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-53 Pressure	(psig)	10 - 20	30	↓	↓
VAS-54 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-54 Pressure	(psig)	10 - 20	30	↓	↓
VAS-55 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-55 Pressure	(psig)	10 - 20	30	↓	↓
VAS-56 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-56 Pressure	(psig)	10 - 20	30	↓	↓
VAS-57 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-57 Pressure	(psig)	10 - 20	30	↓	↓
VAS-58 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-58 Pressure	(psig)	10 - 20	30	↓	↓
VAS-59 Flow Rate	(scfm)	TBD	TBD	↓	↓
VAS-59 Pressure	(psig)	10 - 20	30	↓	↓
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	10.9	10.9
BCA-01 Pressure	(psig)	0 - 5	5	12	12
BCA-02 Flow Rate	(scfm)	TBD	TBD	10.7	10.7
BCA-02 Pressure	(psig)	0 - 5	5	12	12
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD	↓	↓
BRS-01 Pressure	(psig)	10 - 20	30	↓	↓
BRS-02 Flow Rate	(scfm)	TBD	TBD	↓	↓
BRS-02 Pressure	(psig)	10 - 20	30	↓	↓
BRS-03 Flow Rate	(scfm)	TBD	TBD	↓	↓
BRS-03 Pressure	(psig)	10 - 20	30	↓	↓

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
1-29-19/0800	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20 200 Bekn 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)		WTL LOW
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 Airlte 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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2/7/2019 1645	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	yes	
Air Compressor 1 Run Time	(hours)	NA	NA	14110:37	
Air Compressor 1 Load Time	(hours)	NA	NA	10867:48	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	183	
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	
Air Compressor 2 Run Time	(hours)	NA	NA	11961:12	
Air Compressor 2 Load Time	(hours)	NA	NA	10553:34	
Air Compressor 2 Temp	(F)	60 - 100	110	182	
Air Compressor 2 Pressure	(psig)	90 - 110	100	104	
Receiver Tank Pressure	(psig)	90 - 110	100	112	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	105	
Manifold Temperature	(F)	60 - 100	110	90	
Manifold Flow Rate	(scfm)	TBD	TBD	1718	
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	525.9	
HAS-1 Valve Position	(%)	TBD	TBD	70.6	
HAS-1 Pressure	(psig)	10 - 20	30	24	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.2	
HAS-2 Valve Position	(%)	TBD	TBD	53.6	
HAS-2 Pressure	(psig)	10 - 20	30	27	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	260.9	
HAS-3 Valve Position	(%)	TBD	TBD	40.3	
HAS-3 Pressure	(psig)	10 - 20	30	18	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

→ Adjust flows to ~10 SCFM in most wells following data collection. Some well pressures high and flows not adjusted in these cases.

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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2/7/2019 1045	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	NOT operating	
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		

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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2/7/2019 1045	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		
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	9.0	
VAS-22 Pressure	(psig)	10 - 20	30	19	
VAS-23 Flow Rate	(scfm)	TBD	TBD	8.9	
VAS-23 Pressure	(psig)	10 - 20	30	22	
VAS-24 Flow Rate	(scfm)	TBD	TBD	4.3	
VAS-24 Pressure	(psig)	10 - 20	30	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	8.2	
VAS-32 Pressure	(psig)	10 - 20	30	15	
VAS-33 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-33 Pressure	(psig)	10 - 20	30	17	
VAS-34 Flow Rate	(scfm)	TBD	TBD	8.0	
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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2/7/2019 1045	Scott Smith	Tyler Hance	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	5.7	
VAS-35 Pressure	(psig)	10 - 20	30	28	
VAS-36 Flow Rate	(scfm)	TBD	TBD	7.7	
VAS-36 Pressure	(psig)	10 - 20	30	19	
VAS-37 Flow Rate	(scfm)	TBD	TBD	8.9	
VAS-37 Pressure	(psig)	10 - 20	30	11	
VAS-38 Flow Rate	(scfm)	TBD	TBD	4.5	
VAS-38 Pressure	(psig)	10 - 20	30	6	
VAS-39 Flow Rate	(scfm)	TBD	TBD	8.6	
VAS-39 Pressure	(psig)	10 - 20	30	17	
VAS-40 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-40 Pressure	(psig)	10 - 20	30	31	
VAS-41 Flow Rate	(scfm)	TBD	TBD	—	
VAS-41 Pressure	(psig)	20-Oct	30	—	
VAS-42 Flow Rate	(scfm)	TBD	TBD	14.0	
VAS-42 Pressure	(psig)	10 - 20	30	18	
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	7.6	
VAS-45 Pressure	(psig)	10 - 20	30	21	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	10.0	
BCA-01 Pressure	(psig)	0 - 5	5	10	
BCA-02 Flow Rate	(scfm)	TBD	TBD	11.0	
BCA-02 Pressure	(psig)	0 - 5	5	11	

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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
2/7/2019 1045	Scott Smalley	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired / Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		- see field book
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired / Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
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: → calibrate EAD and test. Disconnects main power properly.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.13.19/1200	J. HALL		Air Compressors Condensate Treatment	Sullair TS-20-700 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03720469 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	14,257:23	14,259:00
Air Compressor 1 Temp	(F)	60 - 100	110	182	182
Air Compressor 1 Pressure	(psig)	90 - 110	100	104	105
Air Compressor 2 Run Time	(hours)	NA	NA	12,107:59	12,109:36
Air Compressor 2 Temp	(F)	60 - 100	110	180	180
Air Compressor 2 Pressure	(psig)	90 - 110	100	106	106
Receiver Tank Pressure	(psig)	90 - 110	100	118	118
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	106	105
Manifold Temperature	(F)	60 - 100	110	70	70
Manifold Flow Rate	(scfm)	TBD	TBD	1757	1750
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	523.3	527.9
HAS-1 Valve Position	(%)	TBD	TBD	69.4	69.7
HAS-1 Pressure	(psig)	10 - 20	30	26	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.8	502.6
HAS-2 Valve Position	(%)	TBD	TBD	50.1	52
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	270.1	265.3
HAS-3 Valve Position	(%)	TBD	TBD	32.0	32.6
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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2-13-19/1200	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE0302049 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		9.5
VAS-05 Pressure	(psig)	10 - 20	30		10
VAS-06 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-06 Pressure	(psig)	10 - 20	30		10
VAS-07 Flow Rate	(scfm)	TBD	TBD		10.7
VAS-07 Pressure	(psig)	10 - 20	30		10
VAS-08 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-08 Pressure	(psig)	10 - 20	30		20
VAS-09 Flow Rate	(scfm)	TBD	TBD		11
VAS-09 Pressure	(psig)	10 - 20	30		10
VAS-10 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-10 Pressure	(psig)	10 - 20	30		10
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	8.3	
VAS-13 Pressure	(psig)	10 - 20	30	10	
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-15 Pressure	(psig)	10 - 20	30	11	
VAS-16 Flow Rate	(scfm)	TBD	TBD	11.8	
VAS-16 Pressure	(psig)	10 - 20	30	18	
VAS-17 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-17 Pressure	(psig)	10 - 20	30	12	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.13.19/1200	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	10.3	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-19 Pressure	(psig)	10 - 20	30	8	
VAS-20 Flow Rate	(scfm)	TBD	TBD	7.6	
VAS-20 Pressure	(psig)	10 - 20	30	30	
VAS-21 Flow Rate	(scfm)	TBD	TBD	8.2	
VAS-21 Pressure	(psig)	10 - 20	30	26	
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.8	9.7
VAS-22 Pressure	(psig)	10 - 20	30	20	20
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.5	10.3
VAS-23 Pressure	(psig)	10 - 20	30	22	24
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.2	2.7
VAS-24 Pressure	(psig)	10 - 20	30	25	22
VAS-25 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-25 Pressure	(psig)	10 - 20	30	28	
VAS-26 Flow Rate	(scfm)	TBD	TBD	3.8	
VAS-26 Pressure	(psig)	10 - 20	30	32	
VAS-27 Flow Rate	(scfm)	TBD	TBD	2.2	
VAS-27 Pressure	(psig)	10 - 20	30	12	
VAS-28 Flow Rate	(scfm)	TBD	TBD	2.2	
VAS-28 Pressure	(psig)	10 - 20	30	12	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-30 Pressure	(psig)	10 - 20	30	10	
VAS-31 Flow Rate	(scfm)	TBD	TBD	7.9	
VAS-31 Pressure	(psig)	10 - 20	30	30	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.5	10.5
VAS-32 Pressure	(psig)	10 - 20	30	18	18
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.1	10.1
VAS-33 Pressure	(psig)	10 - 20	30	18	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.1	9.9
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 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Rose/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.13.19/1200	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE0302469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		3.3
VAS-35 Pressure	(psig)	10 - 20	30		27
VAS-36 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-36 Pressure	(psig)	10 - 20	30		18
VAS-37 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-37 Pressure	(psig)	10 - 20	30		12
VAS-38 Flow Rate	(scfm)	TBD	TBD		5.1
VAS-38 Pressure	(psig)	10 - 20	30		8
VAS-39 Flow Rate	(scfm)	TBD	TBD		10.0
VAS-39 Pressure	(psig)	10 - 20	30		18
VAS-40 Flow Rate	(scfm)	TBD	TBD		11.9
VAS-40 Pressure	(psig)	10 - 20	30		30
VAS-41 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-41 Pressure	(psig)	10 - 20	30		15
VAS-42A Flow Rate	(scfm)	TBD	TBD		10.5
VAS-42A Pressure	(psig)	10 - 20	30		15
VAS-43A Flow Rate	(scfm)	TBD	TBD		2.1
VAS-43A Pressure	(psig)	10 - 20	30		31
VAS-44A Flow Rate	(scfm)	TBD	TBD		2.2
VAS-44A Pressure	(psig)	10 - 20	30		30
VAS-45 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-45 Pressure	(psig)	10 - 20	30		25
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.13.19/1200	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE0302049 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-52 Flow Rate	(scfm)	TBD	TBD		
VAS-52 Pressure	(psig)	10 - 20	30		
VAS-53 Flow Rate	(scfm)	TBD	TBD		
VAS-53 Pressure	(psig)	10 - 20	30		
VAS-54 Flow Rate	(scfm)	TBD	TBD		
VAS-54 Pressure	(psig)	10 - 20	30		
VAS-55 Flow Rate	(scfm)	TBD	TBD		
VAS-55 Pressure	(psig)	10 - 20	30		
VAS-56 Flow Rate	(scfm)	TBD	TBD		
VAS-56 Pressure	(psig)	10 - 20	30		
VAS-57 Flow Rate	(scfm)	TBD	TBD		
VAS-57 Pressure	(psig)	10 - 20	30		
VAS-58 Flow Rate	(scfm)	TBD	TBD		
VAS-58 Pressure	(psig)	10 - 20	30		
VAS-59 Flow Rate	(scfm)	TBD	TBD		
VAS-59 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	11.3	11.2
BCA-01 Pressure	(psig)	0 - 5	5	10	12
BCA-02 Flow Rate	(scfm)	TBD	TBD	11.2	11.3
BCA-02 Pressure	(psig)	0 - 5	5	12	14
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/RAI	Lydia Ross/RAI	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
2/13/18 1200	T. HAHL		Air Compressors Condensate Treatment	Sullair TS-20 200 Beko Qwik Pure 350	UIC Permit To Operate: SCIE0302049 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		WTL STILL LOW
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		
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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:

VAS WELLS 1, 6, + 29 STUCK OPEN UPON ARRIVAL

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
			Air Compressors Condensate Treatment	Sullair TS-20-200 Reko Qwik Pure 350	UIC Permit To Operate: SCHE03025469 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	14,399:57	14,402:55
Air Compressor 1 Temp	(F)	60 - 100	110	181	180
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	106
Air Compressor 2 Run Time	(hours)	NA	NA	12,250:33	12,253:31
Air Compressor 2 Temp	(F)	60 - 100	110	177	176
Air Compressor 2 Pressure	(psig)	90 - 110	100	105	106
Receiver Tank Pressure	(psig)	90 - 110	100	119	120
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	106	106
Manifold Temperature	(F)	60 - 100	110	58	50
Manifold Flow Rate	(scfm)	TBD	TBD	1716	1682
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	525.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	523.4	525.4
HAS-1 Valve Position	(%)	TBD	TBD	67.9	67.5
HAS-1 Pressure	(psig)	10 - 20	30	26	26
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	502.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.6	502.7
HAS-2 Valve Position	(%)	TBD	TBD	44.6	43.9
HAS-2 Pressure	(psig)	10 - 20	30	30	30
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	258.5	284.1
HAS-3 Valve Position	(%)	TBD	TBD	29.0	27.9
HAS-3 Pressure	(psig)	10 - 20	30	20	20

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

ARRIVAL COMP #2 RUN TIME: 12,250:33

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	Lewis Drive, Belton, South Carolina

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.19.19/1200	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCME03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	8.6	
VAS-01 Pressure	(psig)	10 - 20	30	24	
VAS-02 Flow Rate	(scfm)	TBD	TBD	1.5	
VAS-02 Pressure	(psig)	10 - 20	30	30	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-03 Pressure	(psig)	10 - 20	30	20	
VAS-04 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-04 Pressure	(psig)	10 - 20	30	4	
VAS-05 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-05 Pressure	(psig)	10 - 20	30		10
VAS-06 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-06 Pressure	(psig)	10 - 20	30		10
VAS-07 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-07 Pressure	(psig)	10 - 20	30		10
VAS-08 Flow Rate	(scfm)	TBD	TBD		10.8
VAS-08 Pressure	(psig)	10 - 20	30		22
VAS-09 Flow Rate	(scfm)	TBD	TBD		4.9
VAS-09 Pressure	(psig)	10 - 20	30		10
VAS-10 Flow Rate	(scfm)	TBD	TBD		10.5
VAS-10 Pressure	(psig)	10 - 20	30		10
VAS-11 Flow Rate	(scfm)	TBD	TBD	4.6	
VAS-11 Pressure	(psig)	10 - 20	30	10	
VAS-12 Flow Rate	(scfm)	TBD	TBD	8.6	
VAS-12 Pressure	(psig)	10 - 20	30	18	
VAS-13 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-13 Pressure	(psig)	10 - 20	30	15	
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-14 Pressure	(psig)	10 - 20	30	15	
VAS-15 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-15 Pressure	(psig)	10 - 20	30	12	
VAS-16 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-16 Pressure	(psig)	10 - 20	30	20	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-17 Pressure	(psig)	10 - 20	30	16	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.19.19/1200	T. Hall		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCME03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-19 Pressure	(psig)	10 - 20	30	8	
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	10.0	10.0
VAS-22 Pressure	(psig)	10 - 20	30	20	20
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.5	10.5
VAS-23 Pressure	(psig)	10 - 20	30	22	22
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.9	2.9
VAS-24 Pressure	(psig)	10 - 20	30	22	22
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	10.3	10.4
VAS-32 Pressure	(psig)	10 - 20	30	18	18
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.3	10.5
VAS-33 Pressure	(psig)	10 - 20	30	20	20
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.1	10.2
VAS-34 Pressure	(psig)	10 - 20	30	24	24

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	Lewis Drive, Belton, South Carolina

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2-19-14/1210	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		7.0
VAS-35 Pressure	(psig)	10 - 20	30		30
VAS-36 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-36 Pressure	(psig)	10 - 20	30		20
VAS-37 Flow Rate	(scfm)	TBD	TBD		10.6
VAS-37 Pressure	(psig)	10 - 20	30		12
VAS-38 Flow Rate	(scfm)	TBD	TBD		6.6
VAS-38 Pressure	(psig)	10 - 20	30		10
VAS-39 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-39 Pressure	(psig)	10 - 20	30		20
VAS-40 Flow Rate	(scfm)	TBD	TBD		11.5
VAS-40 Pressure	(psig)	10 - 20	30		24
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.1	10.2
VAS-41 Pressure	(psig)	10 - 20	30	15	15
VAS-42A Flow Rate	(scfm)	TBD	TBD	10.8	10.4
VAS-42A Pressure	(psig)	10 - 20	30	15	15
VAS-43A Flow Rate	(scfm)	TBD	TBD	1.6	1.7
VAS-43A Pressure	(psig)	10 - 20	30	32	32
VAS-44A Flow Rate	(scfm)	TBD	TBD	0	0
VAS-44A Pressure	(psig)	10 - 20	30	35	35
VAS-45 Flow Rate	(scfm)	TBD	TBD	7.2	7.1
VAS-45 Pressure	(psig)	10 - 20	30	28	28
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	Lewis Drive, Belton, South Carolina

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2.19.19/1200	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-S2 Flow Rate	(scfm)	TBD	TBD		
VAS-S2 Pressure	(psig)	10 - 20	30		
VAS-S3 Flow Rate	(scfm)	TBD	TBD		
VAS-S3 Pressure	(psig)	10 - 20	30		
VAS-S4 Flow Rate	(scfm)	TBD	TBD		
VAS-S4 Pressure	(psig)	10 - 20	30		
VAS-S5 Flow Rate	(scfm)	TBD	TBD		
VAS-S5 Pressure	(psig)	10 - 20	30		
VAS-S6 Flow Rate	(scfm)	TBD	TBD		
VAS-S6 Pressure	(psig)	10 - 20	30		
VAS-S7 Flow Rate	(scfm)	TBD	TBD		
VAS-S7 Pressure	(psig)	10 - 20	30		
VAS-S8 Flow Rate	(scfm)	TBD	TBD		
VAS-S8 Pressure	(psig)	10 - 20	30		
VAS-S9 Flow Rate	(scfm)	TBD	TBD		
VAS-S9 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		
BCA-01 Pressure	(psig)	0 - 5	5		
BCA-02 Flow Rate	(scfm)	TBD	TBD		
BCA-02 Pressure	(psig)	0 - 5	5		
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

* BCA-01 + 02 DOWN FOR SURFACE WATER SAMPLING

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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
2.19.19/1200	T. HALL		Air Compressors Condensate Treatment	Sullair TS 20 200 Beko Qwik Pure 350	UIC Permit To Operate SCHF0320469 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: VAS-6 STUCK OPEN UPON ARRIVAL
VAS-29 STUCK OPEN UPON ARRIVAL
VAS-13 STICKING AS WELL
BCA-01 + BCA-02 DOWN FOR SURFACE WATER SAMPLING

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2-26-19/1100	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	14,566:40	14,570:02
Air Compressor 1 Temp	(F)	60 - 100	110	180	184
Air Compressor 1 Pressure	(psig)	90 - 110	100	107	105
Air Compressor 2 Run Time	(hours)	NA	NA	12,417:16	12,420:37
Air Compressor 2 Temp	(F)	60 - 100	110	180	180
Air Compressor 2 Pressure	(psig)	90 - 110	100	106	104
Receiver Tank Pressure	(psig)	90 - 110	100	118	116
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	108	104
Manifold Temperature	(F)	60 - 100	110	74	82
Manifold Flow Rate	(scfm)	TBD	TBD	1647	1812
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	525.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	525.6	524.1
HAS-1 Valve Position	(%)	TBD	TBD	70.4	70.7
HAS-1 Pressure	(psig)	10 - 20	30	25	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	502.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.6	502.3
HAS-2 Valve Position	(%)	TBD	TBD	55.2	55.3
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	259.5	264.1
HAS-3 Valve Position	(%)	TBD	TBD	33.8	34.3
HAS-3 Pressure	(psig)	10 - 20	30	19	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 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2-26-19/1100	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		7.7
VAS-01 Pressure	(psig)	10 - 20	30		20
VAS-02 Flow Rate	(scfm)	TBD	TBD		1.2
VAS-02 Pressure	(psig)	10 - 20	30		26
VAS-03 Flow Rate	(scfm)	TBD	TBD		8.1
VAS-03 Pressure	(psig)	10 - 20	30		20
VAS-04 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-04 Pressure	(psig)	10 - 20	30		0
VAS-05 Flow Rate	(scfm)	TBD	TBD		8.8
VAS-05 Pressure	(psig)	10 - 20	30		10
VAS-06 Flow Rate	(scfm)	TBD	TBD		8.4
VAS-06 Pressure	(psig)	10 - 20	30		10
VAS-07 Flow Rate	(scfm)	TBD	TBD		8.3
VAS-07 Pressure	(psig)	10 - 20	30		10
VAS-08 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-08 Pressure	(psig)	10 - 20	30		22
VAS-09 Flow Rate	(scfm)	TBD	TBD		3.4
VAS-09 Pressure	(psig)	10 - 20	30		10
VAS-10 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-10 Pressure	(psig)	10 - 20	30		10
VAS-11 Flow Rate	(scfm)	TBD	TBD		4.2
VAS-11 Pressure	(psig)	10 - 20	30		10
VAS-12 Flow Rate	(scfm)	TBD	TBD		8.5
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 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2-26-19/1100	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		7.1
VAS-20 Pressure	(psig)	10 - 20	30		30
VAS-21 Flow Rate	(scfm)	TBD	TBD		7.8
VAS-21 Pressure	(psig)	10 - 20	30		22
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.2	8.9
VAS-22 Pressure	(psig)	10 - 20	30	20	20
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.1	9.9
VAS-23 Pressure	(psig)	10 - 20	30	24	22
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.4	2.3
VAS-24 Pressure	(psig)	10 - 20	30	22	21
VAS-25 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-25 Pressure	(psig)	10 - 20	30		24
VAS-26 Flow Rate	(scfm)	TBD	TBD		3.3
VAS-26 Pressure	(psig)	10 - 20	30		30
VAS-27 Flow Rate	(scfm)	TBD	TBD		0.1
VAS-27 Pressure	(psig)	10 - 20	30		20
VAS-28 Flow Rate	(scfm)	TBD	TBD		2.3
VAS-28 Pressure	(psig)	10 - 20	30		12
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-29 Pressure	(psig)	10 - 20	30		15
VAS-30 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-30 Pressure	(psig)	10 - 20	30		5
VAS-31 Flow Rate	(scfm)	TBD	TBD		8.0
VAS-31 Pressure	(psig)	10 - 20	30		30
VAS-32 Flow Rate	(scfm)	TBD	TBD	9.7	9.2
VAS-32 Pressure	(psig)	10 - 20	30	18	18
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.8	9.5
VAS-33 Pressure	(psig)	10 - 20	30	18	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.6	9.4
VAS-34 Pressure	(psig)	10 - 20	30	22	21

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
2-26-19/1100	J. 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	0.2	0.2
VAS-35 Pressure	(psig)	10 - 20	30	30	30
VAS-36 Flow Rate	(scfm)	TBD	TBD	6.8	7.8
VAS-36 Pressure	(psig)	10 - 20	30	20	18
VAS-37 Flow Rate	(scfm)	TBD	TBD	8.6	8.9
VAS-37 Pressure	(psig)	10 - 20	30	12	10
VAS-38 Flow Rate	(scfm)	TBD	TBD	5.3	4.9
VAS-38 Pressure	(psig)	10 - 20	30	10	8
VAS-39 Flow Rate	(scfm)	TBD	TBD	8.8	8.6
VAS-39 Pressure	(psig)	10 - 20	30	18	18
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.5	6.1
VAS-40 Pressure	(psig)	10 - 20	30	25	22
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	10 - 20	30		
VAS-42A Flow Rate	(scfm)	TBD	TBD	9.8	9.5
VAS-42A Pressure	(psig)	10 - 20	30	15	14
VAS-43A Flow Rate	(scfm)	TBD	TBD		
VAS-43A Pressure	(psig)	10 - 20	30		
VAS-44A Flow Rate	(scfm)	TBD	TBD		
VAS-44A Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
2-26-19/1100	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)		LOW LEVEL
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: VAS-1, 6, 12, 13, + 29 STUCK OPEN UPON ARRIVAL

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3.4.19/0800	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	14,708:11	14,717:03
Air Compressor 1 Temp	(F)	60 - 100	110	181	181
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	106
Air Compressor 2 Run Time	(hours)	NA	NA	12,558:47	12,567:38
Air Compressor 2 Temp	(F)	60 - 100	110	177	180
Air Compressor 2 Pressure	(psig)	90 - 110	100	105	104
Receiver Tank Pressure	(psig)	90 - 110	100	118	118
Receiver Tank Temperature	(F)	60 - 100	110	-	-
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	106	104
Manifold Temperature	(F)	60 - 100	110	62	68
Manifold Flow Rate	(scfm)	TBD	TBD	1750	1708
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	524.5	524.7
HAS-1 Valve Position	(%)	TBD	TBD	69.1	69.9
HAS-1 Pressure	(psig)	10 - 20	30	25	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.3	500.4
HAS-2 Valve Position	(%)	TBD	TBD	54.2	54.8
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	277.6	274.8
HAS-3 Valve Position	(%)	TBD	TBD	30.1	34.1
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, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3.4/ 0800	T. Hill		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	8.4	
VAS-01 Pressure	(psig)	10 - 20	30	21	
VAS-02 Flow Rate	(scfm)	TBD	TBD	1.8	
VAS-02 Pressure	(psig)	10 - 20	30	32	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-03 Pressure	(psig)	10 - 20	30	20	
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-04 Pressure	(psig)	10 - 20	30	2	
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	3.6	
VAS-11 Pressure	(psig)	10 - 20	30	10	
VAS-12 Flow Rate	(scfm)	TBD	TBD	8.4	
VAS-12 Pressure	(psig)	10 - 20	30	15	
VAS-13 Flow Rate	(scfm)	TBD	TBD	7.7	7.7
VAS-13 Pressure	(psig)	10 - 20	30	15	15
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.4	10.7
VAS-14 Pressure	(psig)	10 - 20	30	15	15
VAS-15 Flow Rate	(scfm)	TBD	TBD	10.1	9.7
VAS-15 Pressure	(psig)	10 - 20	30	11	10
VAS-16 Flow Rate	(scfm)	TBD	TBD	11.6	10.9
VAS-16 Pressure	(psig)	10 - 20	30	18	18
VAS-17 Flow Rate	(scfm)	TBD	TBD	3.9	4.2
VAS-17 Pressure	(psig)	10 - 20	30	8	2

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3.4.19/0800	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	4.2	3.7
VAS-18 Pressure	(psig)	10 - 20	30	0	0
VAS-19 Flow Rate	(scfm)	TBD	TBD	4.4	4.2
VAS-19 Pressure	(psig)	10 - 20	30	5	5
VAS-20 Flow Rate	(scfm)	TBD	TBD	|	6.7
VAS-20 Pressure	(psig)	10 - 20	30	|	30
VAS-21 Flow Rate	(scfm)	TBD	TBD	|	8.0
VAS-21 Pressure	(psig)	10 - 20	30	|	28
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.1	9.1
VAS-22 Pressure	(psig)	10 - 20	30	21	20
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.1	9.2
VAS-23 Pressure	(psig)	10 - 20	30	24	24
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.0	2.1
VAS-24 Pressure	(psig)	10 - 20	30	22	22
VAS-25 Flow Rate	(scfm)	TBD	TBD	|	6.7
VAS-25 Pressure	(psig)	10 - 20	30	|	28
VAS-26 Flow Rate	(scfm)	TBD	TBD	|	4.6
VAS-26 Pressure	(psig)	10 - 20	30	|	32
VAS-27 Flow Rate	(scfm)	TBD	TBD	|	2.3
VAS-27 Pressure	(psig)	10 - 20	30	|	30
VAS-28 Flow Rate	(scfm)	TBD	TBD	|	2.1
VAS-28 Pressure	(psig)	10 - 20	30	|	12
VAS-29 Flow Rate	(scfm)	TBD	TBD	|	9.4
VAS-29 Pressure	(psig)	10 - 20	30	|	15
VAS-30 Flow Rate	(scfm)	TBD	TBD	|	9.9
VAS-30 Pressure	(psig)	10 - 20	30	|	7
VAS-31 Flow Rate	(scfm)	TBD	TBD	|	8.2
VAS-31 Pressure	(psig)	10 - 20	30	|	30
VAS-32 Flow Rate	(scfm)	TBD	TBD	9.4	9.2
VAS-32 Pressure	(psig)	10 - 20	30	18	18
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.5	9.5
VAS-33 Pressure	(psig)	10 - 20	30	20	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.3	9.3
VAS-34 Pressure	(psig)	10 - 20	30	22	20

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3.4.19/0800	T. MAH		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	4.6	
VAS-35 Pressure	(psig)	10 - 20	30	30	
VAS-36 Flow Rate	(scfm)	TBD	TBD	8.1	
VAS-36 Pressure	(psig)	10 - 20	30	18	
VAS-37 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	5.5	
VAS-38 Pressure	(psig)	10 - 20	30	10	
VAS-39 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-39 Pressure	(psig)	10 - 20	30	20	
VAS-40 Flow Rate	(scfm)	TBD	TBD	7.6	
VAS-40 Pressure	(psig)	10 - 20	30	22	
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	10 - 20	30		
VAS-42A Flow Rate	(scfm)	TBD	TBD	9.8	9.7
VAS-42A Pressure	(psig)	10 - 20	30	15	15
VAS-43A Flow Rate	(scfm)	TBD	TBD		
VAS-43A Pressure	(psig)	10 - 20	30		
VAS-44A Flow Rate	(scfm)	TBD	TBD		
VAS-44A Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3/4/19 0800	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-52 Flow Rate	(scfm)	TBD	TBD		
VAS-52 Pressure	(psig)	10 - 20	30		
VAS-53 Flow Rate	(scfm)	TBD	TBD		
VAS-53 Pressure	(psig)	10 - 20	30		
VAS-54 Flow Rate	(scfm)	TBD	TBD		
VAS-54 Pressure	(psig)	10 - 20	30		
VAS-55 Flow Rate	(scfm)	TBD	TBD		
VAS-55 Pressure	(psig)	10 - 20	30		
VAS-56 Flow Rate	(scfm)	TBD	TBD		
VAS-56 Pressure	(psig)	10 - 20	30		
VAS-57 Flow Rate	(scfm)	TBD	TBD		
VAS-57 Pressure	(psig)	10 - 20	30		
VAS-58 Flow Rate	(scfm)	TBD	TBD		
VAS-58 Pressure	(psig)	10 - 20	30		
VAS-59 Flow Rate	(scfm)	TBD	TBD		
VAS-59 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		
BCA-01 Pressure	(psig)	0 - 5	5		
BCA-02 Flow Rate	(scfm)	TBD	TBD		
BCA-02 Pressure	(psig)	0 - 5	5		
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

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	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
3/4/19 0800	TH/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)		
Activate and inspect condition of receiver auto drain	Each visit	(Yes) / No	Yes / (No)		
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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: 2" RAIN SINCE 2/26/19
VAS-1, +6 STUCK OPEN UPON ARRIVAL

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	JBenny Buice/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3/13/2019 1430	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	14928:52	
Air Compressor 1 Load Time	(hours)	NA	NA	11686:02	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	184	
Air Compressor 1 Pressure	(psig)	90 - 110	100	105	
Air Compressor 2 Run Time	(hours)	NA	NA	12779:28	
Air Compressor 2 Load Time	(hours)	NA	NA	11371:48	
Air Compressor 2 Temp	(F)	60 - 100	110	181	
Air Compressor 2 Pressure	(psig)	90 - 110	100	105	
Receiver Tank Pressure	(psig)	90 - 110	100	—	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	108	
Manifold Temperature	(F)	60 - 100	110	80	
Manifold Flow Rate	(scfm)	TBD	TBD	1755	
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	524.8	
HAS-1 Valve Position	(%)	TBD	TBD	69.7	
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	501.3	
HAS-2 Valve Position	(%)	TBD	TBD	56.8	
HAS-2 Pressure	(psig)	10 - 20	30	27	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	271.1	
HAS-3 Valve Position	(%)	TBD	TBD	32.7	
HAS-3 Pressure	(psig)	10 - 20	30	19	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

→ after collecting data, flows were adjusted close to targets where able. Some flows/pressures are currently turned down due to 'daylighting' issues.

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	JBenny Buice/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3/13/2019 1430	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	70	
VAS-03 Pressure	(psig)	10 - 20	30	20	
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	7.9	
VAS-13 Pressure	(psig)	10 - 20	30	16	
VAS-14 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-15 Pressure	(psig)	10 - 20	30	9	
VAS-16 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-16 Pressure	(psig)	10 - 20	30	17	
VAS-17 Flow Rate	(scfm)	TBD	TBD	4.2	
VAS-17 Pressure	(psig)	10 - 20	30	3	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	JBenny Buice/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3/13/2019 1430	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	3.6	
VAS-18 Pressure	(psig)	10 - 20	30	1	
VAS-19 Flow Rate	(scfm)	TBD	TBD	3.1	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	6.8	
VAS-20 Pressure	(psig)	10 - 20	30	30	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.0	
VAS-21 Pressure	(psig)	10 - 20	30	25	
VAS-22 Flow Rate	(scfm)	TBD	TBD	8.0	
VAS-22 Pressure	(psig)	10 - 20	30	20	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-23 Pressure	(psig)	10 - 20	30	23	
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.0	
VAS-24 Pressure	(psig)	10 - 20	30	22	
VAS-25 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-25 Pressure	(psig)	10 - 20	30	25	
VAS-26 Flow Rate	(scfm)	TBD	TBD	2.4	
VAS-26 Pressure	(psig)	10 - 20	30	33	
VAS-27 Flow Rate	(scfm)	TBD	TBD	2.3	
VAS-27 Pressure	(psig)	10 - 20	30	28	
VAS-28 Flow Rate	(scfm)	TBD	TBD	2.1	
VAS-28 Pressure	(psig)	10 - 20	30	12	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.1	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-30 Pressure	(psig)	10 - 20	30	9	
VAS-31 Flow Rate	(scfm)	TBD	TBD	7.7	
VAS-31 Pressure	(psig)	10 - 20	30	28	
VAS-32 Flow Rate	(scfm)	TBD	TBD	9.2	
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	9.0	
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	JBenny Buice/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3/13/2019 1430	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		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	94	
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	Not operating, Brown's Creek very low.	
BCA-01 Pressure	(psig)	0 - 5	5		
BCA-02 Flow Rate	(scfm)	TBD	TBD		
BCA-02 Pressure	(psig)	0 - 5	5		
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

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	JBenny Buice/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
3/13/2019 1430	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	→ very little water, aerators to remain off.	
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	April 2019	
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:

→ Inspected water in condensate OWS. Found ok, not greasy or oily, clear.

→ activate condensate drain, found ok - operating normally.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 5 Lewis Drive, Belton, South Carolina	
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL		
Date & Time	**O&M Technician #1**	**O&M Technician #2**	**Equipment Type**	**Equipment Model**	**Permits**
3.22.19/0800	T. HALL/GVL		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	15,139:28	15,146:07
Air Compressor 1 Temp	(F)	60 - 100	110	181	186
Air Compressor 1 Pressure	(psig)	90 - 110	100	106	104
Air Compressor 2 Run Time	(hours)	NA	NA	12,990:04	12,996:43
Air Compressor 2 Temp	(F)	60 - 100	110	177	182
Air Compressor 2 Pressure	(psig)	90 - 110	100	104	104
Receiver Tank Pressure	(psig)	90 - 110	100	120	115
Receiver Tank Temperature	(F)	60 - 100	110	—	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	106	104
Manifold Temperature	(F)	60 - 100	110	60	80
Manifold Flow Rate	(scfm)	TBD	TBD	1686	1815
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	525.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	524.3	522.1
HAS-1 Valve Position	(%)	TBD	TBD	69.2	71.1
HAS-1 Pressure	(psig)	10 - 20	30	26	26
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	500.8	501.3
HAS-2 Valve Position	(%)	TBD	TBD	50.5	56.3
HAS-2 Pressure	(psig)	10 - 20	30	28	28
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	225.5	254.9
HAS-3 Valve Position	(%)	TBD	TBD	31.5	33.9
HAS-3 Pressure	(psig)	10 - 20	30	20	20

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

VAS-1, 6, 13 STUCK OPEN UPON ARRIVAL

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	Lydia Ross/RAL		
Date & Time	**O&M Technician #1**	**O&M Technician #2**	**Equipment Type**	**Equipment Model**	**Permits**
3.22.19/0800	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHF03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-01 Pressure	(psig)	10 - 20	30		20
VAS-02 Flow Rate	(scfm)	TBD	TBD		1.5
VAS-02 Pressure	(psig)	10 - 20	30		30
VAS-03 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-03 Pressure	(psig)	10 - 20	30		20
VAS-04 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-04 Pressure	(psig)	10 - 20	30		0
VAS-05 Flow Rate	(scfm)	TBD	TBD		8.9
VAS-05 Pressure	(psig)	10 - 20	30		10
VAS-06 Flow Rate	(scfm)	TBD	TBD		8.5
VAS-06 Pressure	(psig)	10 - 20	30		10
VAS-07 Flow Rate	(scfm)	TBD	TBD		8.4
VAS-07 Pressure	(psig)	10 - 20	30		10
VAS-08 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-08 Pressure	(psig)	10 - 20	30		20
VAS-09 Flow Rate	(scfm)	TBD	TBD		4.9
VAS-09 Pressure	(psig)	10 - 20	30		10
VAS-10 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-10 Pressure	(psig)	10 - 20	30		10
VAS-11 Flow Rate	(scfm)	TBD	TBD		3.7
VAS-11 Pressure	(psig)	10 - 20	30		10
VAS-12 Flow Rate	(scfm)	TBD	TBD		7.7
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 5
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Rosa/RAL	Lewis Drive, Belton, South Carolina

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3-22-19/0800	J. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE0317049 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	10.8	8.8
VAS-20 Pressure	(psig)	10 - 20	30	30	30
VAS-21 Flow Rate	(scfm)	TBD	TBD	9.9	8.3
VAS-21 Pressure	(psig)	10 - 20	30	28	25
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.0	8.6
VAS-22 Pressure	(psig)	10 - 20	30	22	20
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.1	8.8
VAS-23 Pressure	(psig)	10 - 20	30	25	24
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.1	1.9
VAS-24 Pressure	(psig)	10 - 20	30	22	22
VAS-25 Flow Rate	(scfm)	TBD	TBD	11.3	11.6
VAS-25 Pressure	(psig)	10 - 20	30	28	25
VAS-26 Flow Rate	(scfm)	TBD	TBD	5.9	3.6
VAS-26 Pressure	(psig)	10 - 20	30	31	30
VAS-27 Flow Rate	(scfm)	TBD	TBD	4.3	1.9
VAS-27 Pressure	(psig)	10 - 20	30	29	29
VAS-28 Flow Rate	(scfm)	TBD	TBD	3.5	3.1
VAS-28 Pressure	(psig)	10 - 20	30	12	12
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.7	8.9
VAS-29 Pressure	(psig)	10 - 20	30	17	15
VAS-30 Flow Rate	(scfm)	TBD	TBD	10.2	9.3
VAS-30 Pressure	(psig)	10 - 20	30	10	8
VAS-31 Flow Rate	(scfm)	TBD	TBD	7.1	5.0
VAS-31 Pressure	(psig)	10 - 20	30	31	30
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.0	9.1
VAS-32 Pressure	(psig)	10 - 20	30	28	18
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.5	9.1
VAS-33 Pressure	(psig)	10 - 20	30	20	18
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.3	8.9
VAS-34 Pressure	(psig)	10 - 20	30	22	20

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 5 Lewis Drive, Belton, South Carolina
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3-22-19/0810			Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCMF0307P469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		3.6
VAS-35 Pressure	(psig)	10 - 20	30		28
VAS-36 Flow Rate	(scfm)	TBD	TBD		7.9
VAS-36 Pressure	(psig)	10 - 20	30		18
VAS-37 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-37 Pressure	(psig)	10 - 20	30		11
VAS-38 Flow Rate	(scfm)	TBD	TBD		4.8
VAS-38 Pressure	(psig)	10 - 20	30		8
VAS-39 Flow Rate	(scfm)	TBD	TBD		8.1
VAS-39 Pressure	(psig)	10 - 20	30		18
VAS-40 Flow Rate	(scfm)	TBD	TBD		7.2
VAS-40 Pressure	(psig)	10 - 20	30		21
VAS-41 Flow Rate	(scfm)	TBD	TBD		|
VAS-41 Pressure	(psig)	10 - 20	30		|
VAS-42A Flow Rate	(scfm)	TBD	TBD	9.8	9.2
VAS-42A Pressure	(psig)	10 - 20	30	15	13
VAS-43A Flow Rate	(scfm)	TBD	TBD		
VAS-43A Pressure	(psig)	10 - 20	30		
VAS-44A Flow Rate	(scfm)	TBD	TBD		
VAS-44A Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
VAS-46 Flow Rate	(scfm)	TBD	TBD		
VAS-46 Pressure	(psig)	10 - 20	30		
VAS-47 Flow Rate	(scfm)	TBD	TBD		
VAS-47 Pressure	(psig)	10 - 20	30		
VAS-48 Flow Rate	(scfm)	TBD	TBD		
VAS-48 Pressure	(psig)	10 - 20	30		
VAS-49 Flow Rate	(scfm)	TBD	TBD		
VAS-49 Pressure	(psig)	10 - 20	30		
VAS-50 Flow Rate	(scfm)	TBD	TBD		
VAS-50 Pressure	(psig)	10 - 20	30		
VAS-51 Flow Rate	(scfm)	TBD	TBD		
VAS-51 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 5 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Lydia Ross/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
3.22.19/0300	T. Hall		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate SCHE03320469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-52 Flow Rate	(scfm)	TBD	TBD		
VAS-52 Pressure	(psig)	10 - 20	30		
VAS-53 Flow Rate	(scfm)	TBD	TBD		
VAS-53 Pressure	(psig)	10 - 20	30		
VAS-54 Flow Rate	(scfm)	TBD	TBD		
VAS-54 Pressure	(psig)	10 - 20	30		
VAS-55 Flow Rate	(scfm)	TBD	TBD		
VAS-55 Pressure	(psig)	10 - 20	30		
VAS-56 Flow Rate	(scfm)	TBD	TBD		
VAS-56 Pressure	(psig)	10 - 20	30		
VAS-57 Flow Rate	(scfm)	TBD	TBD		
VAS-57 Pressure	(psig)	10 - 20	30		
VAS-58 Flow Rate	(scfm)	TBD	TBD		
VAS-58 Pressure	(psig)	10 - 20	30		
VAS-59 Flow Rate	(scfm)	TBD	TBD		
VAS-59 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		
BCA-01 Pressure	(psig)	0 - 5	5		
BCA-02 Flow Rate	(scfm)	TBD	TBD		
BCA-02 Pressure	(psig)	0 - 5	5		
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

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	Lydia Ross/RAL	

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: SCHE0320449 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)		
--	--				
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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

BORING LOG

BORING/WELL ID: MW-55

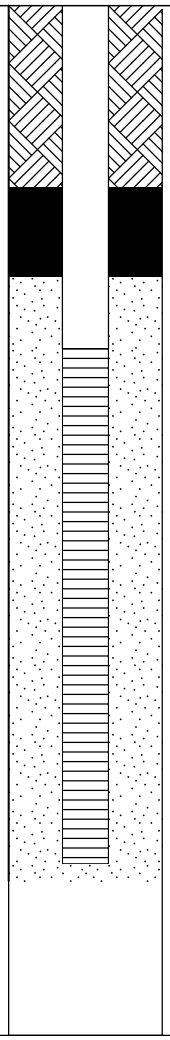
SHEET 1 OF 1

PROJECT : Lewis Drive Site Assessment
LOCATION : Belton, South Carolina
PROJECT NUMBER: 684910
CLIENT: Plantation Pipeline
DRILLING CONTRACTOR : AE Drilling
DRILLING METHOD: 3.5-in ID Hollow Stem Auger, DPT w/ macrocore sampler
SAMPLING METHOD: Direct Push Technology
START DATE: 3/13/2019
NORTH, EAST (South Carolina and North American Datum 1983, ft) : 989625.50, 1545695.15

GROUND ELEVATION : 859.84 feet above msl
MEASURING POINT: Top of inner casing
MEASURING POINT ELEVATION: 859.71 feet above msl
TOTAL DEPTH: 30.0' bgs
FOREMAN : N/A
DRILLING EQUIPMENT: Geoprobe 8040
CH2M OBSERVER: K. Taylor
FINISH DATE: 3/13/2019
APPROX. DEPTH TO WATER: --

DEPTH (FT. BGS)	INTERVAL (feet)	SAMPLE TYPE	RECOVERY (feet)	PID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	GRAPHIC LOG	USCS SYMBOL
1						**SILTY SAND (SM)** dark brown, dry, loose, fine grained sand, trace roots		SM
2						orange to brown, moist from 0.3 to 1.5 ft bgs		
3	(0-5 ft.)	S-1	5	0.0		1.5 **CLAYEY SAND (SC)** mottled orange, brown, and red, moist, medium stiff to dense, fine grained sand with pyrite flakes		
4								
5				0.0	855			
6				0.0				SC
7								
8	(5-10 ft.)	S-2	5	0.2				
9								
10				5.4	850			
11				20.1		10.5 **SILTY SAND (SM)** mottled red, purple and brown, moist, loose, saprolite comprised of feldspar, pyrite and biotite		
12						-collected sample: mw55-1112-031319. time: 1617		
13	(10-15 ft.)	S-3	5	34.1				
14								
15				57.1	845			
16				39.3				
17								
18	(15-20 ft.)	S-4	5	38.3				SM
19								
20				6.7	840			
21				0.1		-water encountered at 20.0 ft bgs during drilling		
22								
23	(20-25 ft.)	S-5	5	0.1				
24								
25				0.0	835	24.5 **WELL GRADED SAND (SW)** olive gray to brown, wet, loose, highly weathered amphibolite gneiss comprised of feldspar, quartz, pyrite, and trace biotite		
26				0.2				
27								SW
28	(25-30 ft.)	S-6	5	3.6		28.0 **WELL GRADED SAND (SW)** olive gray, wet, loose, highly weathered amphibolite gneiss comprised of feldspar, quartz, pyrite and biotite		
29								SW
30				1.9	830	30.0		

WELL CONSTRUCTION



LEGEND:
msl = mean seal level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable
btoc = below top of inner casing

SAMPLE TYPES
S = Sample

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
very loose
loose
medium dense
dense
very dnese

PLASTIC SOILS DENSITY:
very soft
soft
medium soft
stiff
very stiff
hard

PROPORTIONS:
Trace: < 5%
Few: 16-30%
Little: 6-15%
Some: 31-49%

WELL LEGEND:
Well vault set in concrete
Grout Slurry
#00 Sand
#1 Filter Pack Sand
Well Screen
Sump/Riser

BORING LOG

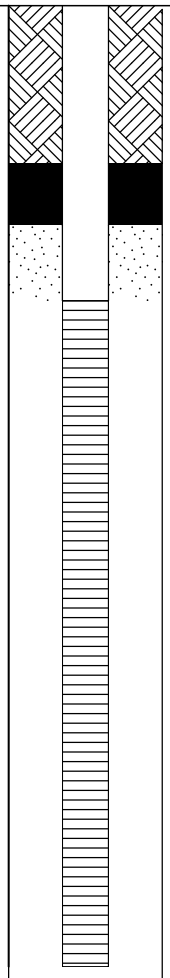
BORING/WELL ID: MW-56

SHEET 1 OF 1

PROJECT : Lewis Drive Site Assessment	GROUND ELEVATION : 840.71 feet above msl
LOCATION : Belton, South Carolina	MEASURING POINT: Top of inner casing
PROJECT NUMBER: 684910	MEASURING POINT ELEVATION: 843.94 feet above msl
CLIENT: Plantation Pipeline	TOTAL DEPTH: 15.0' bgs
DRILLING CONTRACTOR : AE Drilling	FOREMAN : N/A
DRILLING METHOD: 3.5-in ID Hollow Stem Auger, DPT w/ macrocore sampler	DRILLING EQUIPMENT: Geoprobe 8040
SAMPLING METHOD: Direct Push Technology	CH2M OBSERVER: K. Taylor
START DATE: 3/12/2019	FINISH DATE: 3/12/2019
NORTH, EAST (South Carolina and North American Datum 1983, ft) : 989185.78, 1545683.08	APPROX. DEPTH TO WATER: --

DEPTH (FT. BGS)	INTERVAL (feet)	SAMPLE TYPE	RECOVERY (feet)	PID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	GRAPHIC LOG	USCS SYMBOL
1				2.0	840	**SILTY SAND (SM)** brown, wet, loose, fine grained sand with roots -light brown, trace roots from 0.25 to 4.0 ft bgs		
2								
3	(0-5 ft.)	S-1	5			-encountered water at 2.0 ft bgs		SM
4				1.1		4.0		
5				0.0		**SANDY SILT (ML)** light brown, wet, soft 4.5 **SANDY CLAY (CL)** light brown to orange, moist, medium stiff		ML
6				0.0	835	-light gray, soft from 5.5 to 7.5 ft bgs		CL
7						7.5		
8	(5-10 ft.)	S-2	4	5.8		**WELL GRADED SAND WITH SILT (SW-SM)** gray to black, moist, loose to soft, highly weathered anphibolite gneiss, laminated, comprised of quartz, feldspar, and biotite		
9								
10				1.9				
11				1.6	830			SW-SM
12								
13	(10-15 ft.)	5	3					
14				5.4				
15				43.8		15.0		

WELL CONSTRUCTION



LEGEND:
msl = mean seal level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable
btoc = below top of inner casing

SAMPLE TYPES
S = Sample

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
very loose
loose
medium dense
dense
very dnese

PLASTIC SOILS DENSITY:
very soft
soft
medium soft
stiff
very stiff
hard

PROPORTIONS:
Trace: < 5%
Few: 16-30%
Little: 6-15%
Some: 31-49%

WELL LEGEND:
Well vault set in concrete
Grout Slurry
#00 Sand
#1 Filter Pack Sand
Well Screen
Sump/Riser

BORING LOG

BORING/WELL ID: MW-57

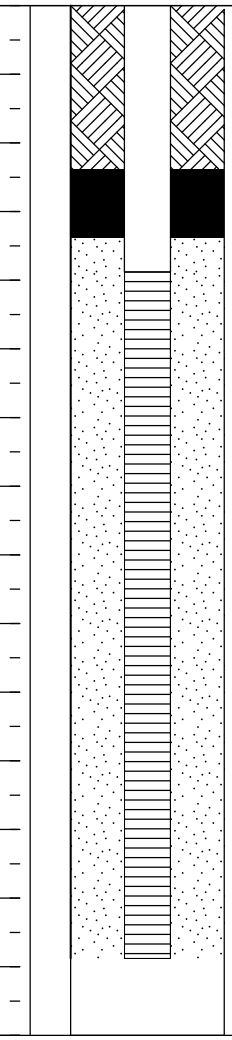
SHEET 1 OF 1

PROJECT : Lewis Drive Site Assessment
LOCATION : Belton, South Carolina
PROJECT NUMBER: 684910
CLIENT: Plantation Pipeline
DRILLING CONTRACTOR :
DRILLING METHOD: 3.5-in ID Hollow Stem Auger, DPT w/ macrocore sampler
SAMPLING METHOD: Direct Push Technology
START DATE: 3/12/2019
NORTH, EAST (South Carolina and North American Datum 1983, ft) : 989246.51, 1545620.00

GROUND ELEVATION : 842.50 feet above msl
MEASURING POINT: Top of inner casing
MEASURING POINT ELEVATION: 845.63 feet above msl
TOTAL DEPTH: 15.0' bgs
FOREMAN : N/A
DRILLING EQUIPMENT: Geoprobe 8040
CH2M OBSERVER: K. Taylor
FINISH DATE: 3/12/2019
APPROX. DEPTH TO WATER: --

DEPTH (FT. BGS)	INTERVAL (feet)	SAMPLE TYPE	RECOVERY (feet)	PID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY)	USCS SYMBOL
0						**WELL GRADED SAND (SW)** brown, dry, loose, with roots	SW
0.5						**SILTY SAND (SM)** yellowish orange, moist, soft, with roots	SM
1.5						**SANDY LEAN CLAY (CL)** yellowish orange, wet, medium stiff to stiff	
3	(0-5 ft.)	S-1	5		840		
4						-water encountered at 4.0 ft bgs	CL
5				1.6			
6.5						**SAND WITH CLAY (SM)** yellowish orange, moist, Saprolite, silty sand with lamination of clay, trace feldspar, pyrite, biotite, and quartz	
8	(5-10 ft.)	S-2	5	9.6	835		SM
10				76.8			
10.0				111.4		**AMPHIBOLITE GNEISS (WEATHERED BEDROCK)** grey and back banding, wet, quartz, biotite, feldspar	
13	(10-15 ft.)	S-3	5	76.4	830		
15				88.8			
15.0							

WELL CONSTRUCTION



LEGEND:
msl = mean seal level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable
btoc = below top of inner casing

SAMPLE TYPES
S = Sample

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
very loose
loose
medium dense
dense
very dnese

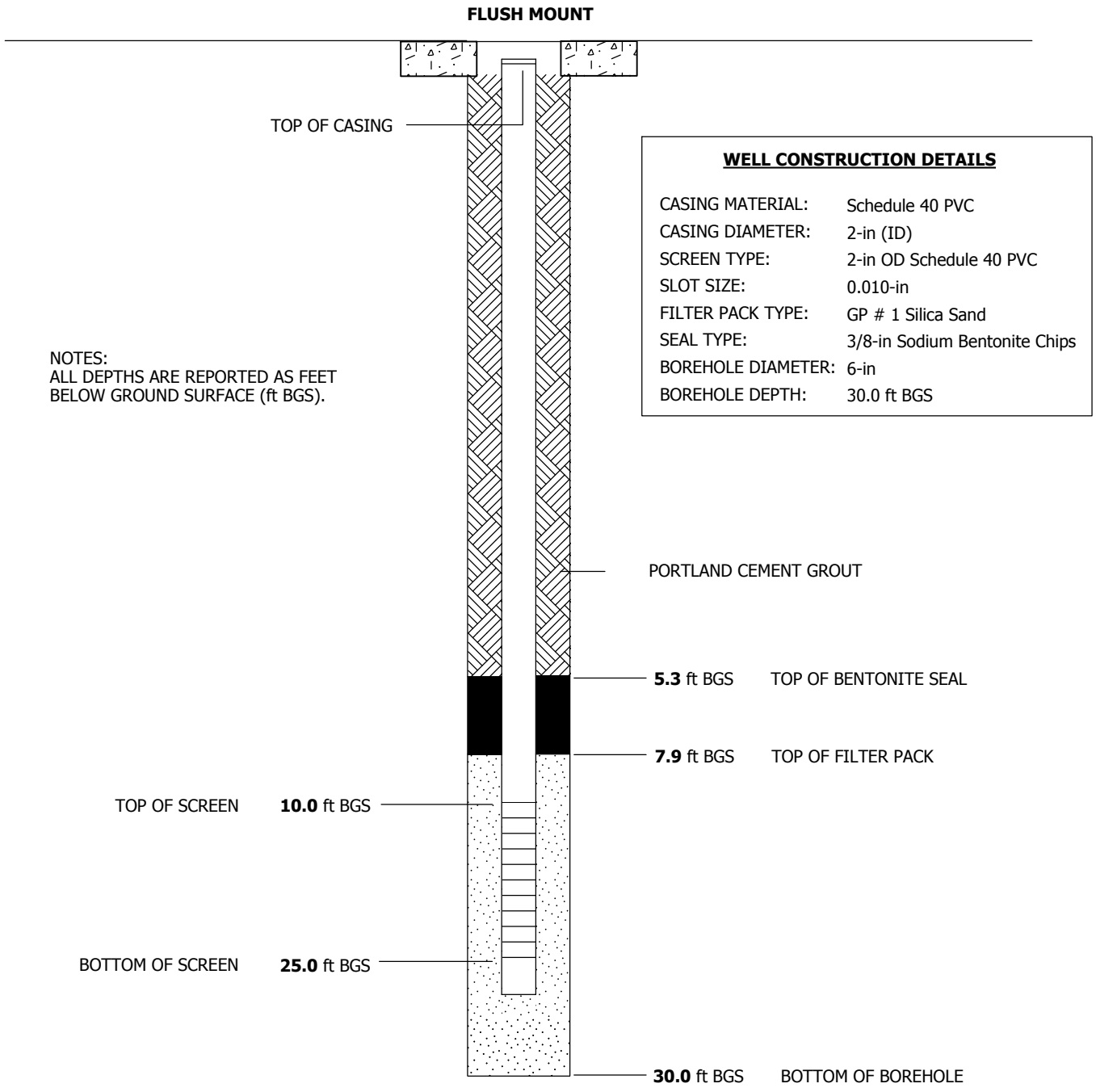
PLASTIC SOILS DENSITY:
very soft
soft
medium soft
stiff
very stiff
hard

PROPORTIONS:
Trace: < 5%
Few: 16-30%
Little: 6-15%
Some: 31-49%

WELL LEGEND:
Well vault set in concrete
Grout Slurry
#00 Sand
#1 Filter Pack Sand
Well Screen
Sump/Riser

JACOBS	**PROJECT NUMBER:** Lewis Drive Site Assessment	**BORING NUMBER:** MW-55
	WELL COMPLETION DIAGRAM	

PROJECT: Lewis Drive Site Assessment		**LOCATION:** Belton, South Carolina	
DRILLING METHOD: Geoprobe 8040 - 3.5-in ID Hollow Stem Auger, DPT w/ macrocore sampler		**DRILLING CONTRACTOR:** AE Drilling	
TOP OF CASING ELEVATION (NAVD 88): 859.71 ft	**NORTHING (S.Carolina NAD83):** 989625.50 feet	**EASTING (S. Carolina NAD83):** 1545695.15 feet	**STATIC WATER LEVEL:** Not Available
GROUND ELEVATION (NAVD 88): 859.84 ft	**START:** 03/13/2019	**FINISH:** 03/13/2019	**LOGGED BY:** K. Taylor



WELL CONSTRUCTION DETAILS

CASING MATERIAL:	Schedule 40 PVC
CASING DIAMETER:	2-in (ID)
SCREEN TYPE:	2-in OD Schedule 40 PVC
SLOT SIZE:	0.010-in
FILTER PACK TYPE:	GP # 1 Silica Sand
SEAL TYPE:	3/8-in Sodium Bentonite Chips
BOREHOLE DIAMETER:	6-in
BOREHOLE DEPTH:	30.0 ft BGS

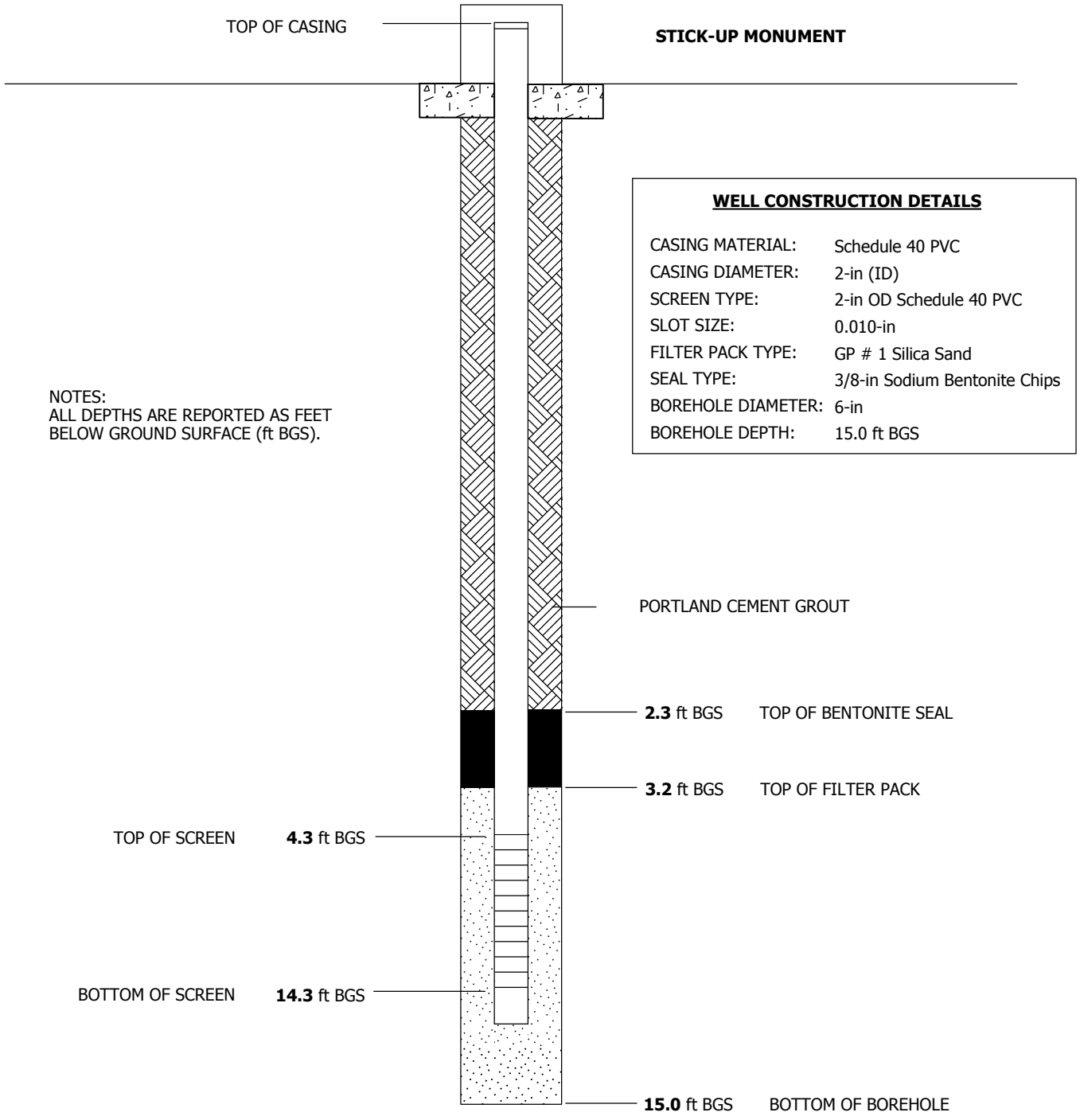
NOTES:
ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE (ft BGS).

WELL DIAGRAM IS NOT TO SCALE

JACOBS	**PROJECT NUMBER:** Lewis Drive Site Assessment	**BORING NUMBER:** MW-56

WELL COMPLETION DIAGRAM

PROJECT: Lewis Drive Site Assessment		**LOCATION:** Belton, South Carolina	
DRILLING METHOD: 3.5-in ID Hollow Stem Auger, DPT w/ macrocore sampler, Geoprobe 8040		**DRILLING CONTRACTOR:** AE Drilling	
TOP OF CASING ELEVATION (NAVD 88): 843.94 ft	**NORTHING (S. Carolina NAD83):** 989185.78 feet	**EASTING (S. Carolina NAD83):** 1545683.08 feet	**STATIC WATER LEVEL:** Not Available
GROUND ELEVATION (NAVD 88): 840.71 ft	**START:** 03/12/2019	**FINISH:** 03/12/2019	**LOGGED BY:** K. Taylor



WELL CONSTRUCTION DETAILS

CASING MATERIAL:	Schedule 40 PVC
CASING DIAMETER:	2-in (ID)
SCREEN TYPE:	2-in OD Schedule 40 PVC
SLOT SIZE:	0.010-in
FILTER PACK TYPE:	GP # 1 Silica Sand
SEAL TYPE:	3/8-in Sodium Bentonite Chips
BOREHOLE DIAMETER:	6-in
BOREHOLE DEPTH:	15.0 ft BGS

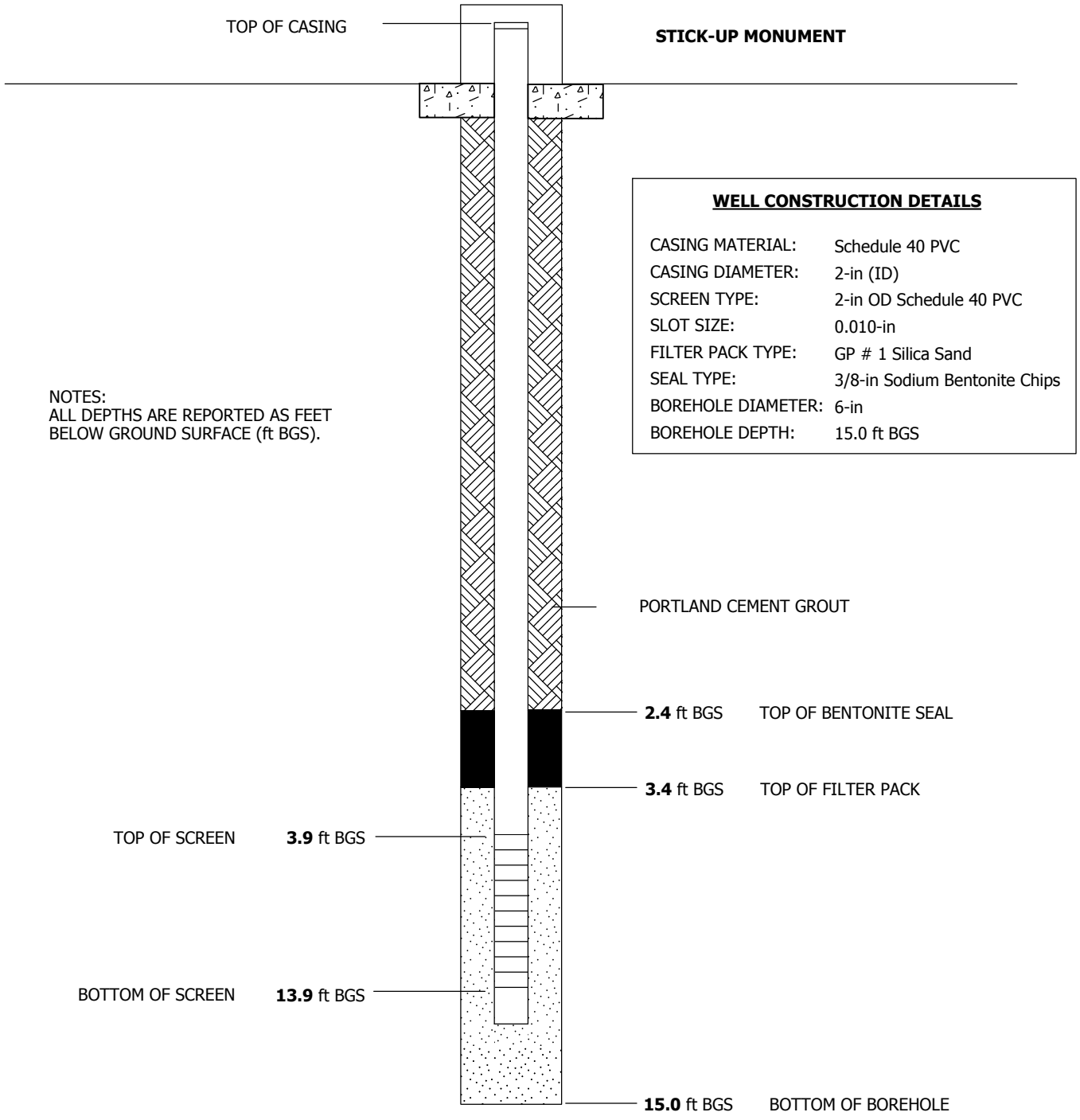
NOTES:
ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE (ft BGS).

WELL DIAGRAM IS NOT TO SCALE

JACOBS	**PROJECT NUMBER:** Lewis Drive Site Assessment	**BORING NUMBER:** MW-57

WELL COMPLETION DIAGRAM

PROJECT: Lewis Drive Site Assessment		**LOCATION:** Belton, South Carolina	
DRILLING METHOD: 3.5-in ID Hollow Stem Auger, DPT w/ macrocore sampler, Geoprobe 8040		**DRILLING CONTRACTOR:**	
TOP OF CASING ELEVATION (NAVD 88): 845.63 ft	**NORTHING (S. Carolina NAD83):** 989246.51 feet	**EASTING (S. Carolina NAD83):** 1545620.00 feet	**STATIC WATER LEVEL:** Not Available
GROUND ELEVATION (NAVD 88): 842.50 ft	**START:** 03/12/2019	**FINISH:** 03/12/2019	**LOGGED BY:** K. Taylor



WELL CONSTRUCTION DETAILS

CASING MATERIAL:	Schedule 40 PVC
CASING DIAMETER:	2-in (ID)
SCREEN TYPE:	2-in OD Schedule 40 PVC
SLOT SIZE:	0.010-in
FILTER PACK TYPE:	GP # 1 Silica Sand
SEAL TYPE:	3/8-in Sodium Bentonite Chips
BOREHOLE DIAMETER:	6-in
BOREHOLE DEPTH:	15.0 ft BGS

NOTES:
ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE (ft BGS).

WELL DIAGRAM IS NOT TO SCALE

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

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	31151814500	8/14/2019	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 3115 - Union County Regional MSW Landfill

Generator Name: Plantation Pipe Line

Generator Site Address: 112 Lewis Dr

City: Belton	County:	State: SC	Zip:

Name of Waste: Soil

Estimated Annual Volume: 100 Tons

II. Special Waste Department Decision: ☑ Approved ☐ Rejected

Management Method(s): ☑ Landfill ☐ Solidification ☐ Bioremediation ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☑ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☑ Not Applicable

Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: _____ **Name (Printed):** Lynette Gehring

Date: 8/30/2018

III. Facility Decision: ☑ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

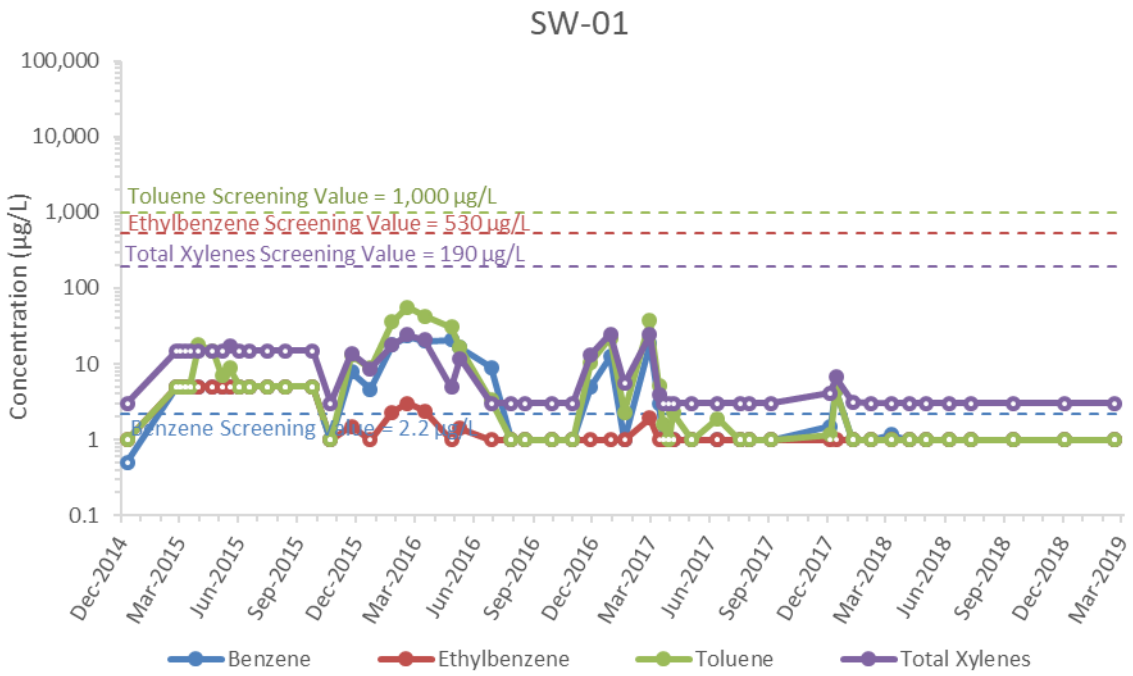
By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: _____ **Name (Printed):** TONY [illegible]

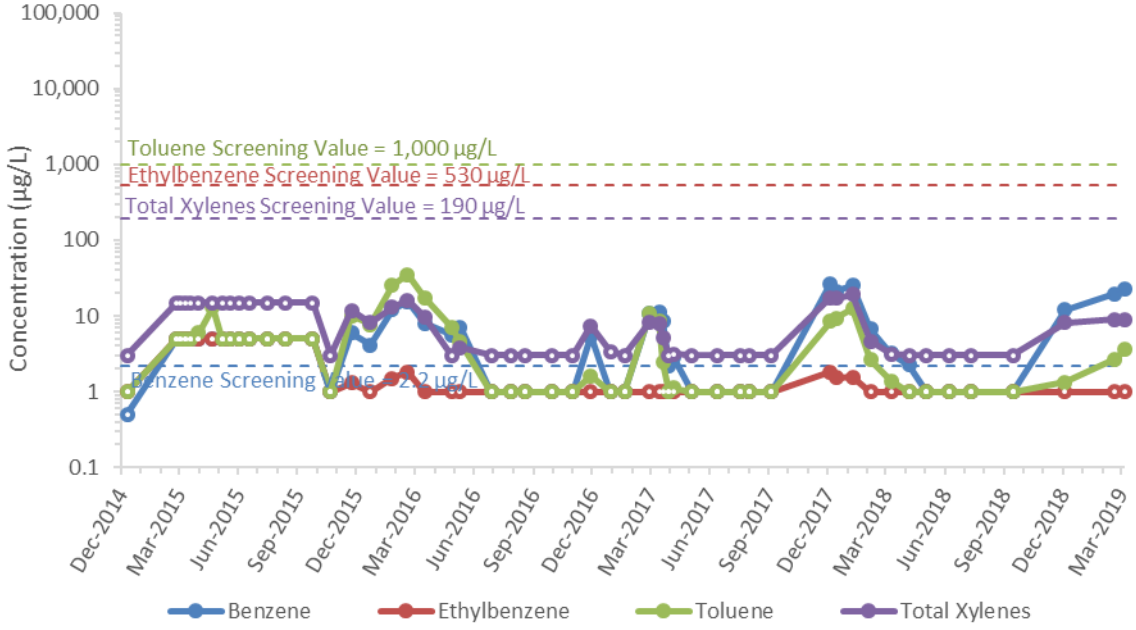
Date: 8/30/2018

8/30/18

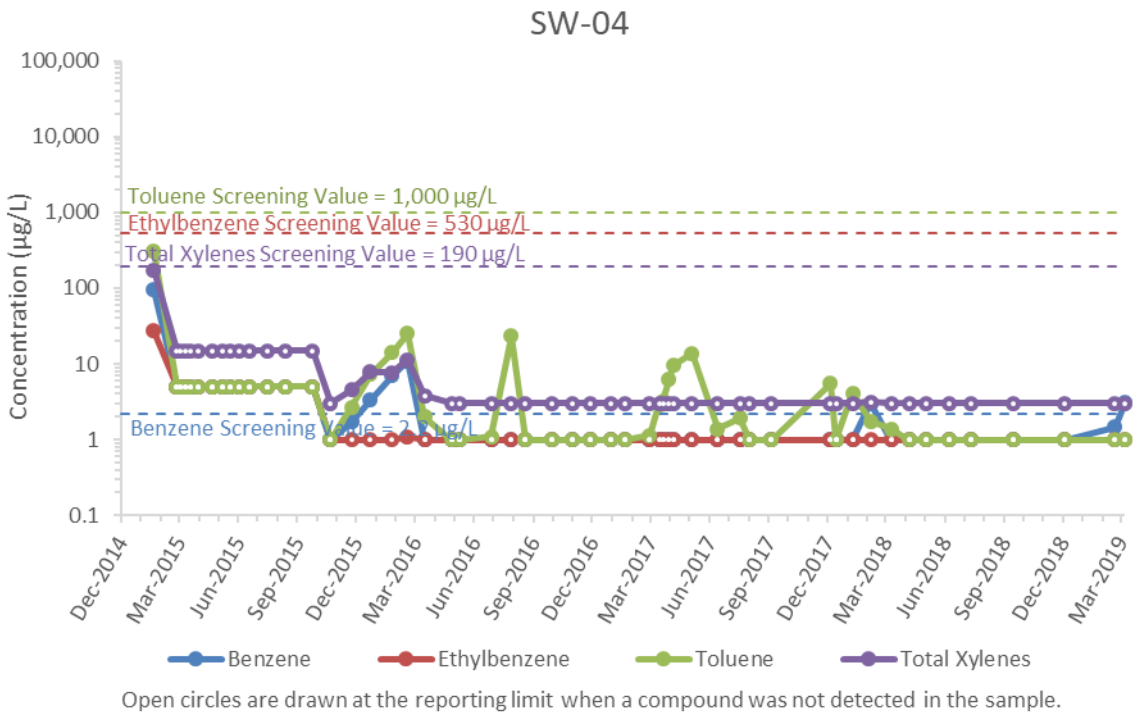
Appendix F
Surface Water Analytical Trends



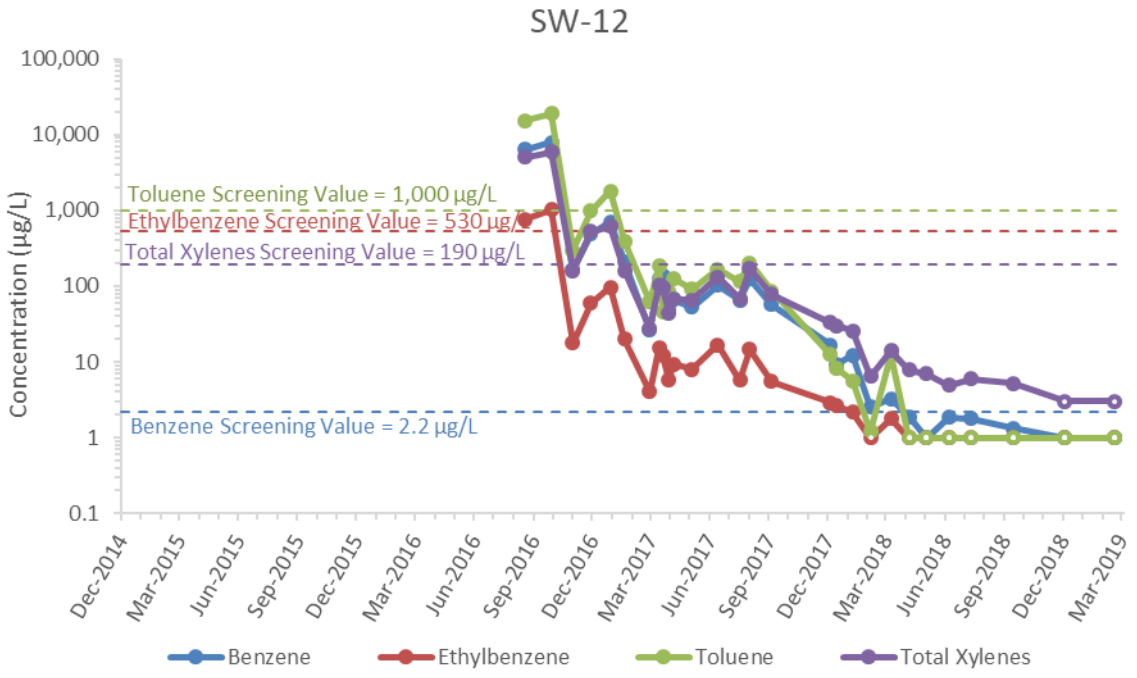
Open circles are drawn at the reporting limit when a compound was not detected in the sample.



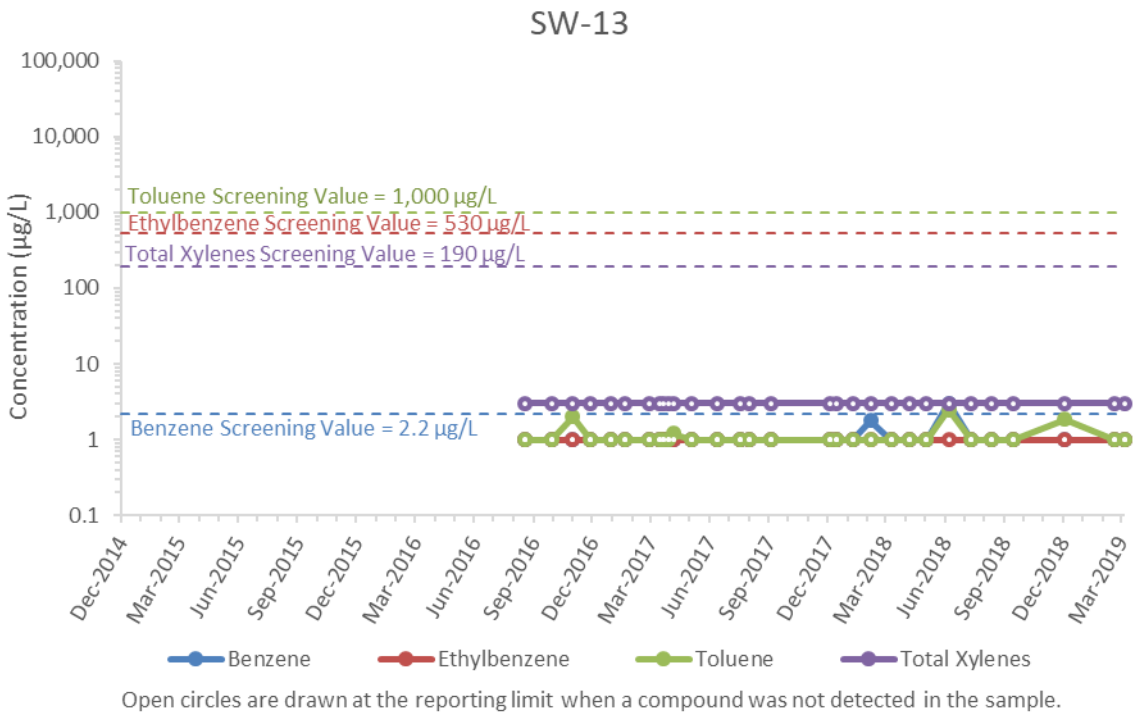
Open circles are drawn at the reporting limit when a compound was not detected in the sample.



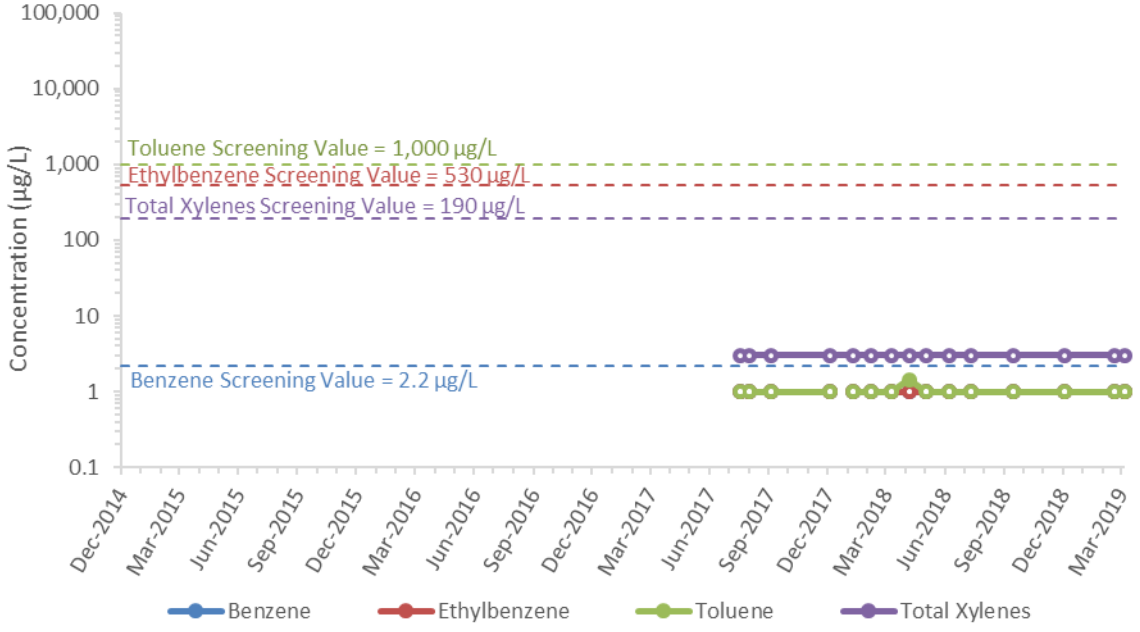
Open circles are drawn at the reporting limit when a compound was not detected in the sample.



Open circles are drawn at the reporting limit when a compound was not detected in the sample.

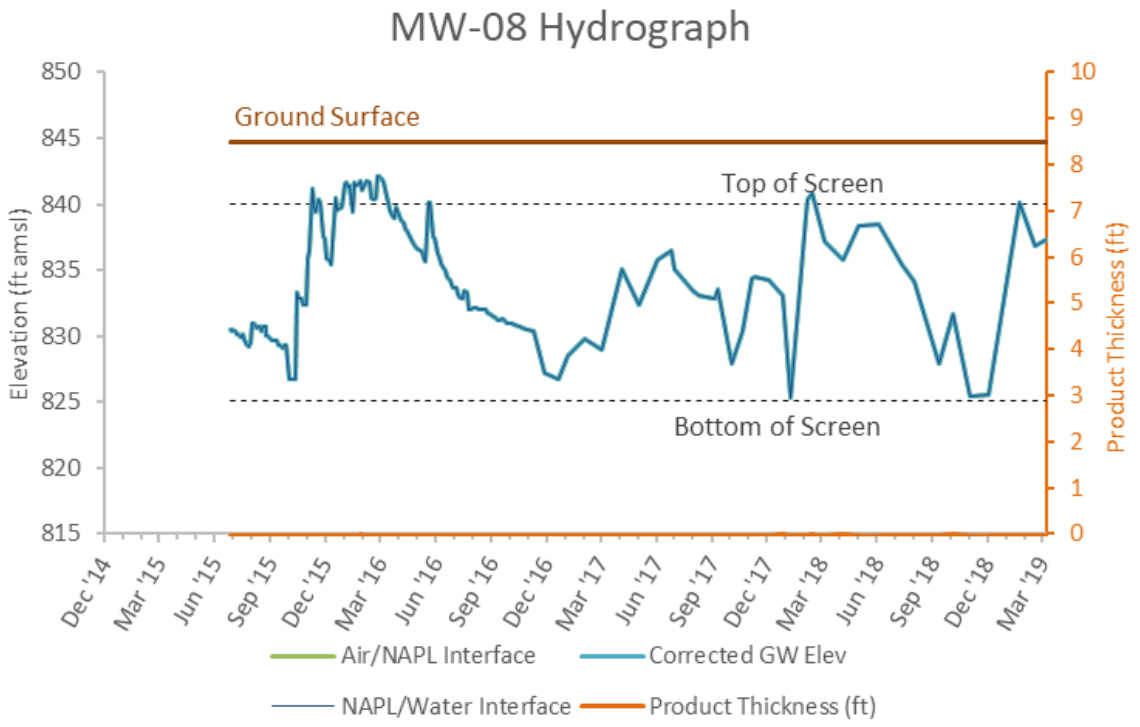


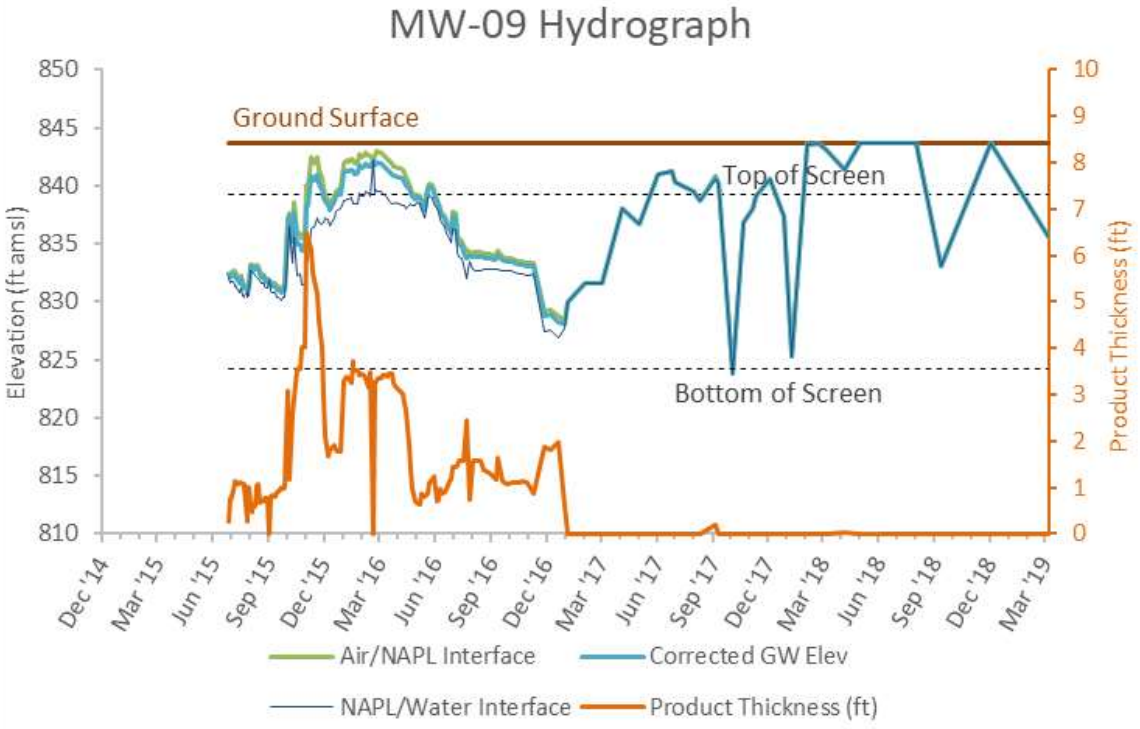
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

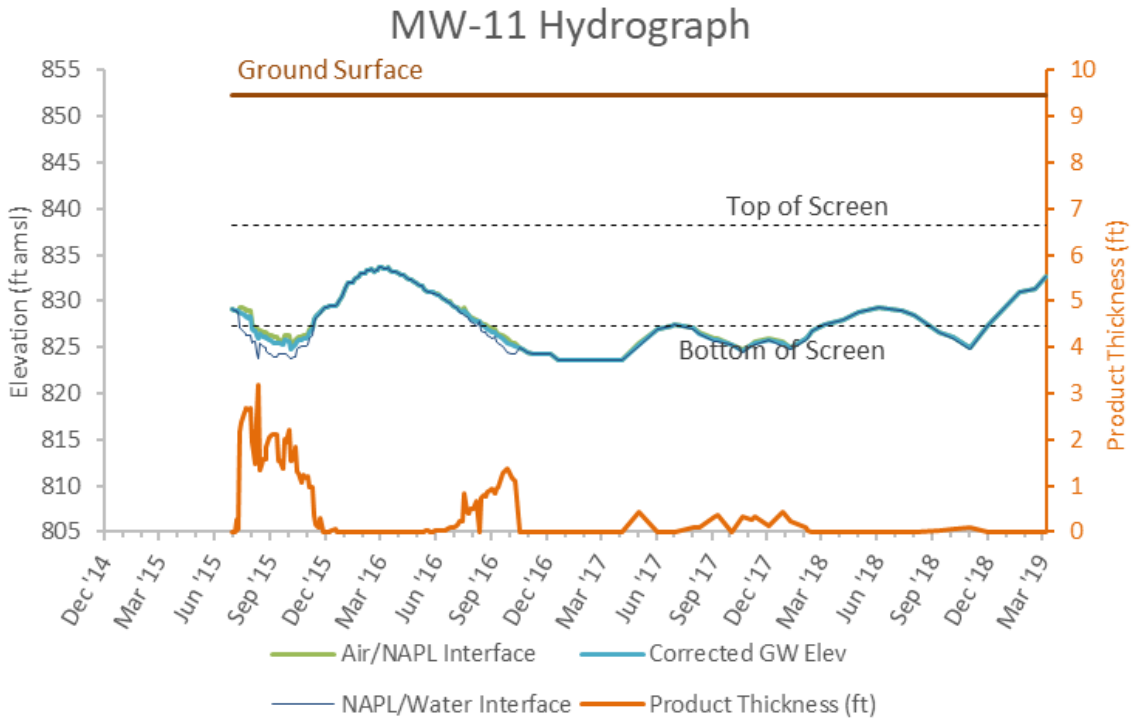


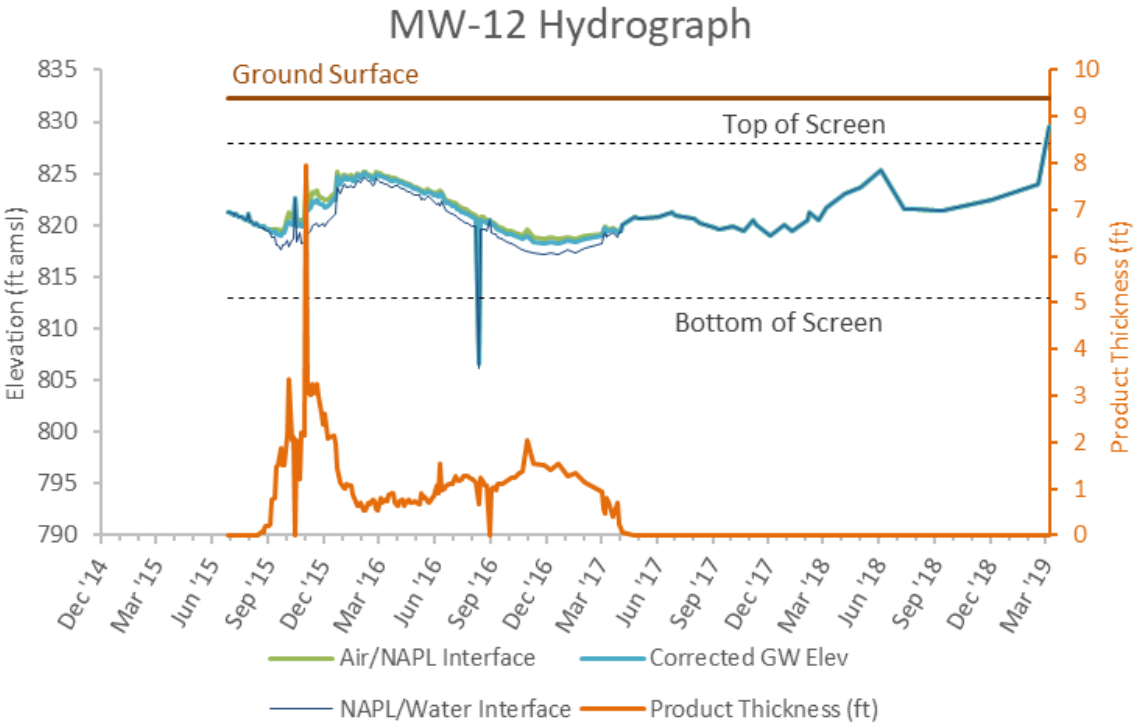
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

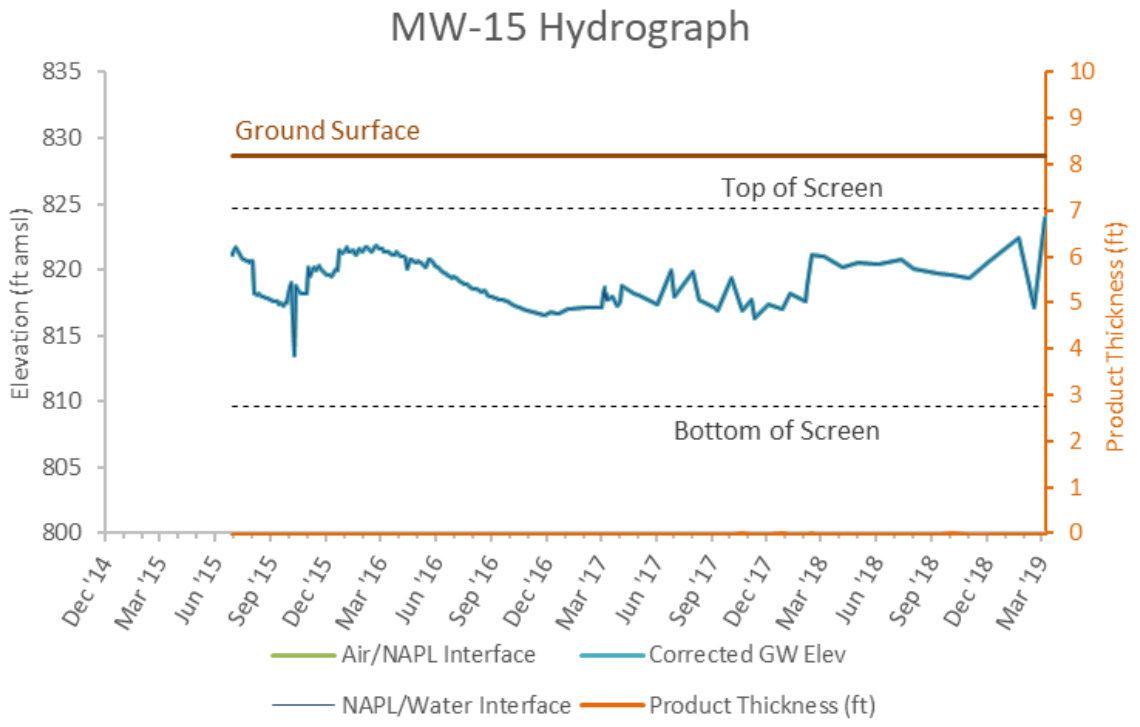
Appendix G
Product Thickness Trends

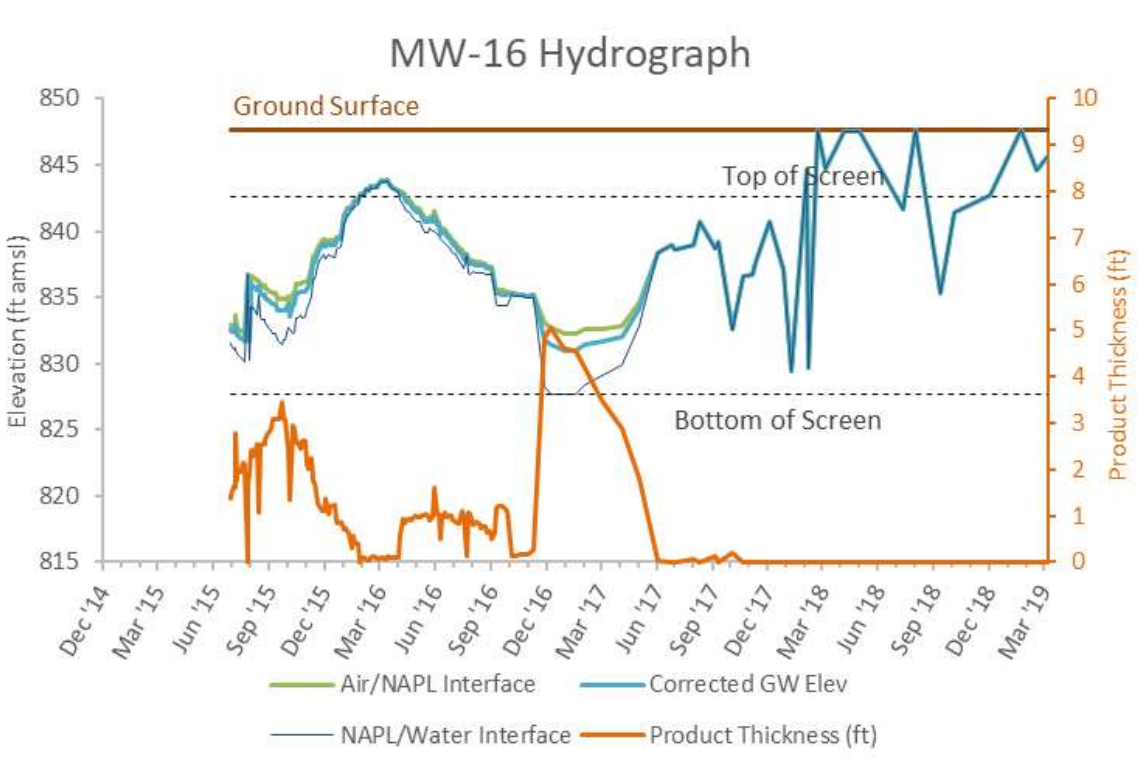

MW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

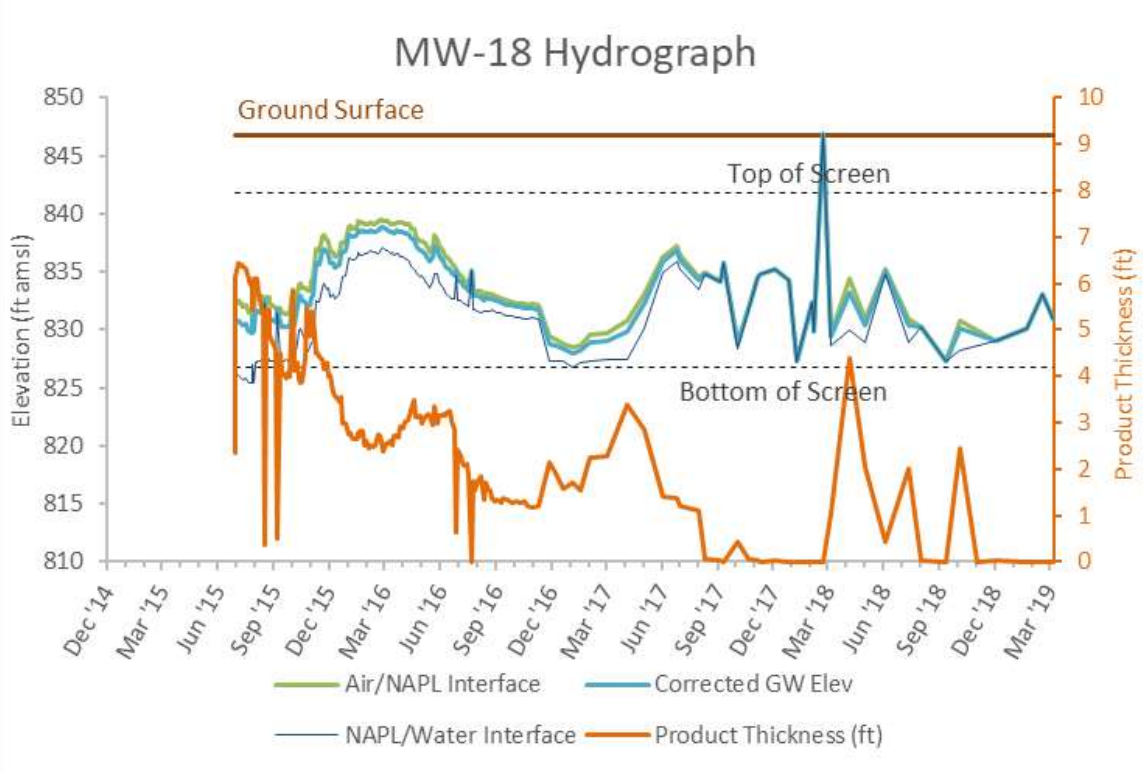

MW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

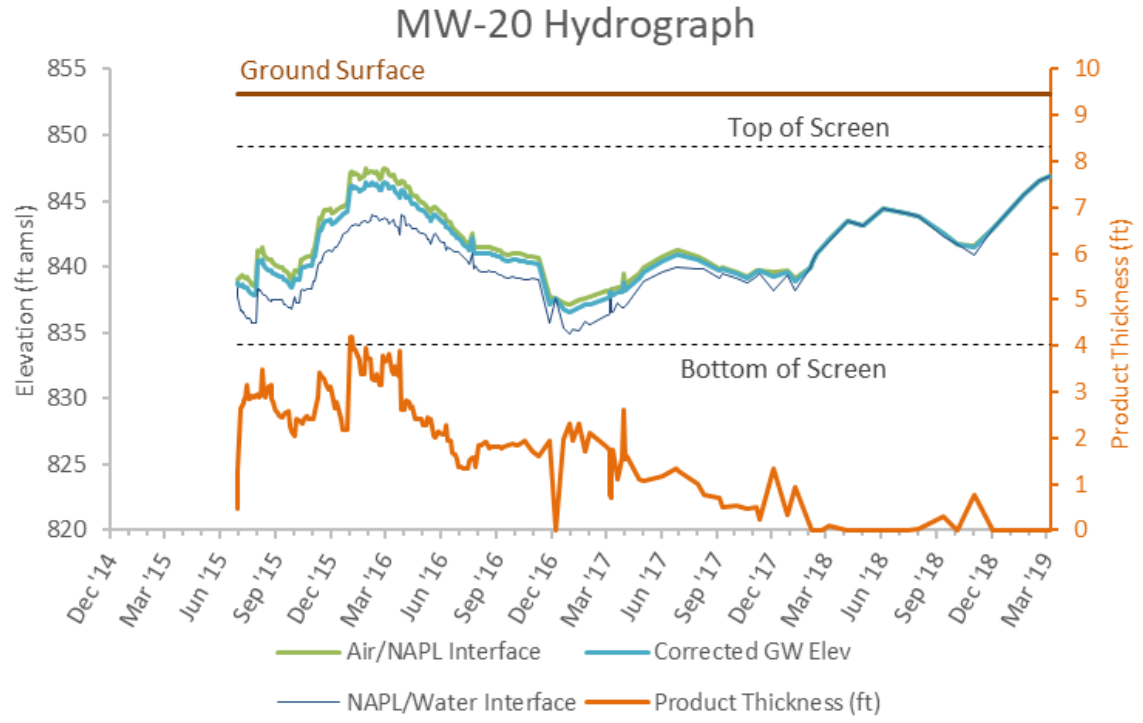

MW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
805
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

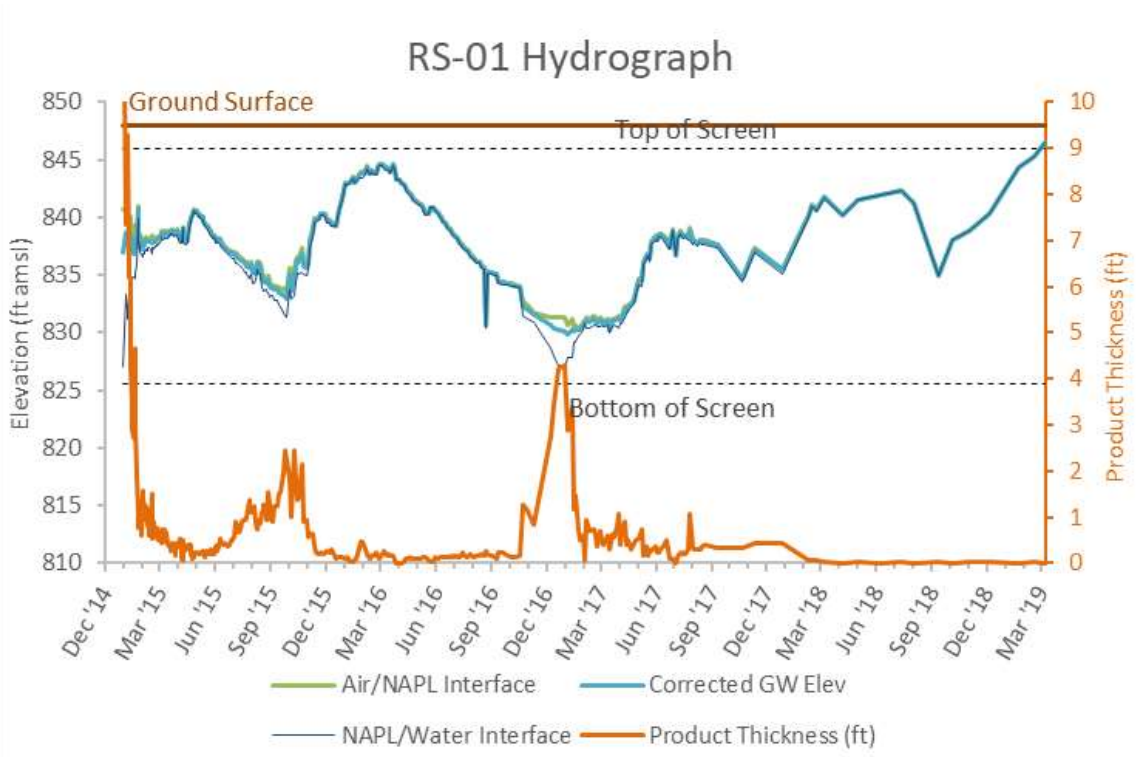

MW-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
795
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

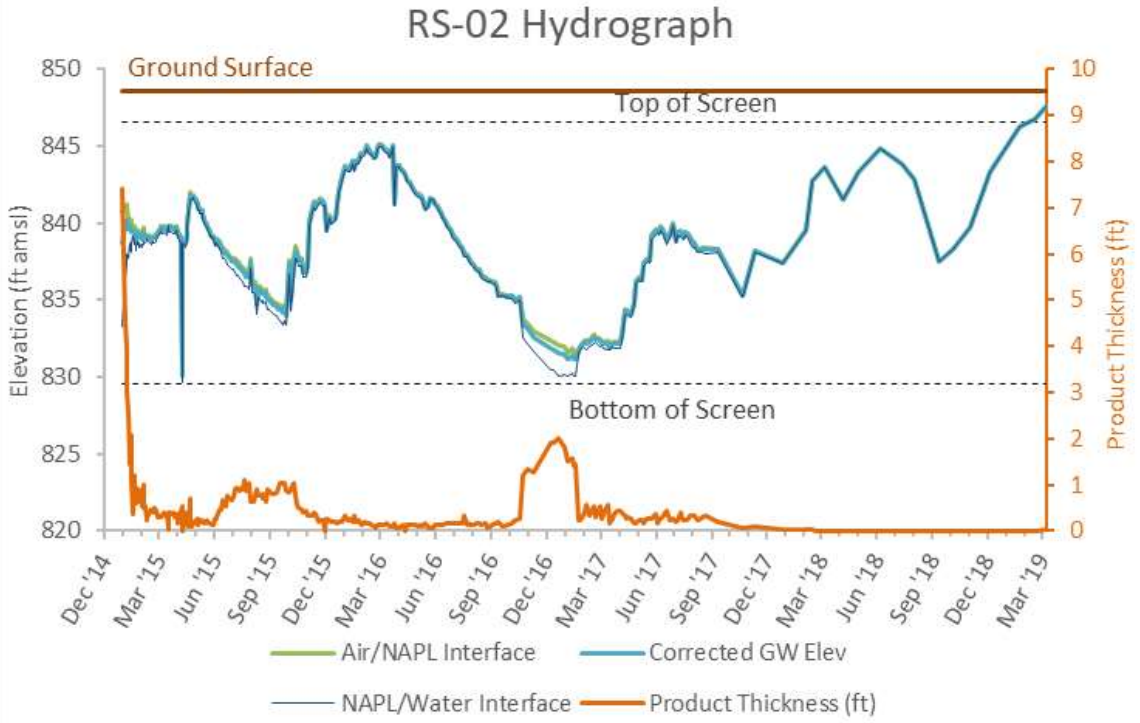

MW-15 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

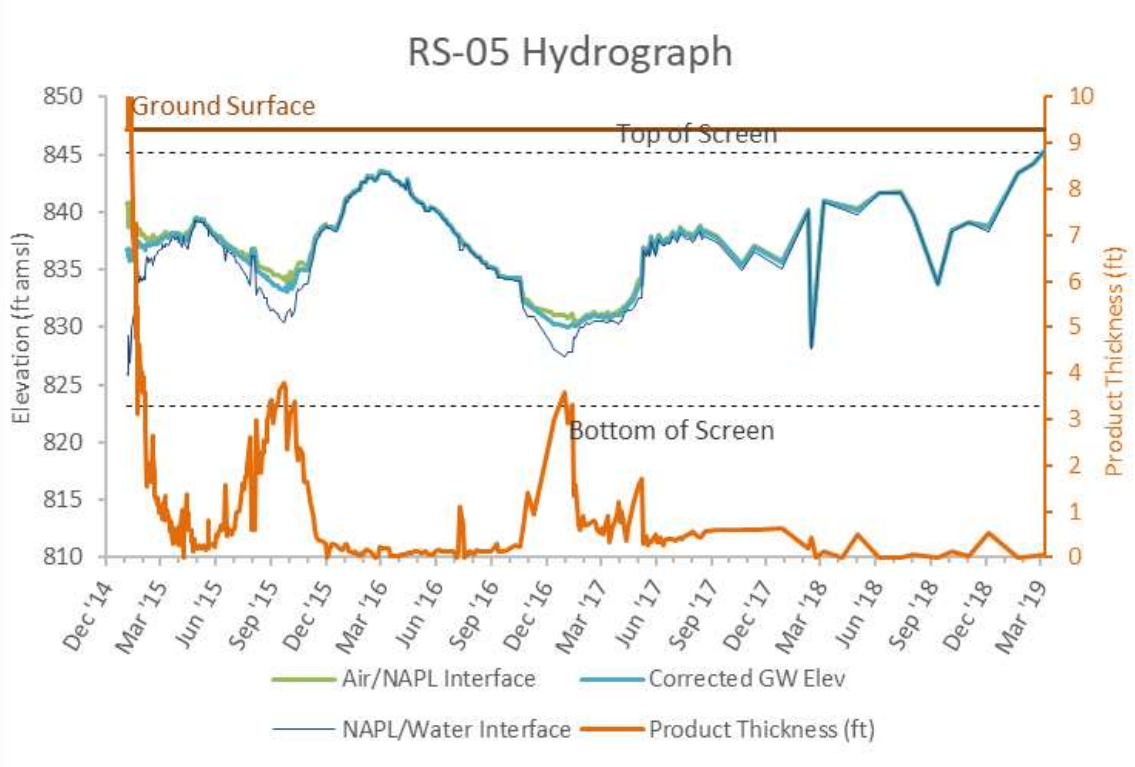

MW-16 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

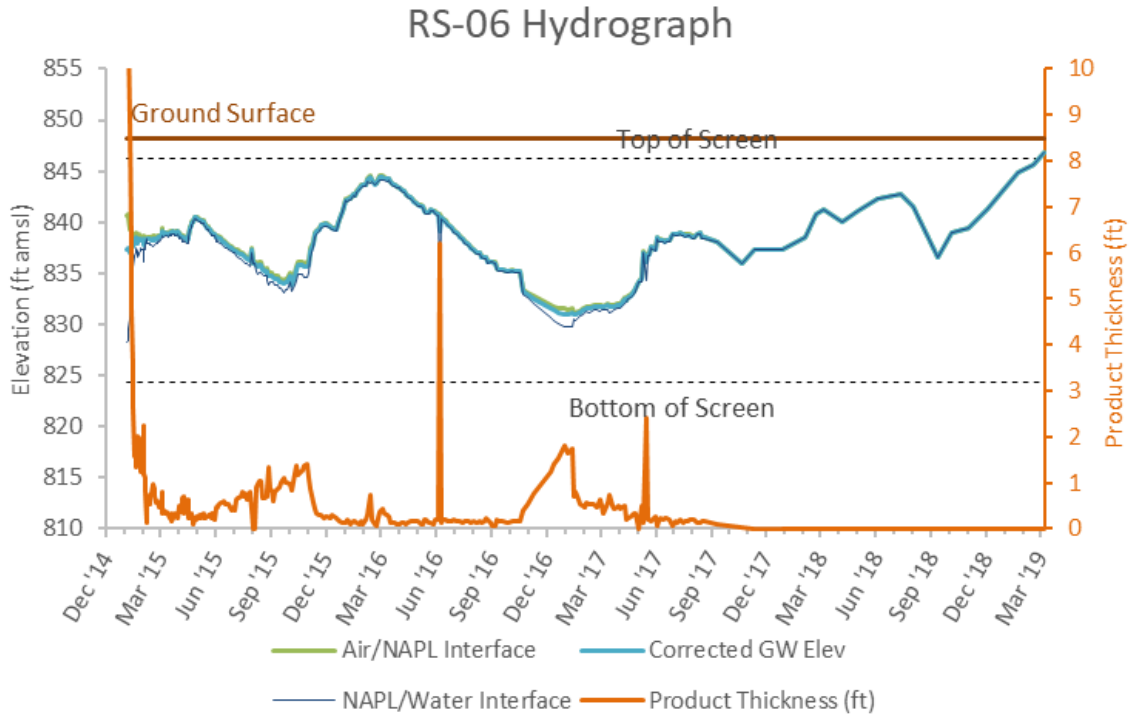

MW-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

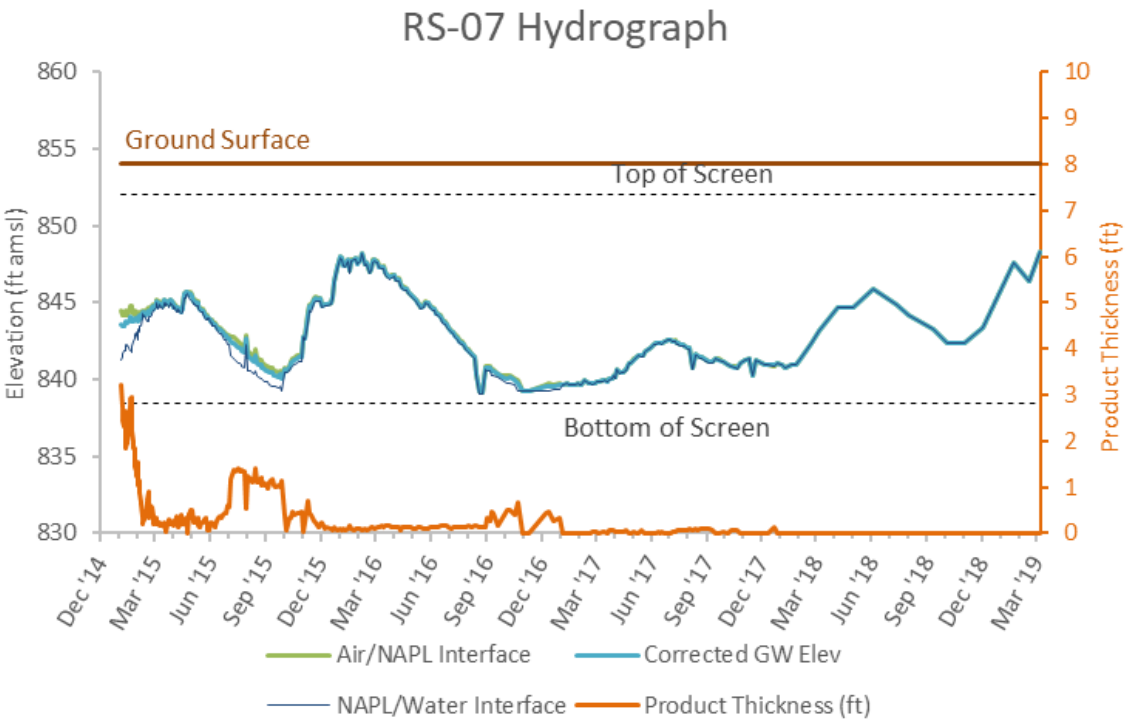

MW-20 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

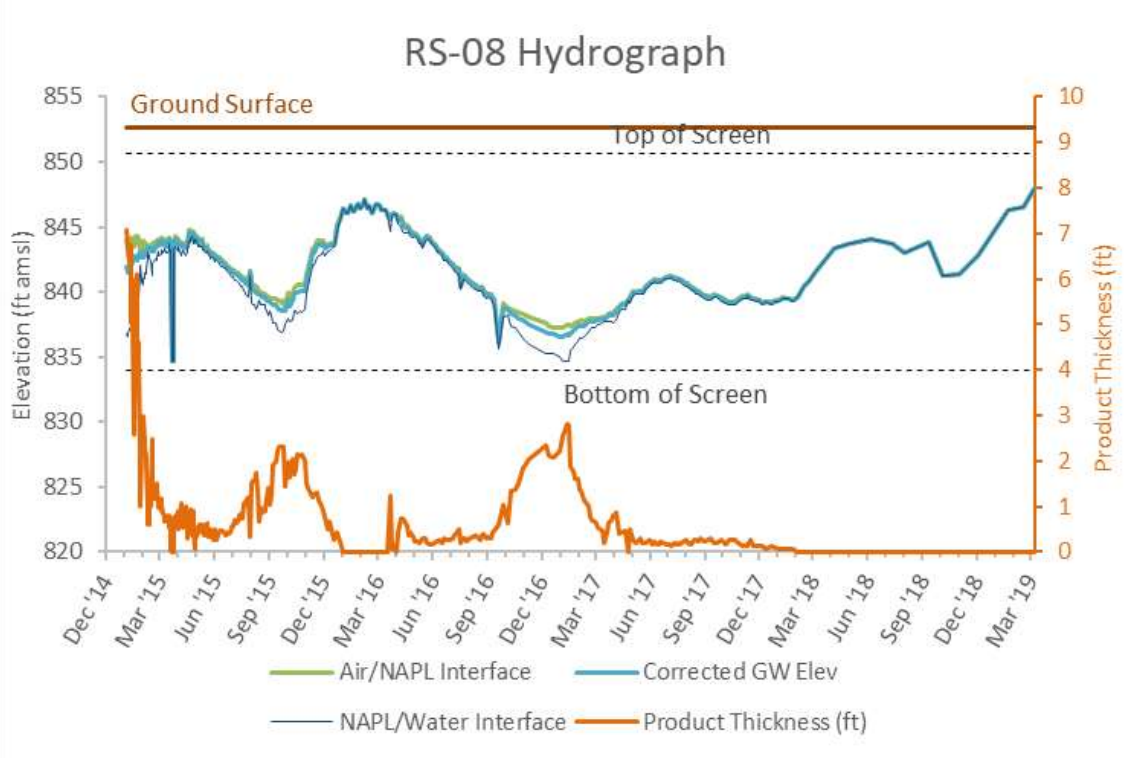

RS-01 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

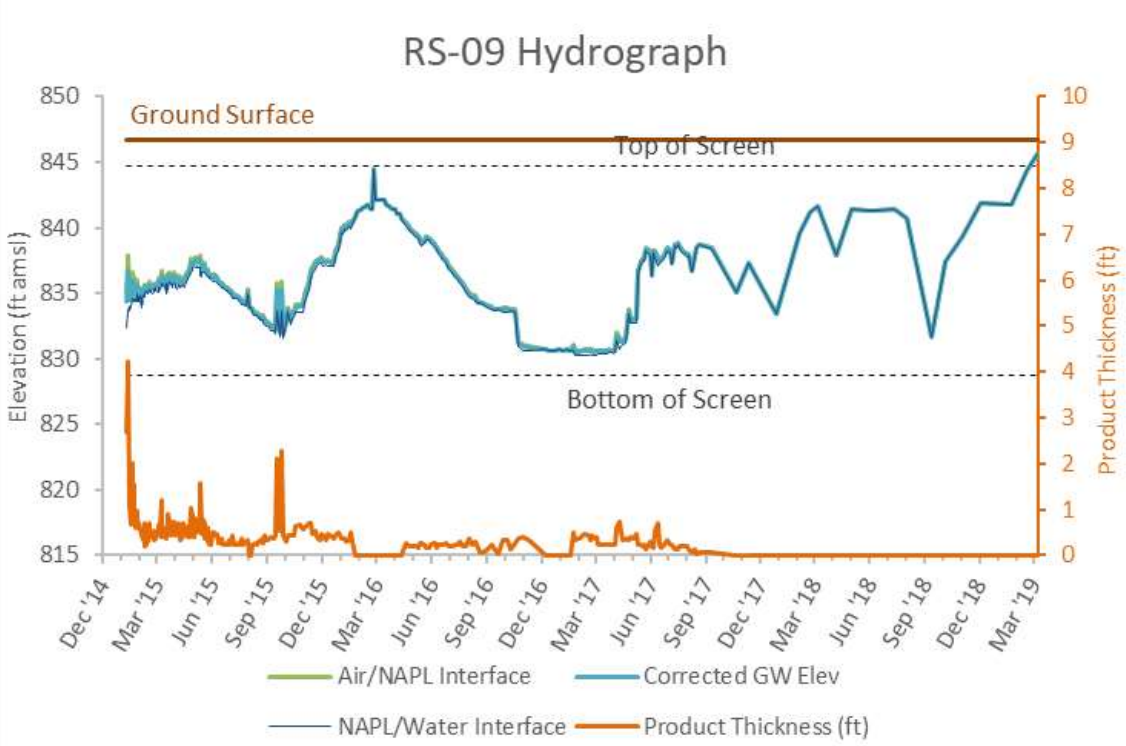

RS-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

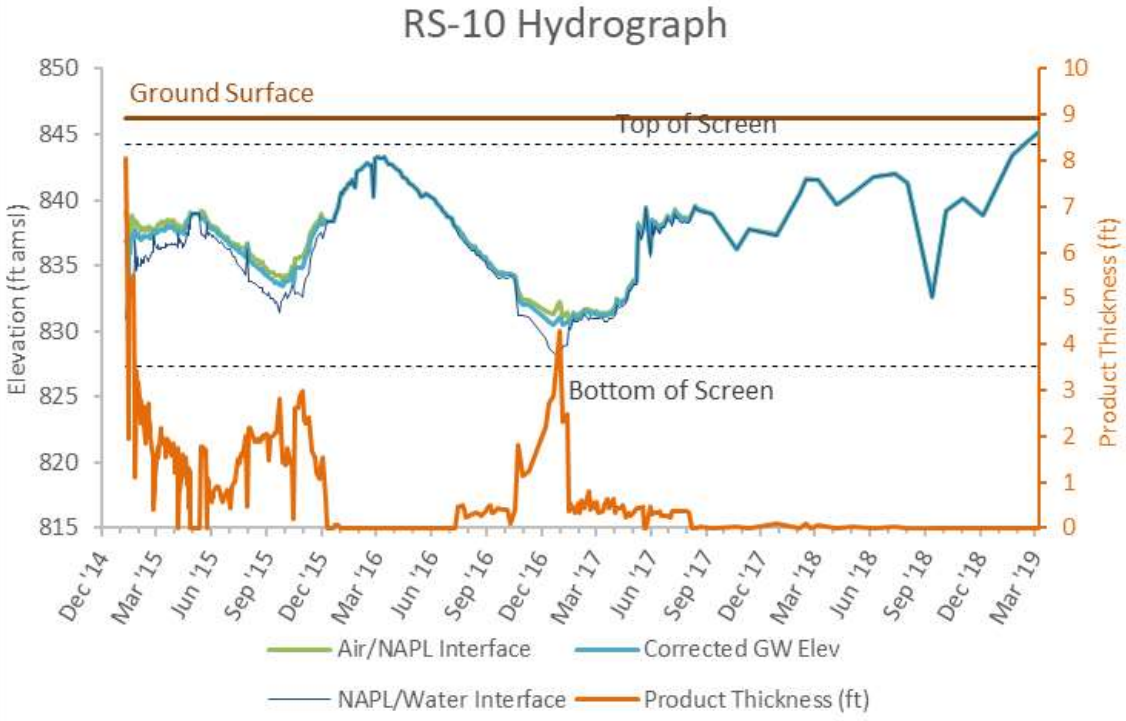

RS-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

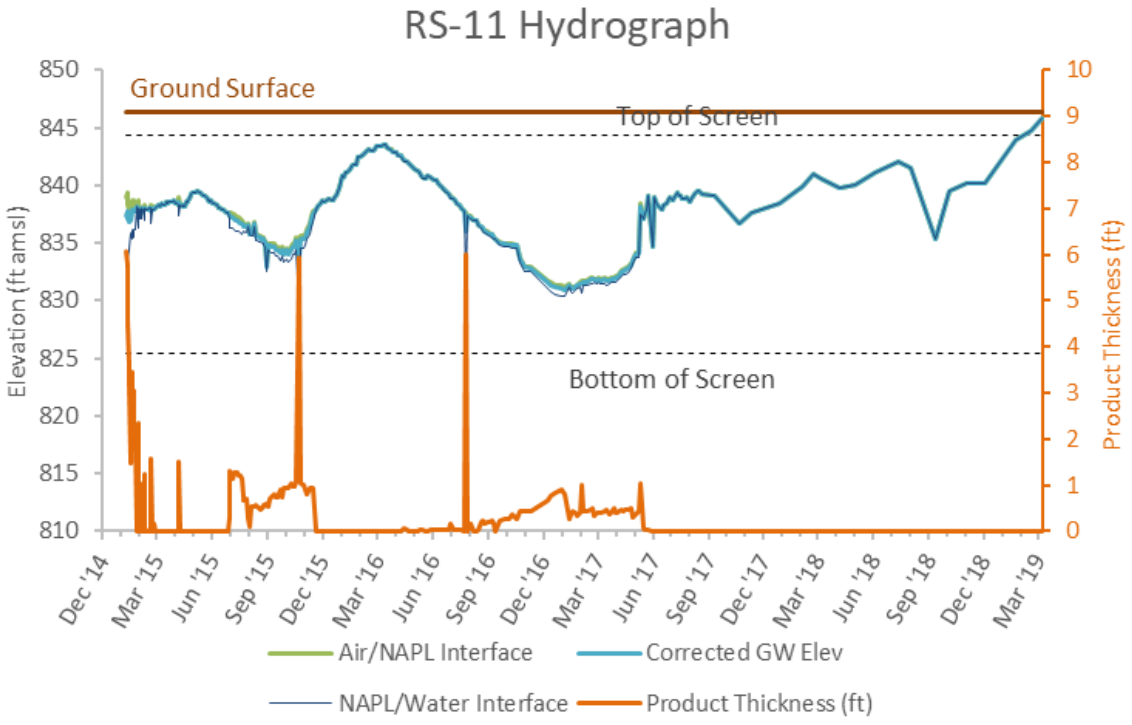

RS-06 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

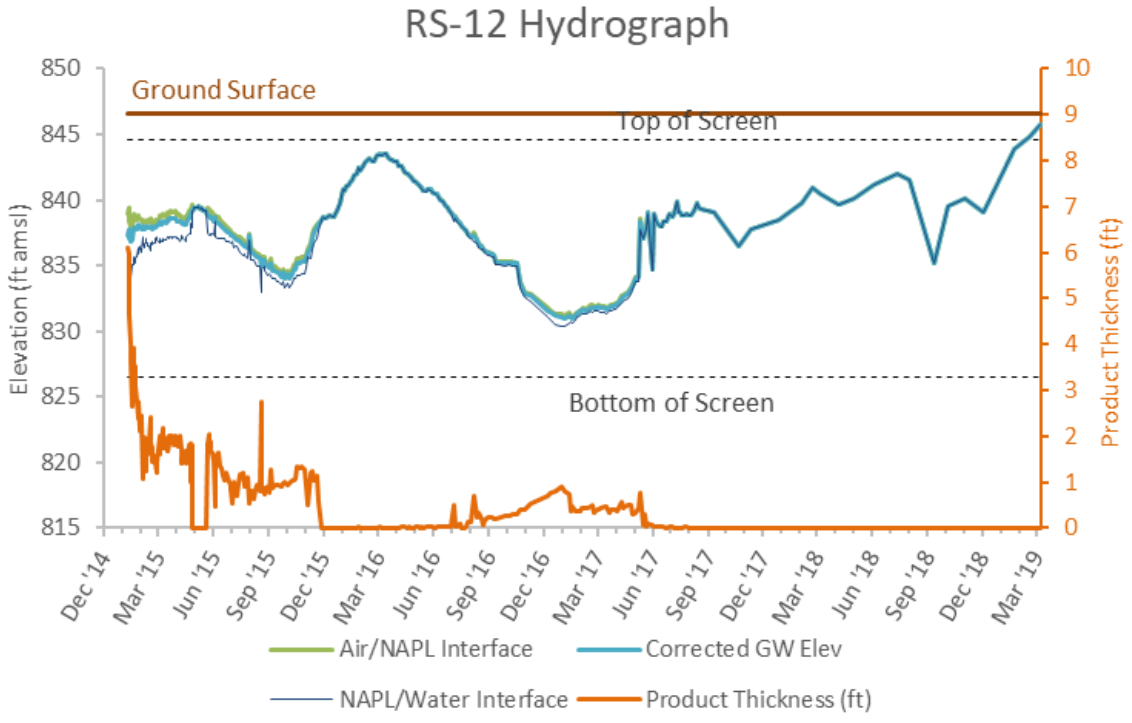

RS-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
855
850
845
840
835
830
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

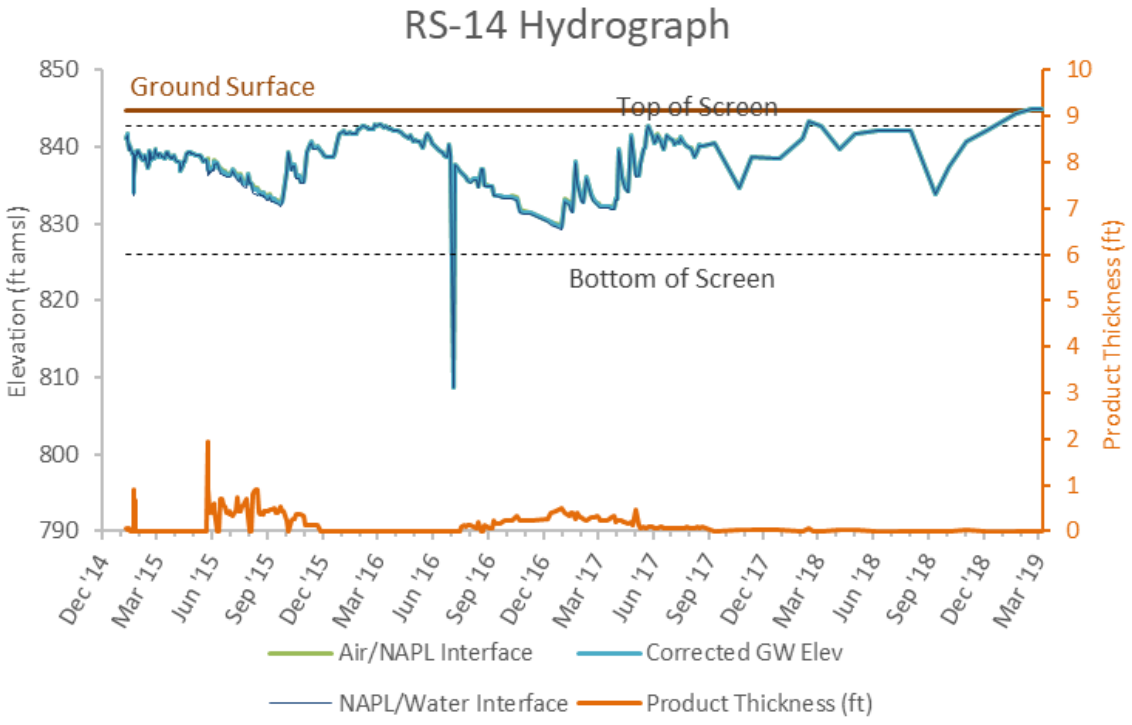

RS-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

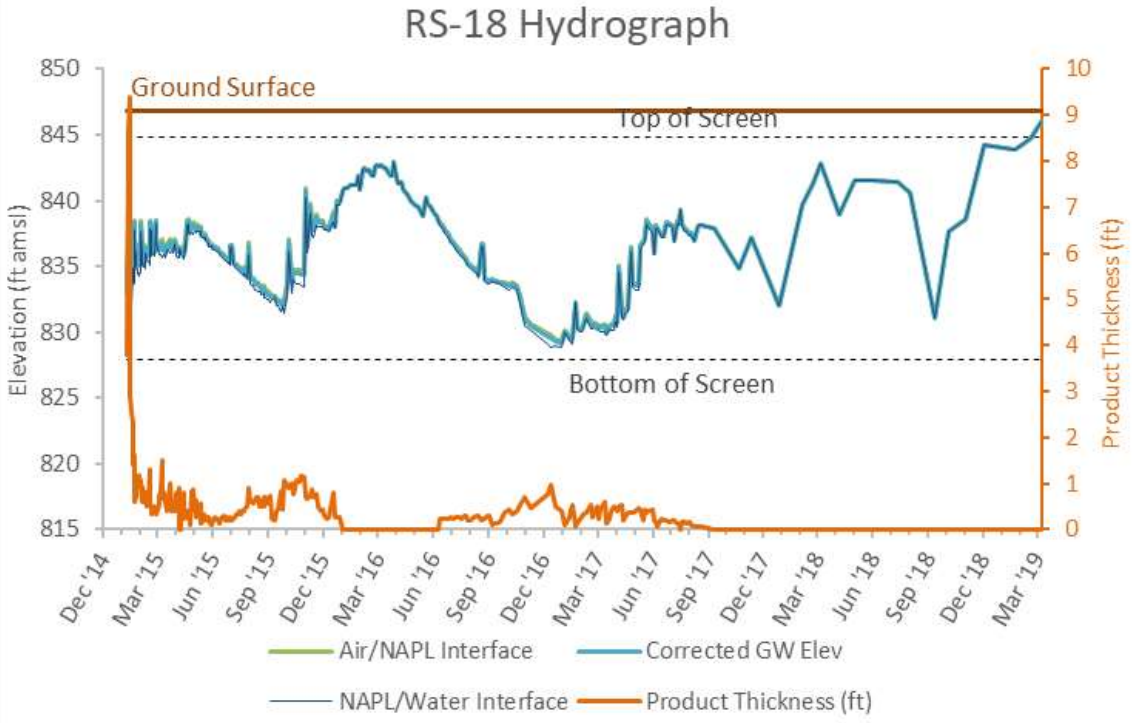

RS-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

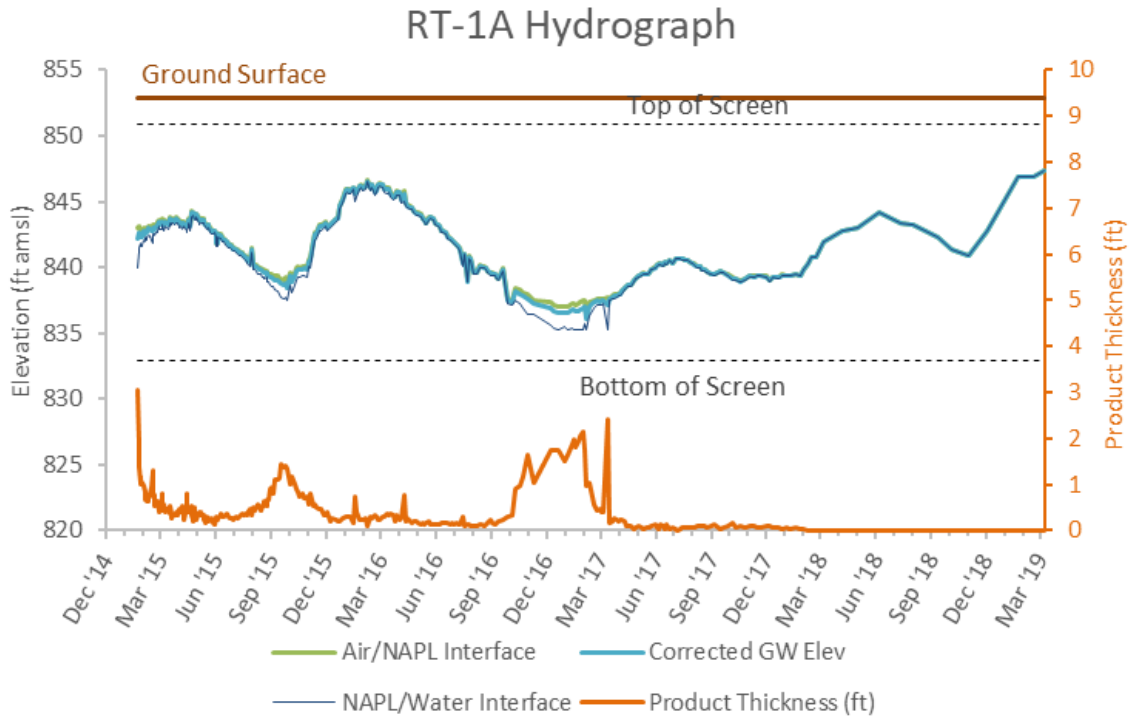

RS-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

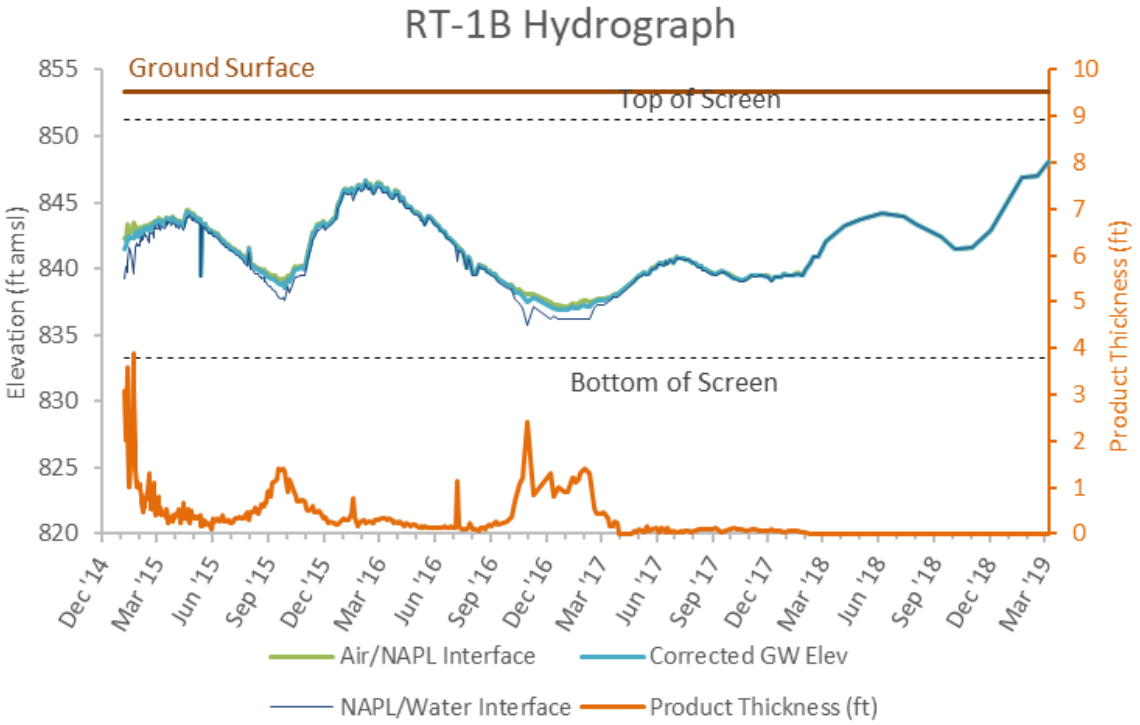

RS-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

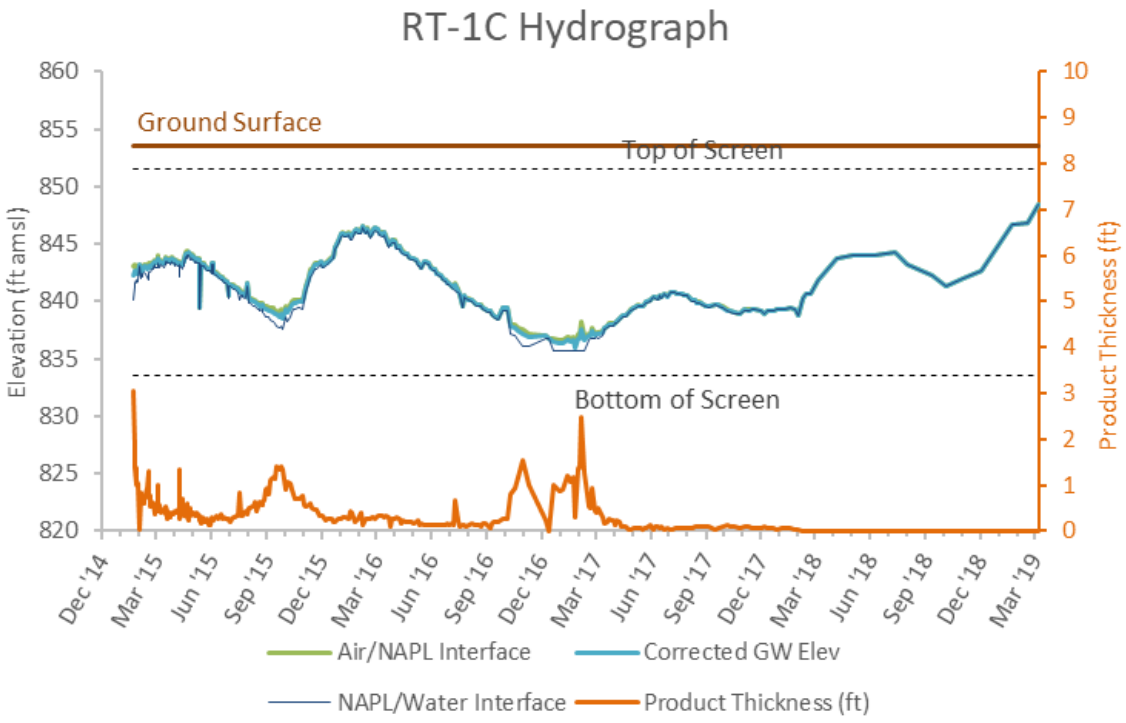

RS-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

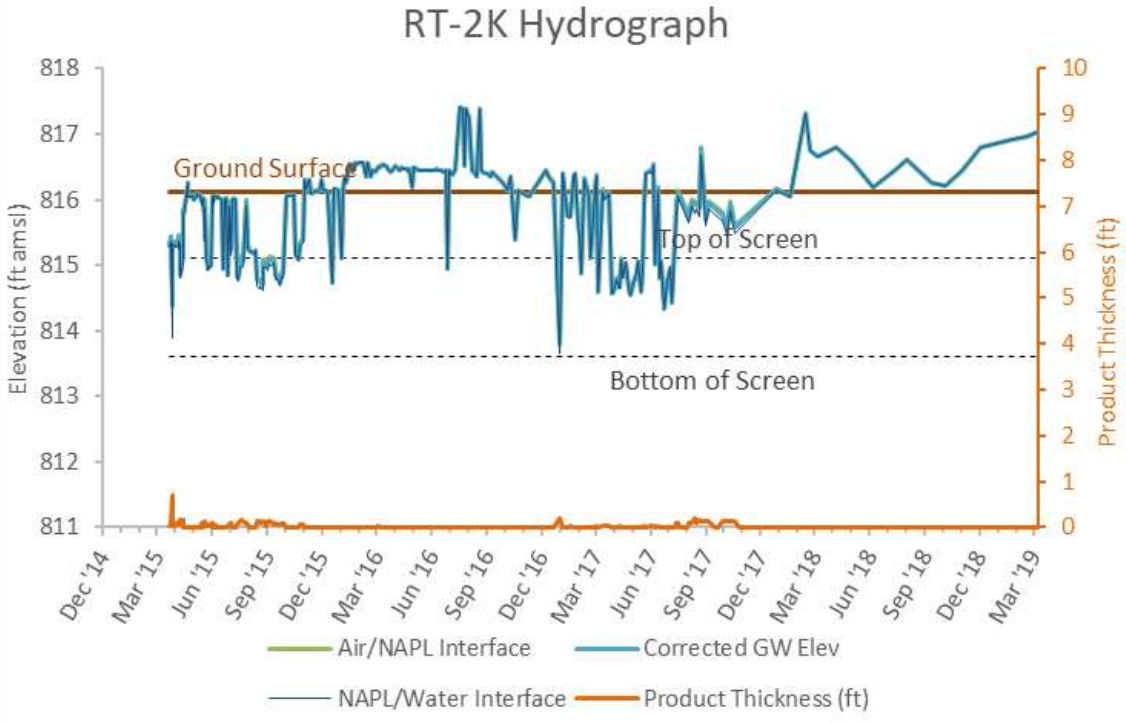

RS-14 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

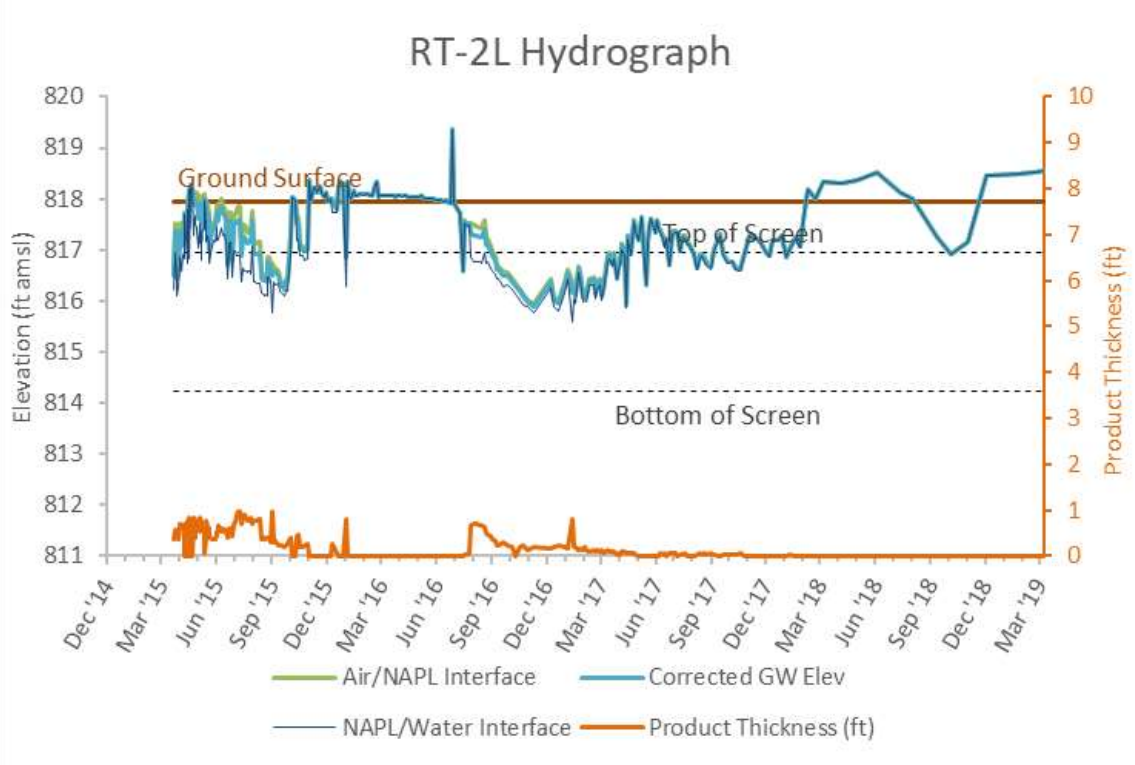

RS-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

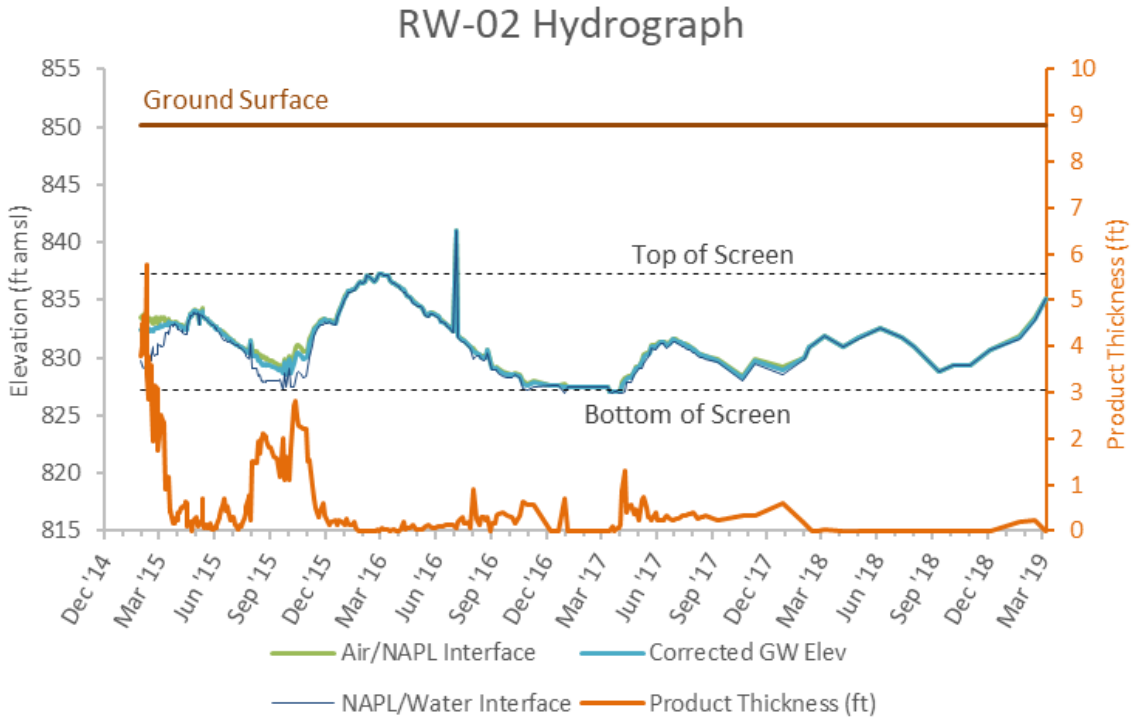

RT-1A Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

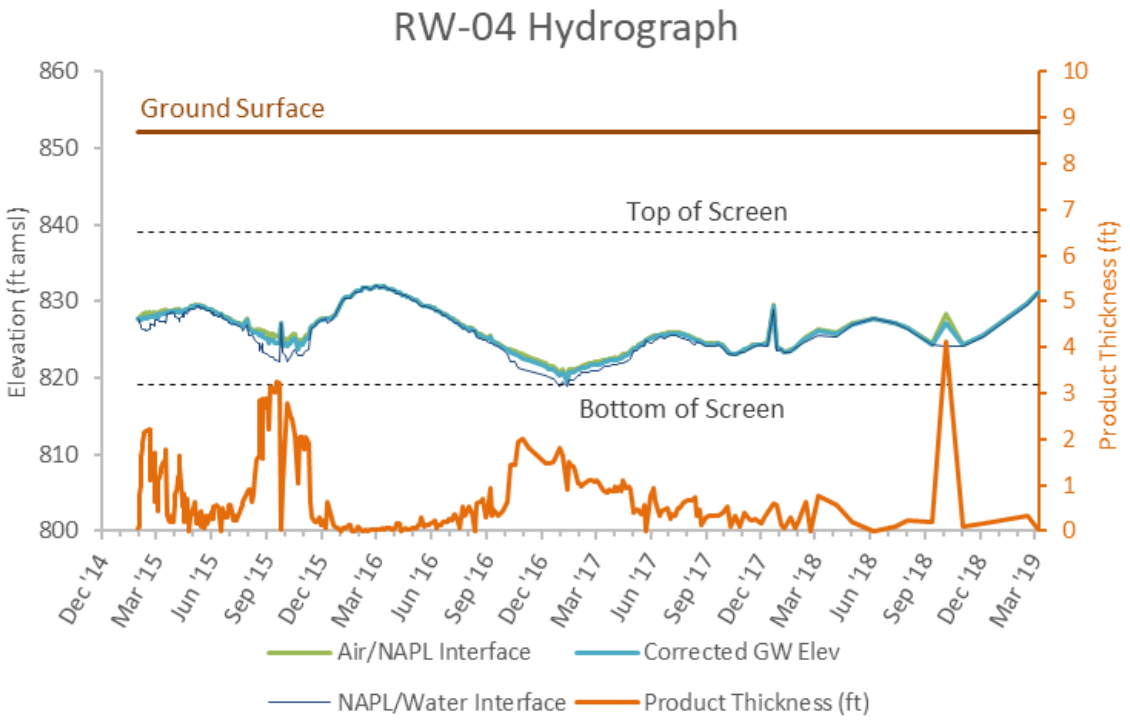

RT-1B Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

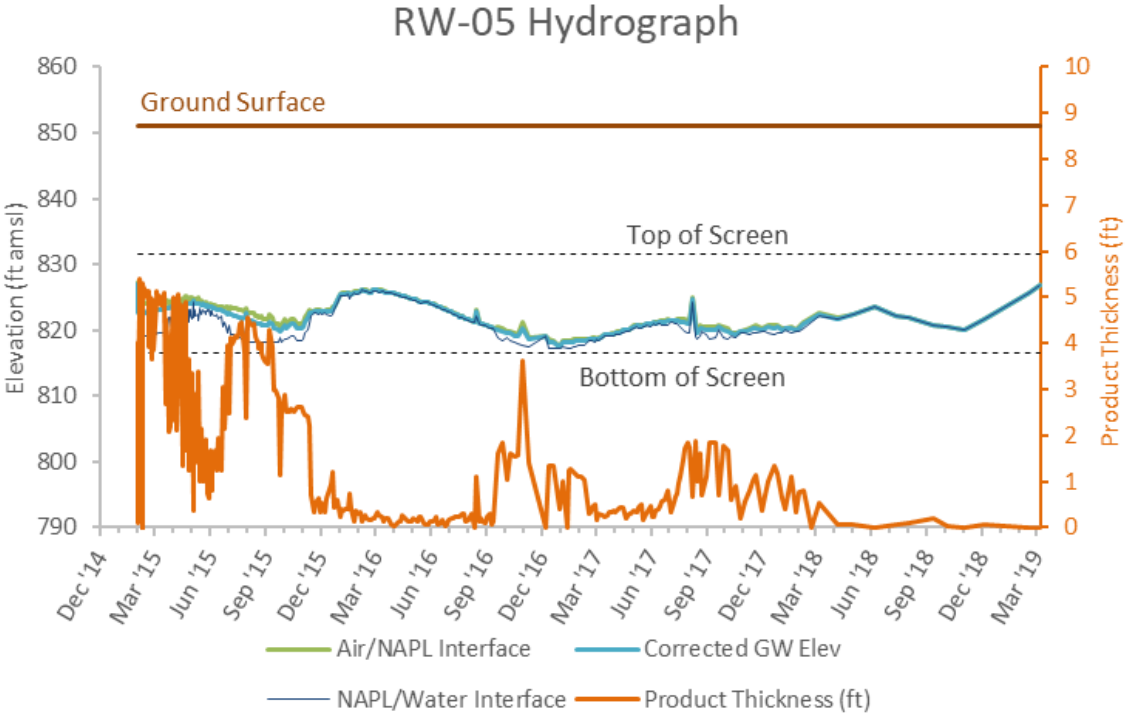

RT-1C Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

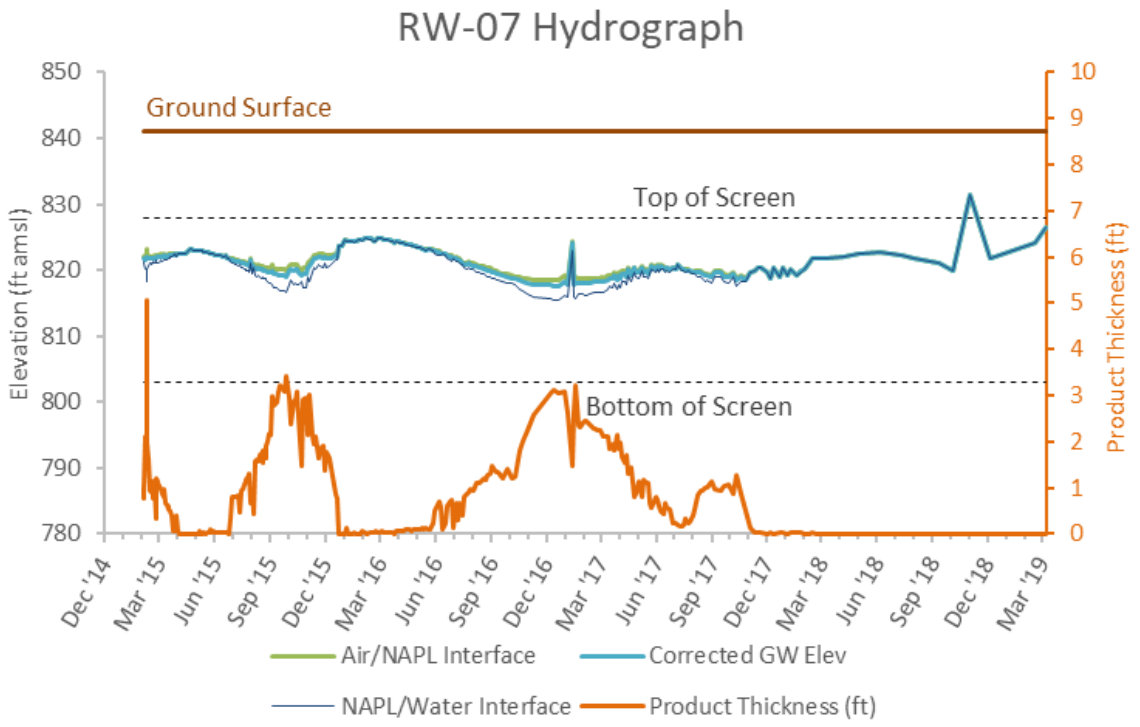

RT-2K Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
818
817
816
815
814
813
812
811
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

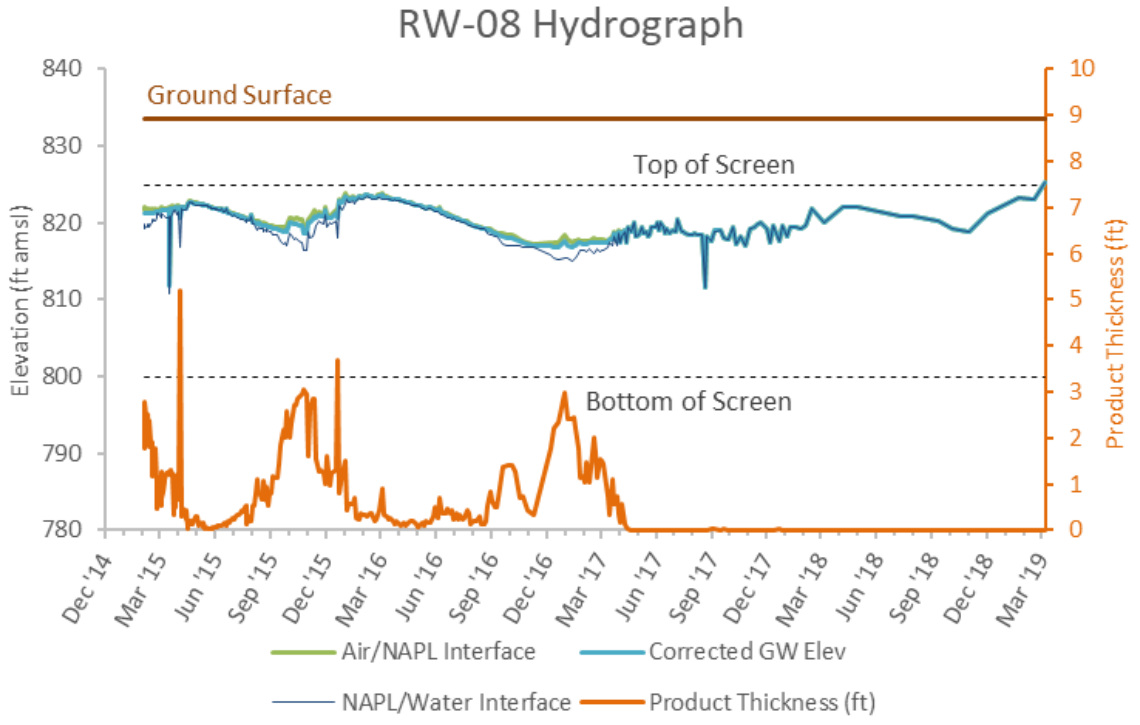

RT-2L Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
820
819
818
817
816
815
814
813
812
811
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

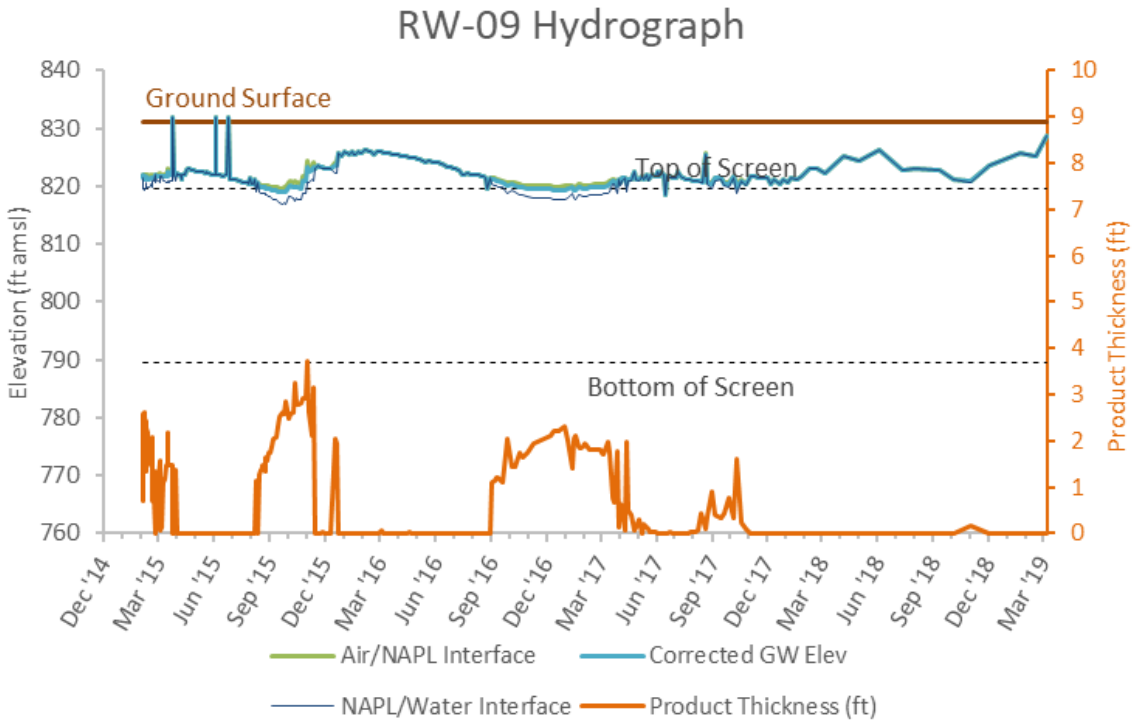

RW-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

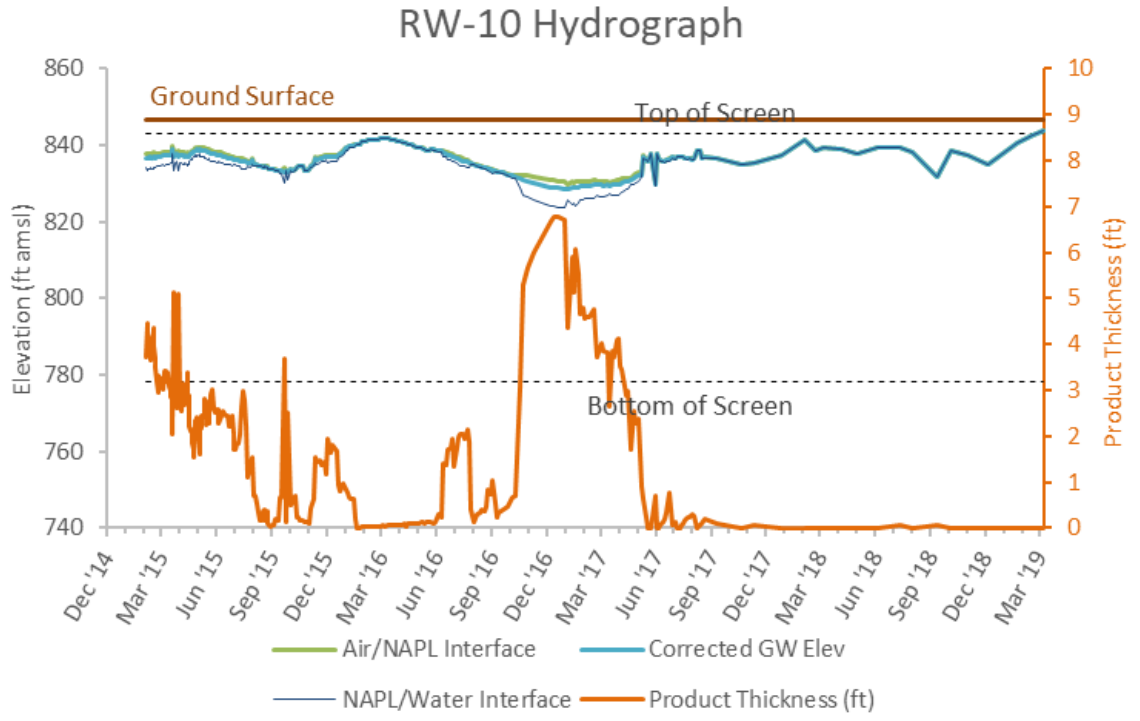

RW-04 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

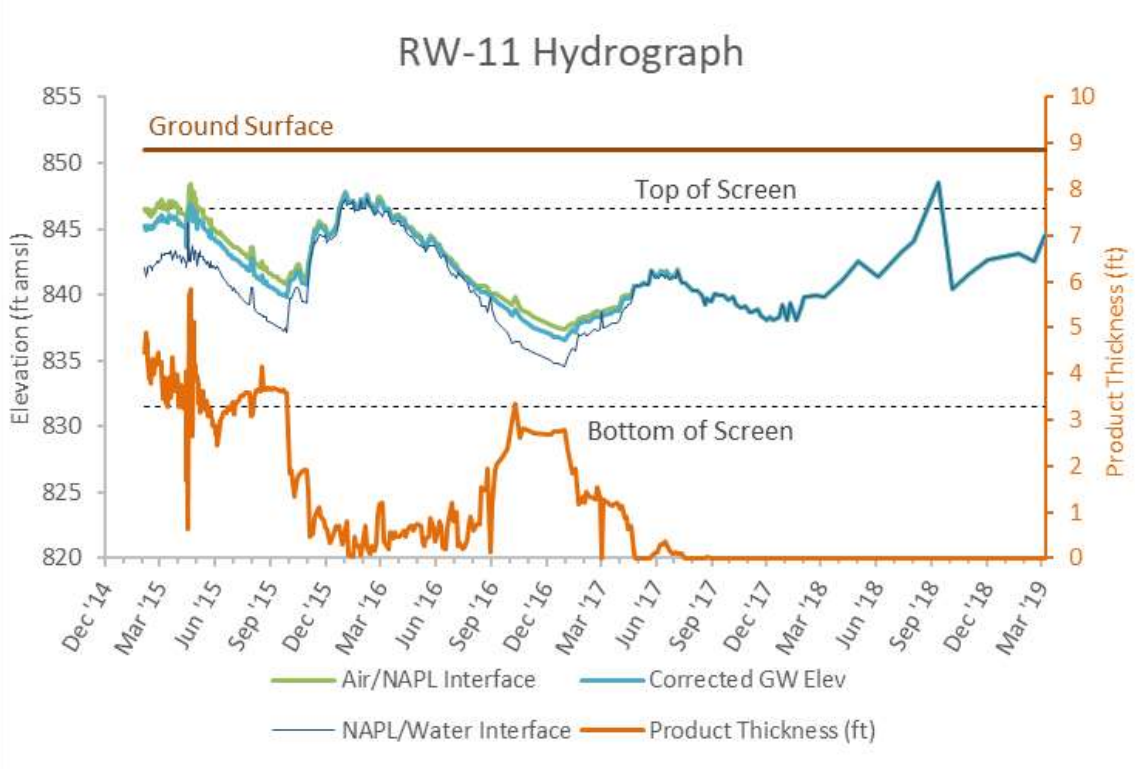

RW-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

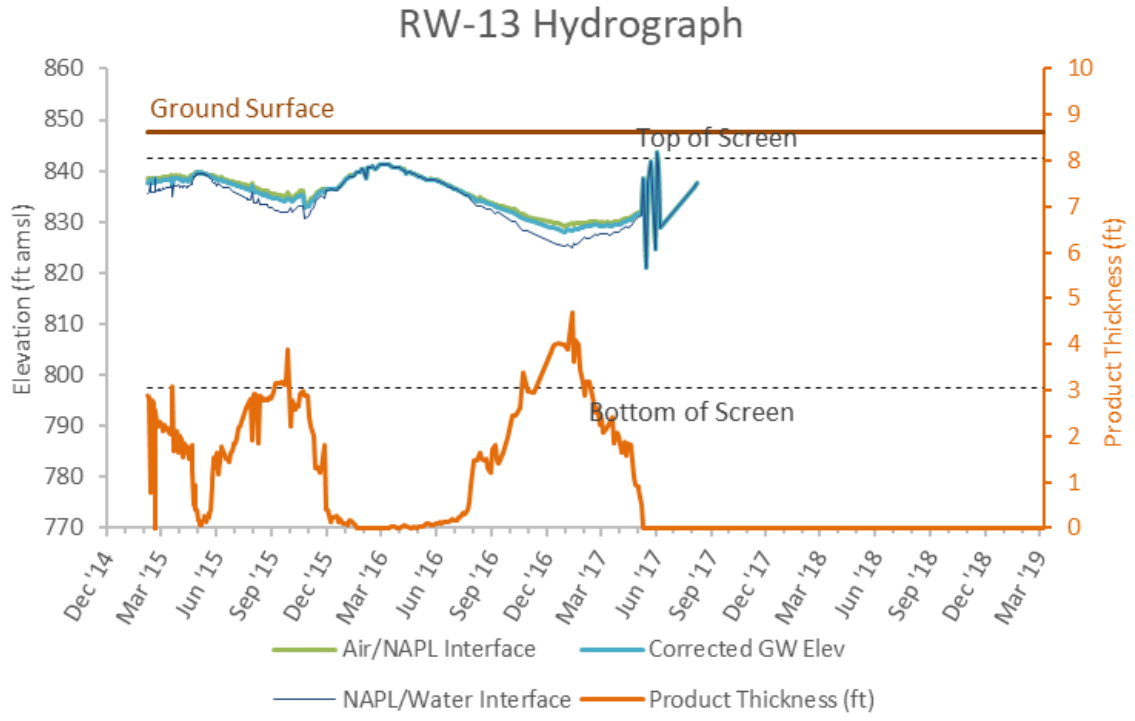

RW-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

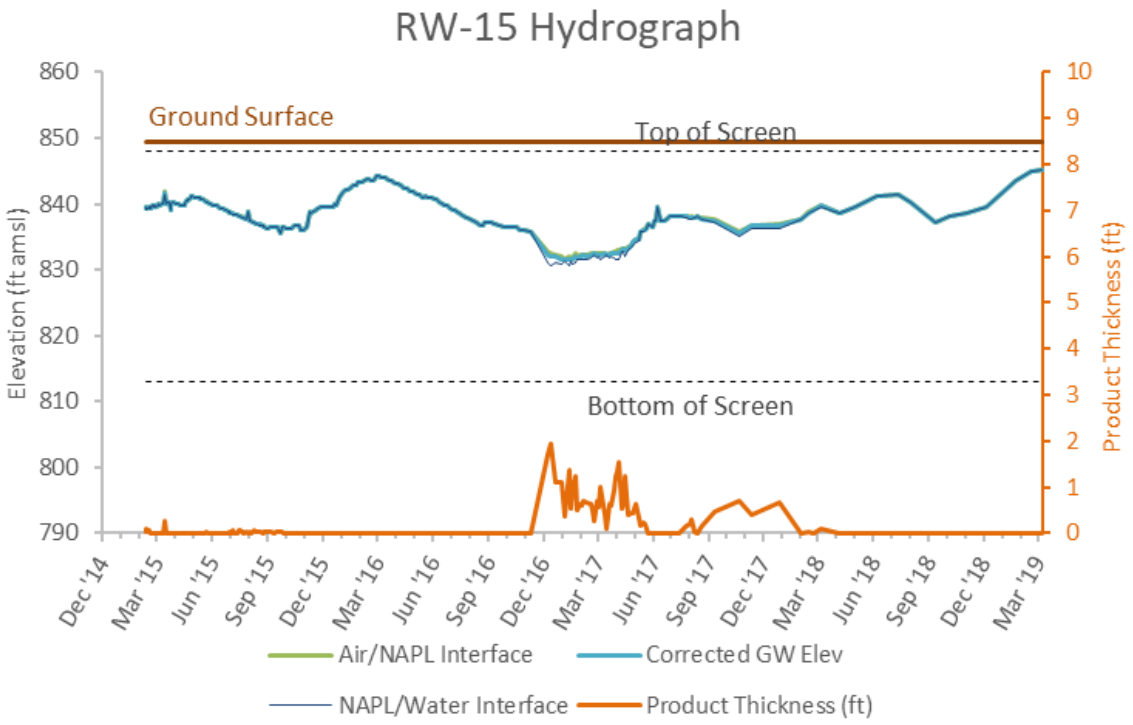

RW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
770
760
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
840
820
800
780
760
740
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

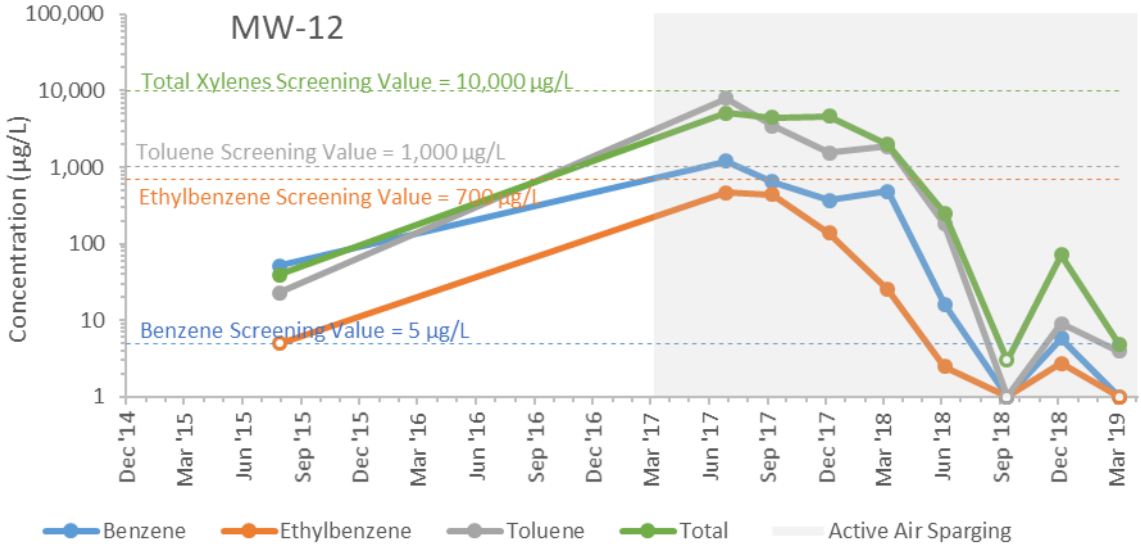

RW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-13 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
780
770
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

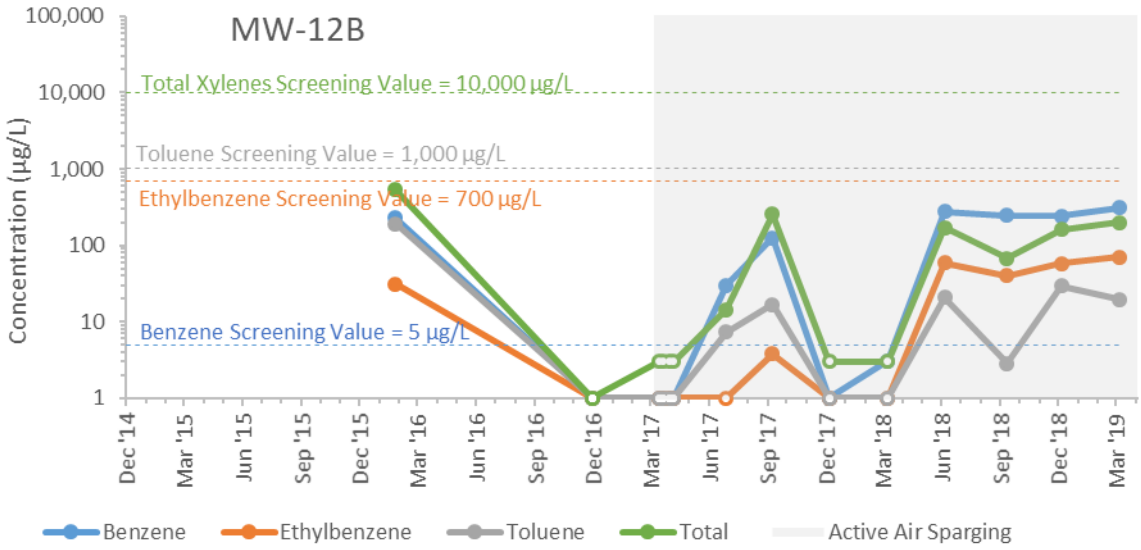

RW-15 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Mar '19
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

Appendix H
Groundwater Analytical Trends

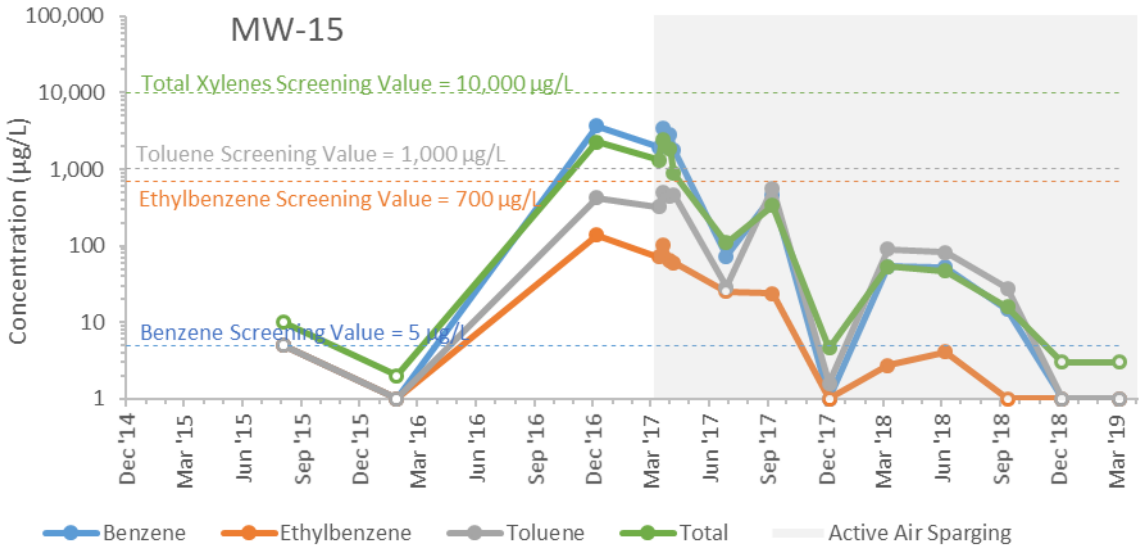
Brown's Creek Monitoring Well Trends:



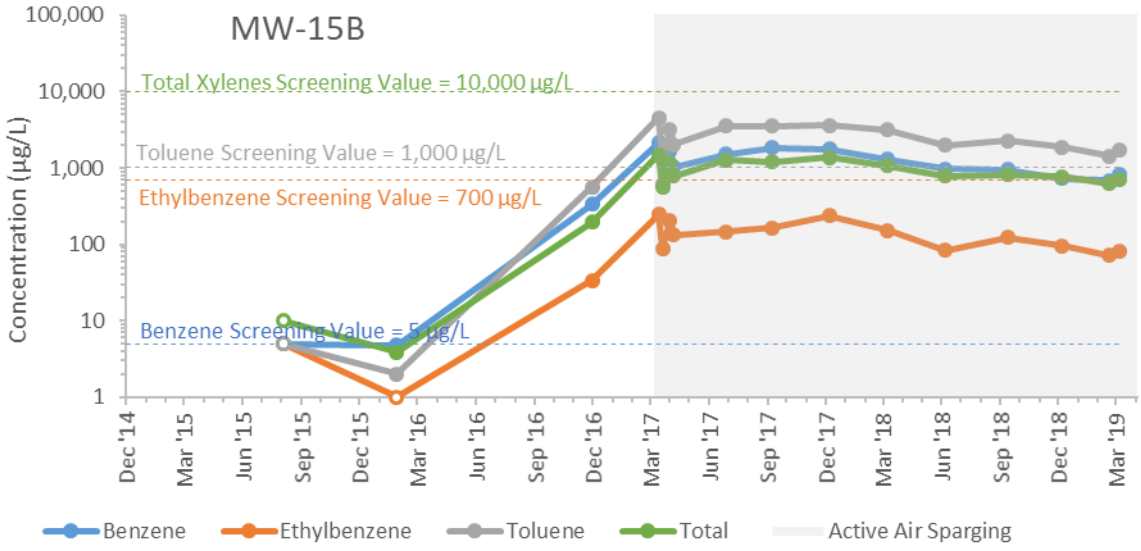
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



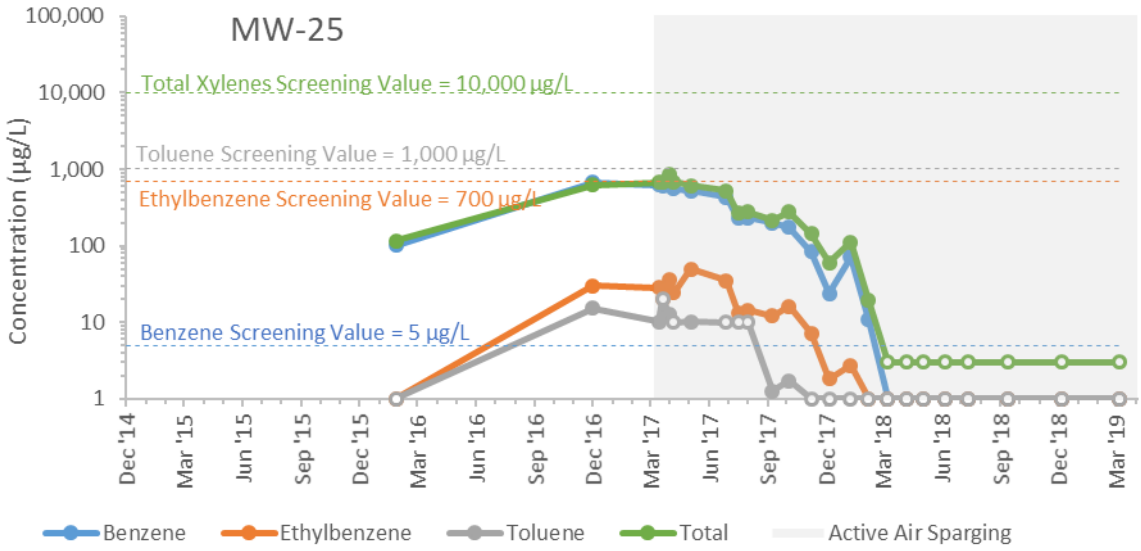
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



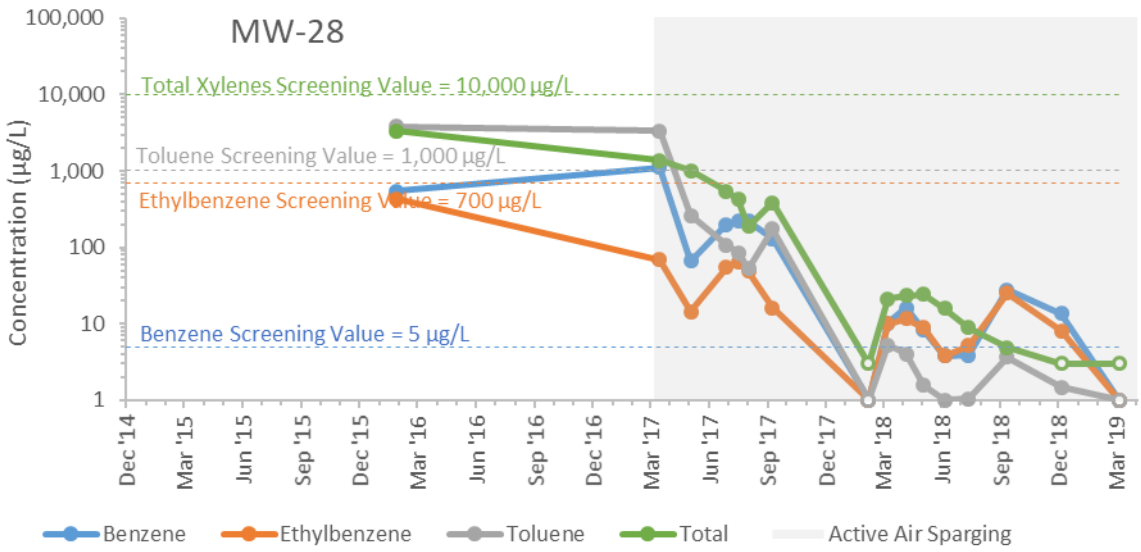
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



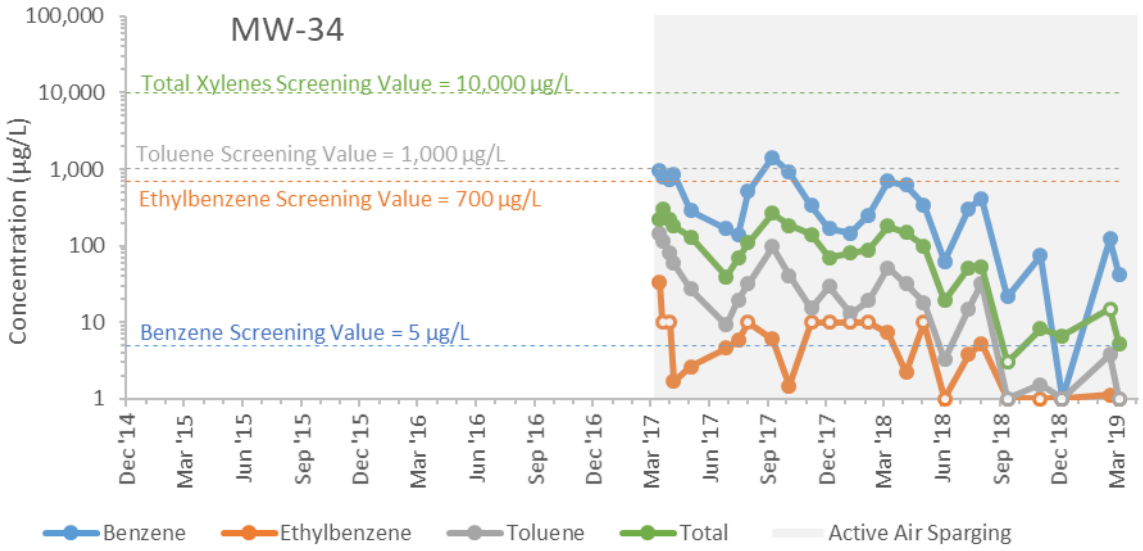
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



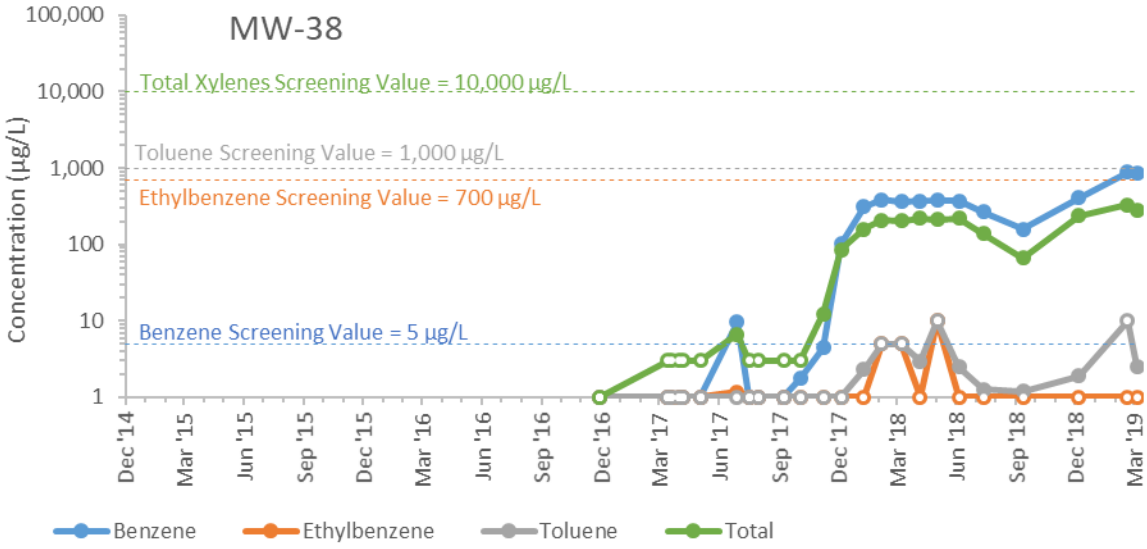
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



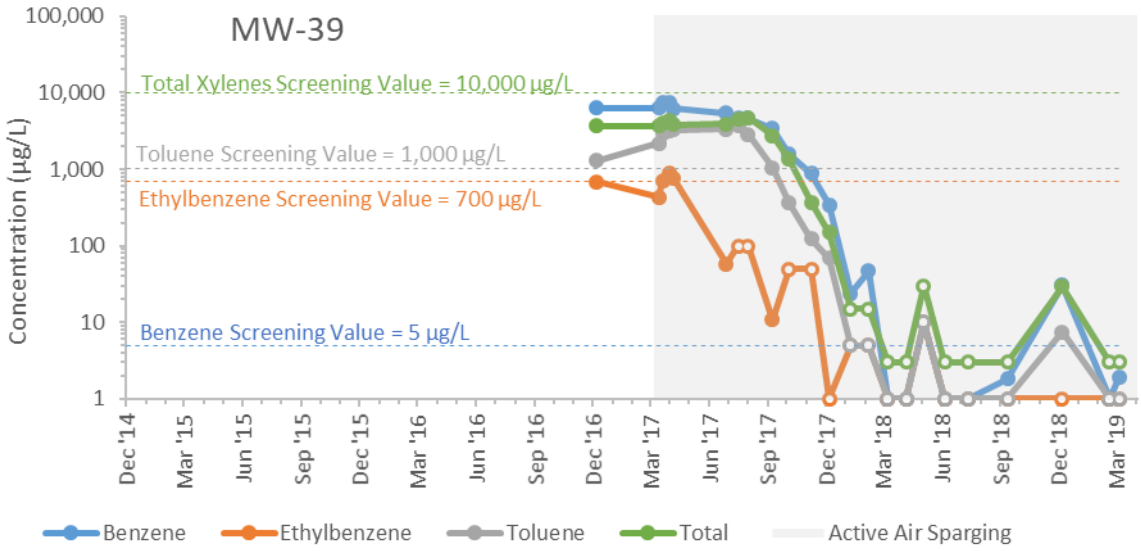
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



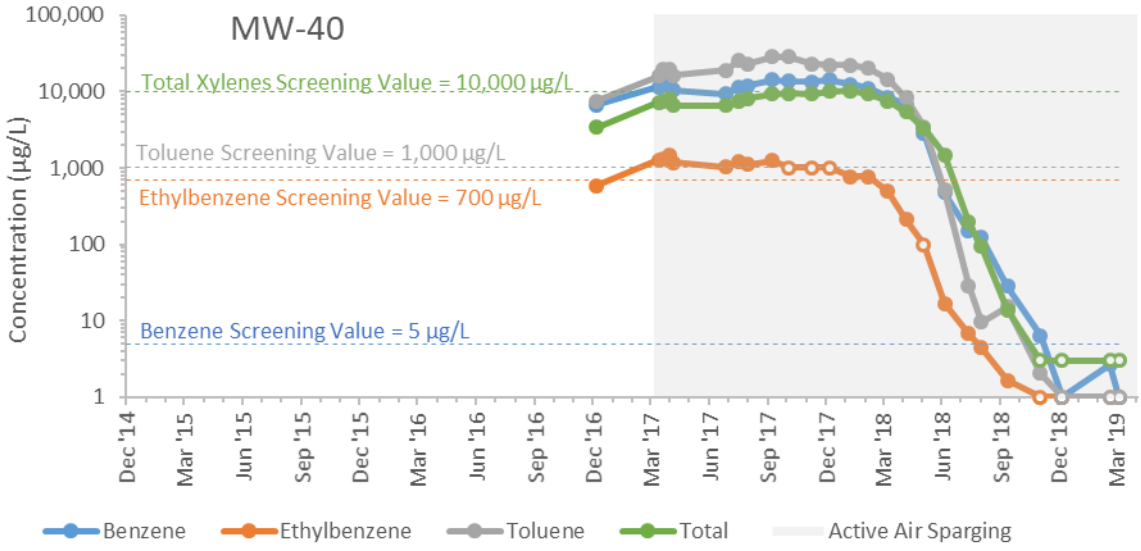
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



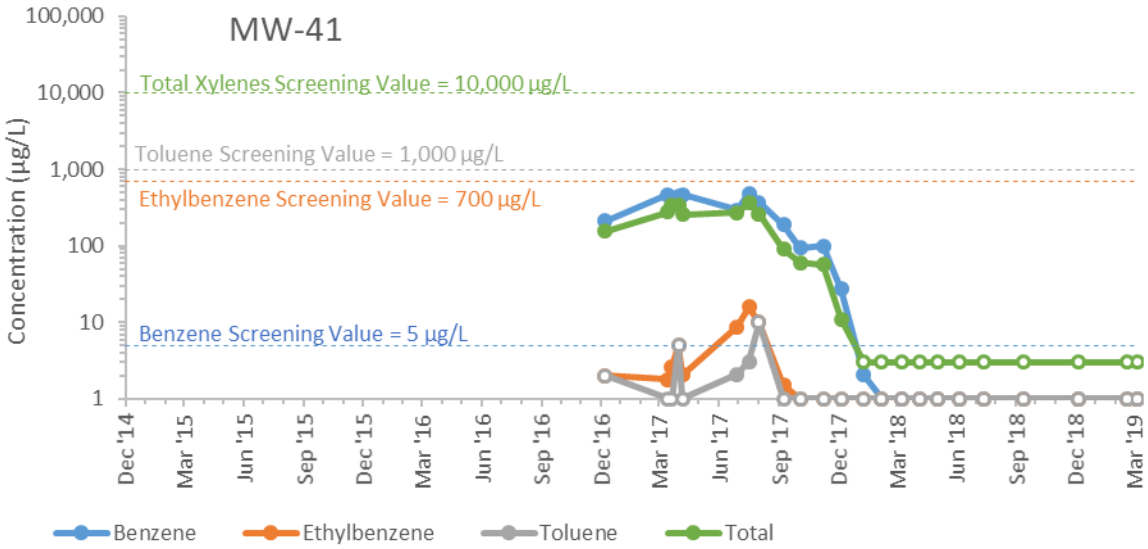
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



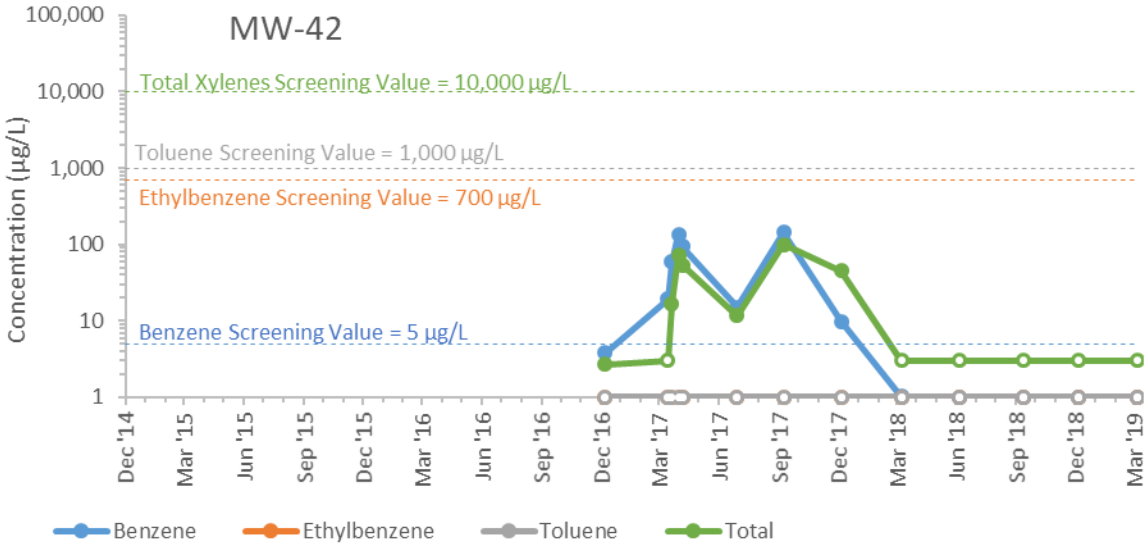
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

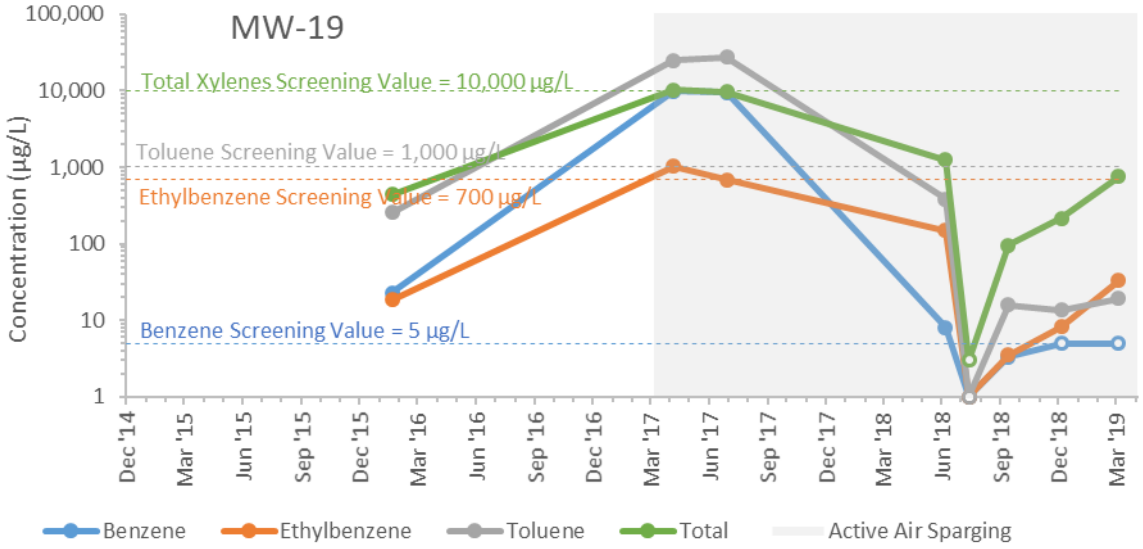


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

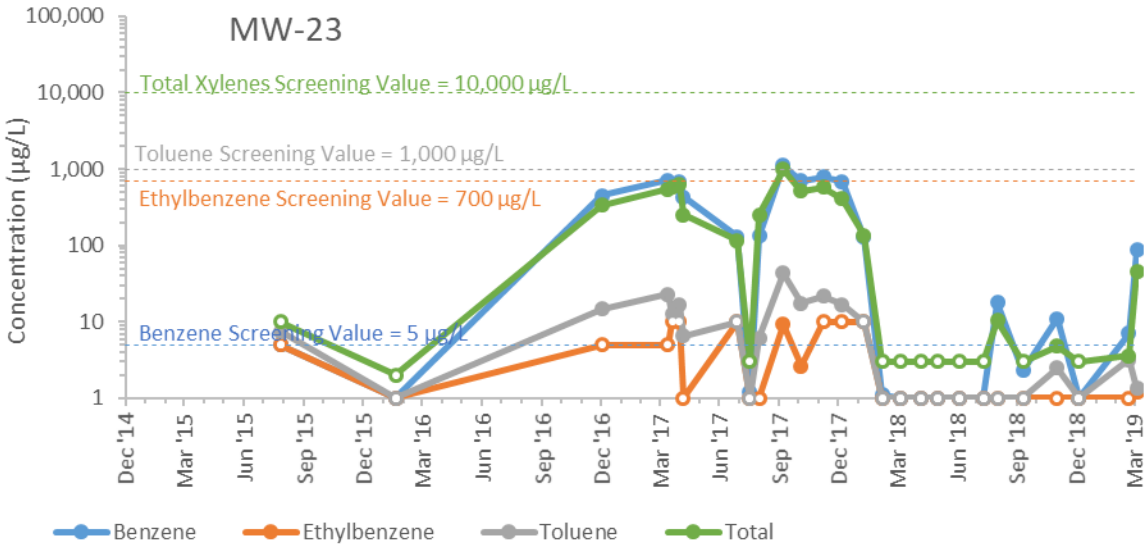


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

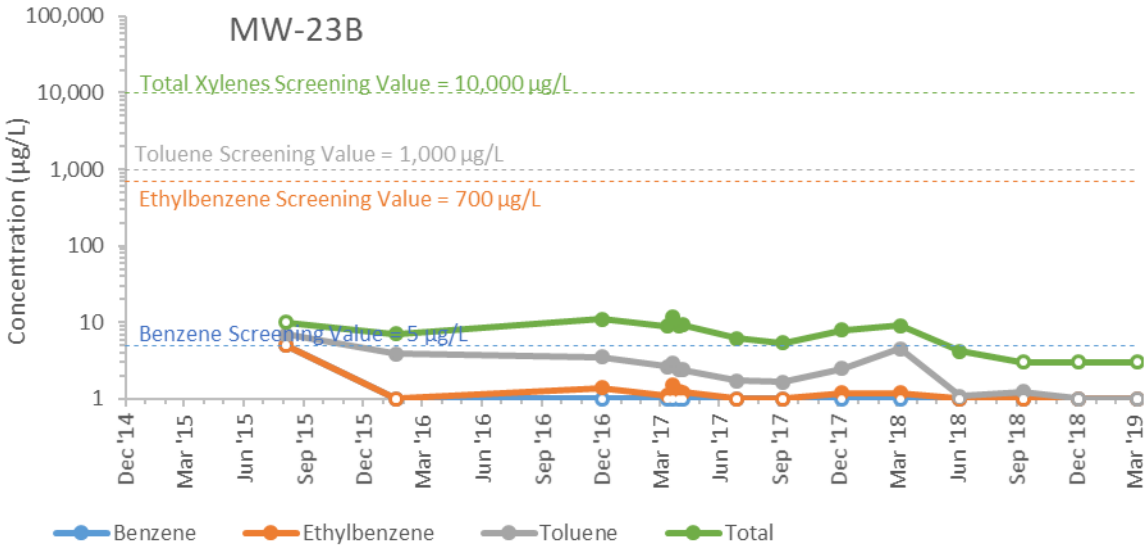
Cupboard Creek Monitoring Well Trends:



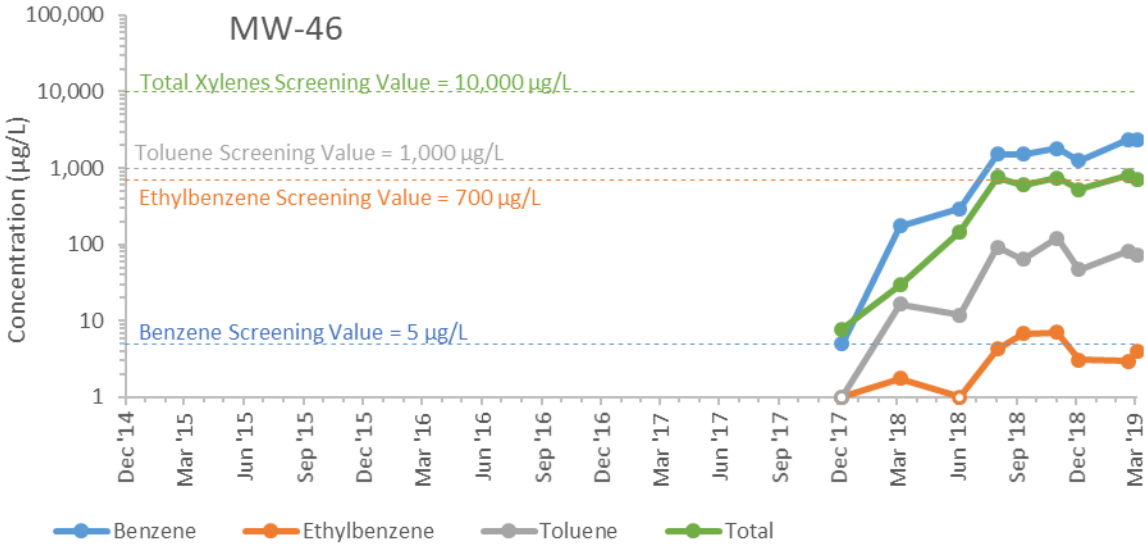
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

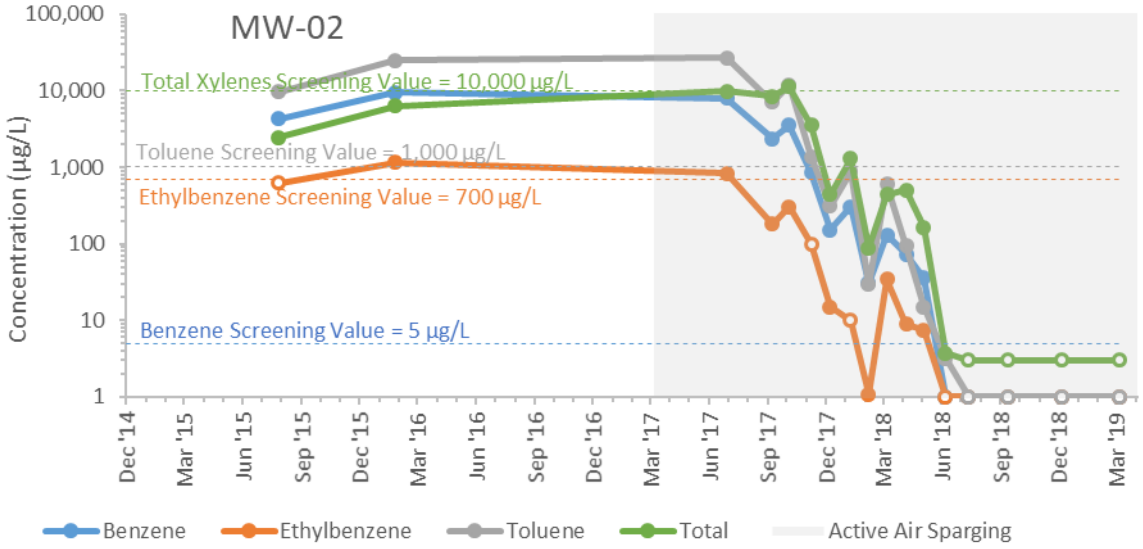


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

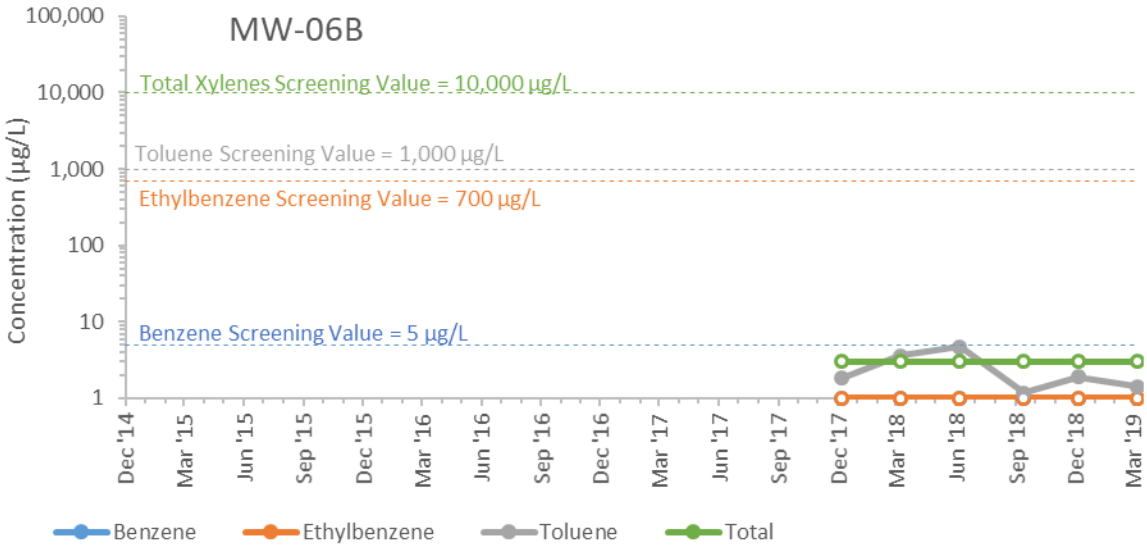


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

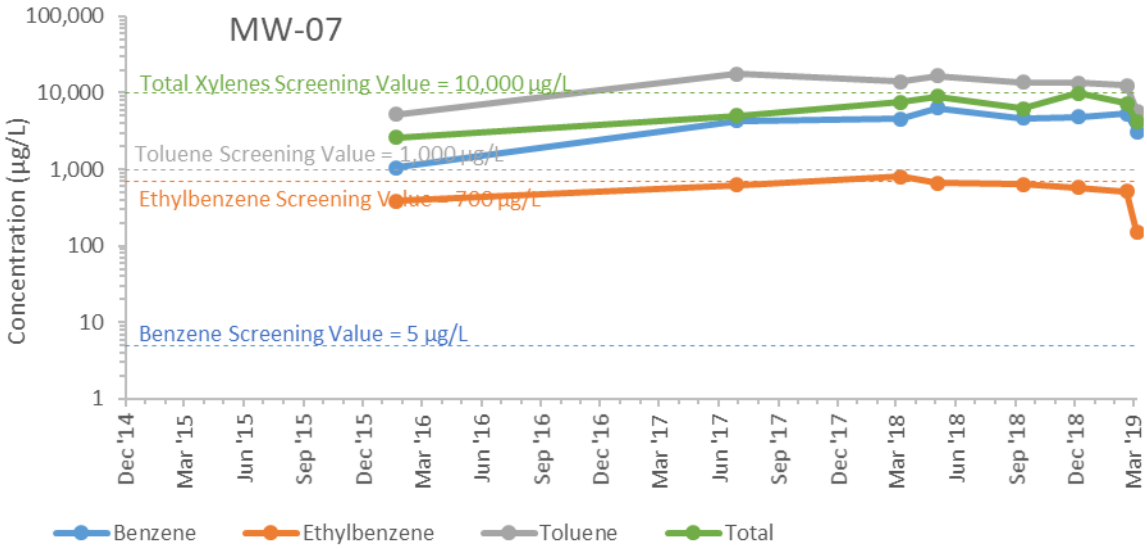
Hayfield Monitoring Well Trends:



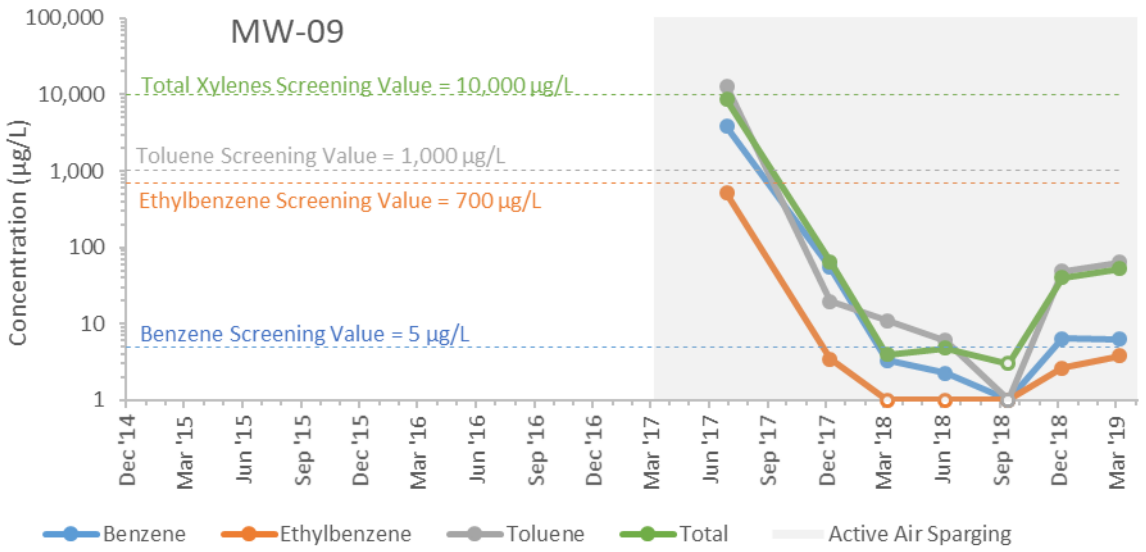
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



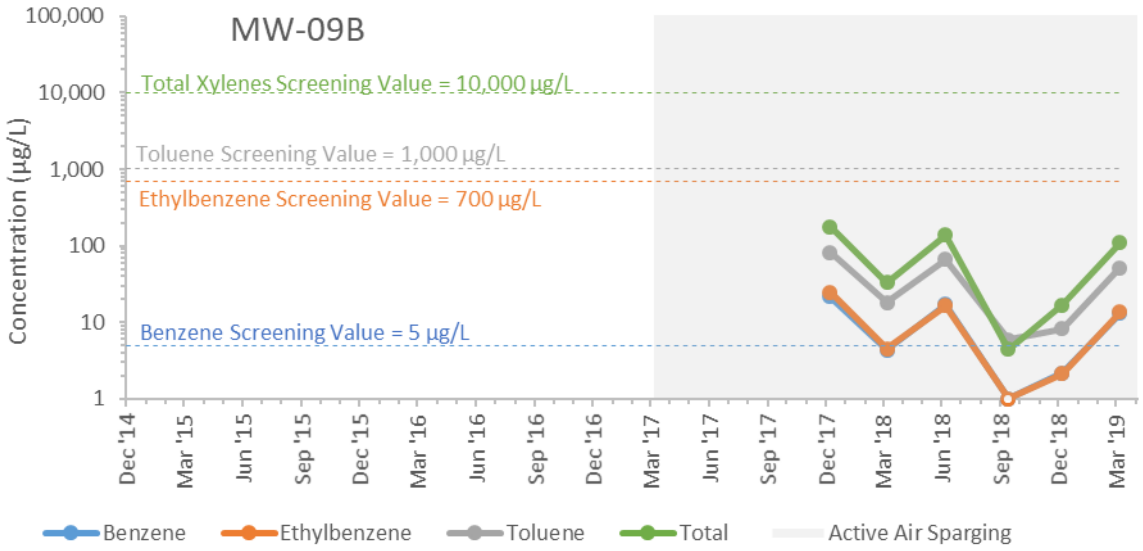
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



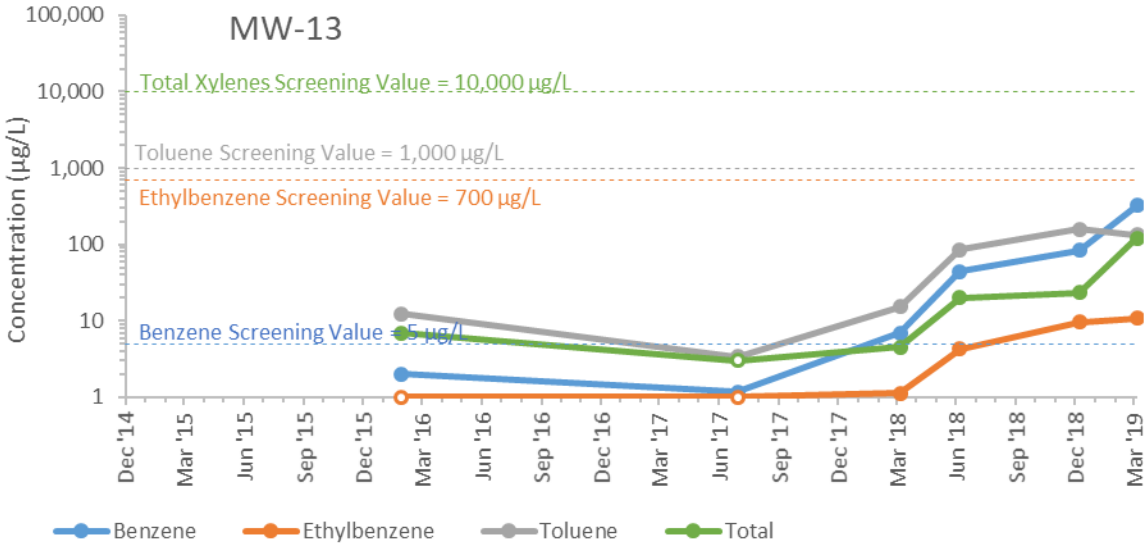
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



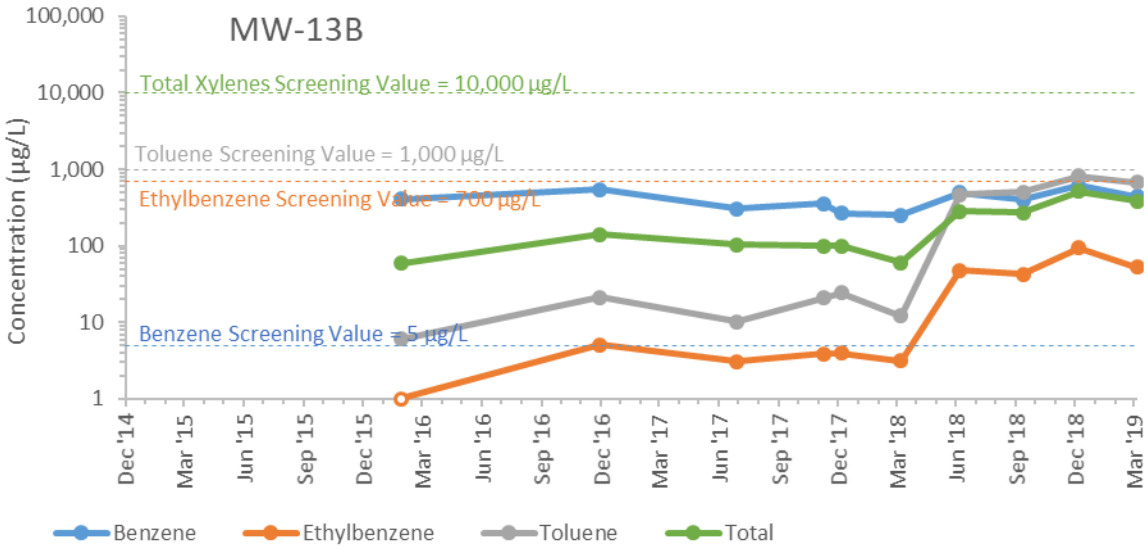
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



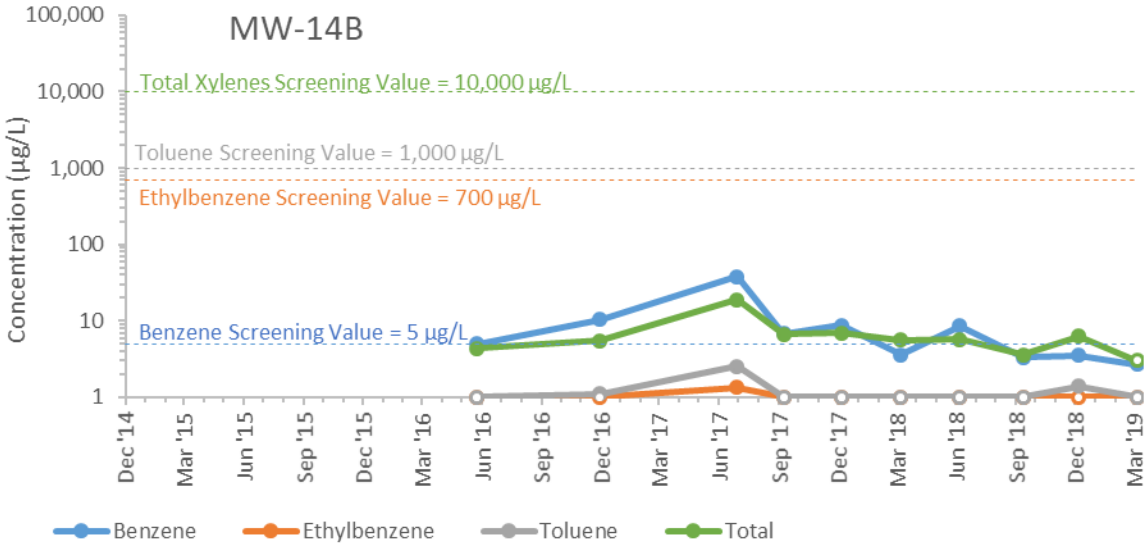
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



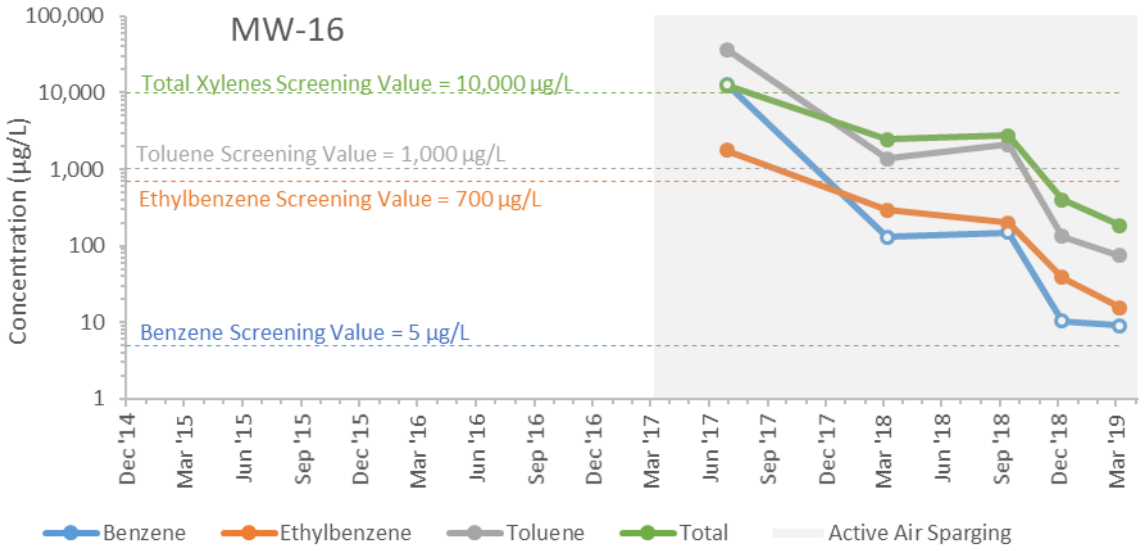
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



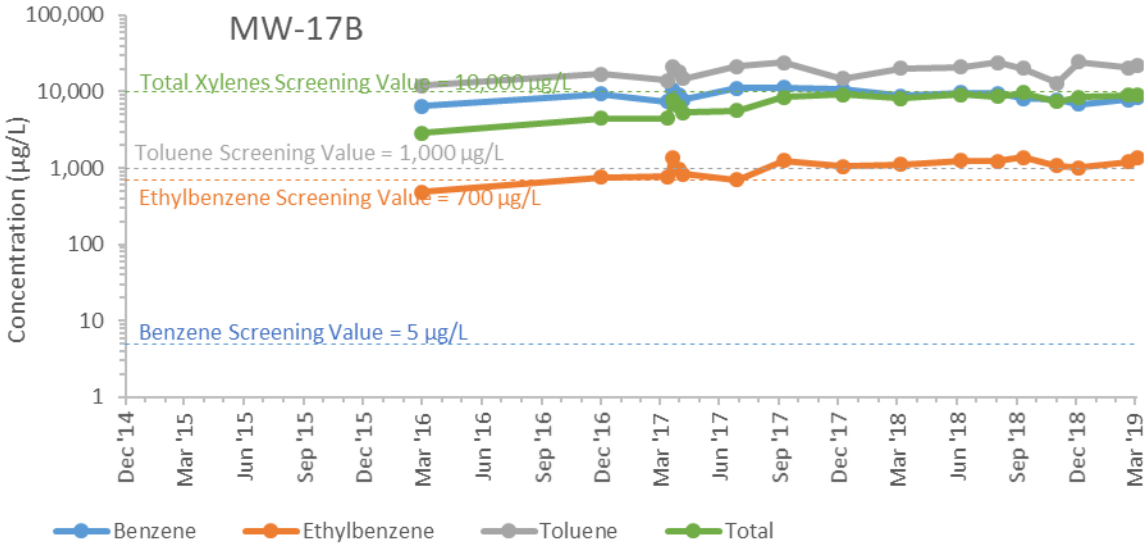
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



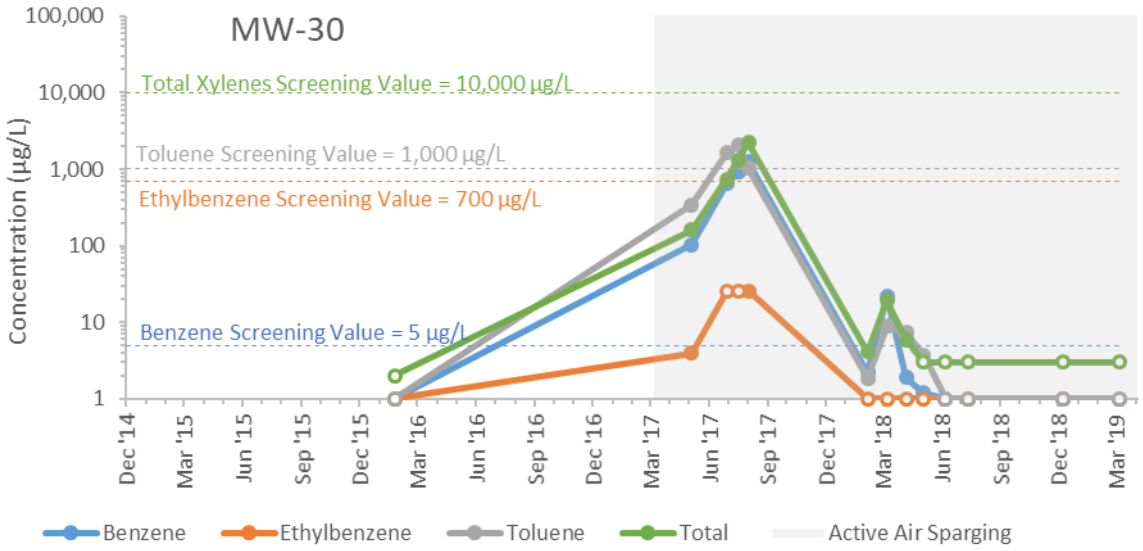
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



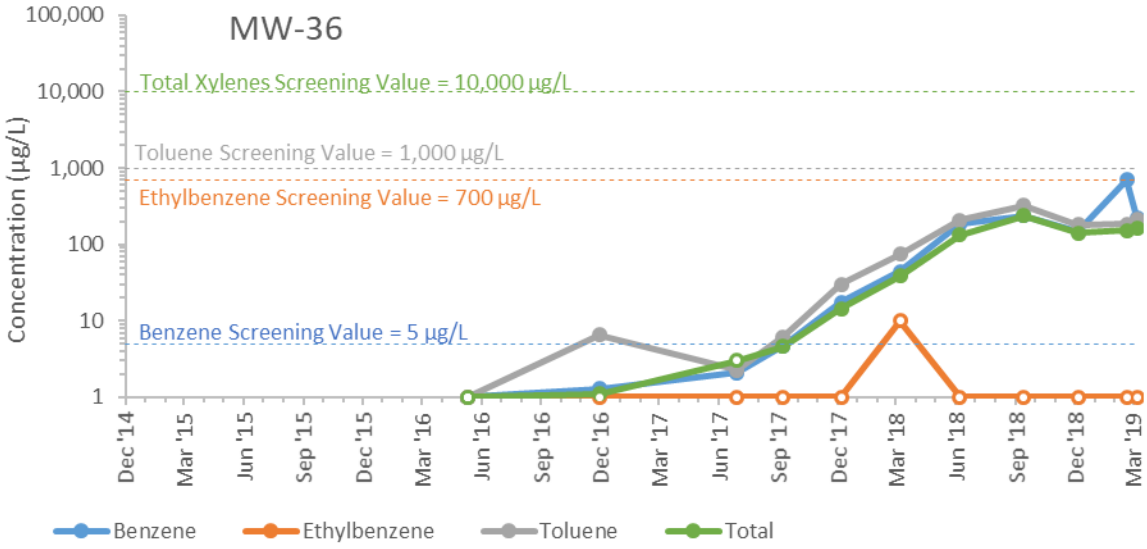
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



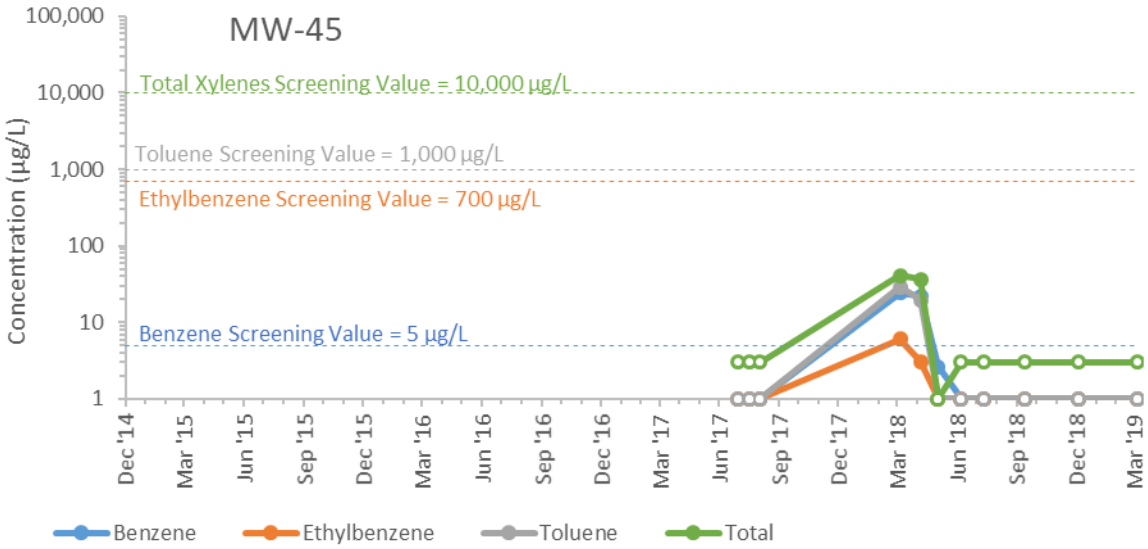
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



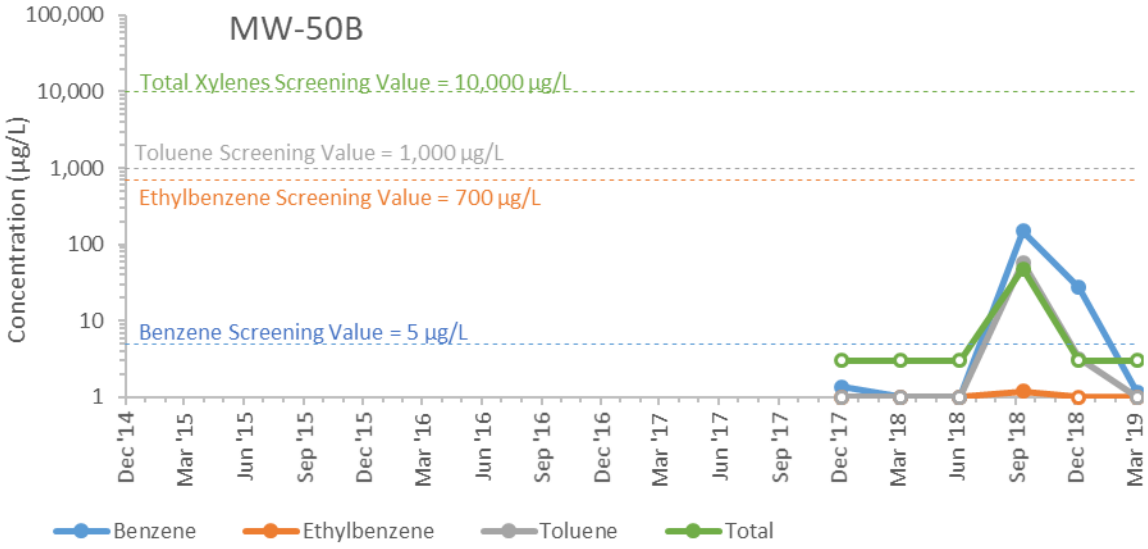
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

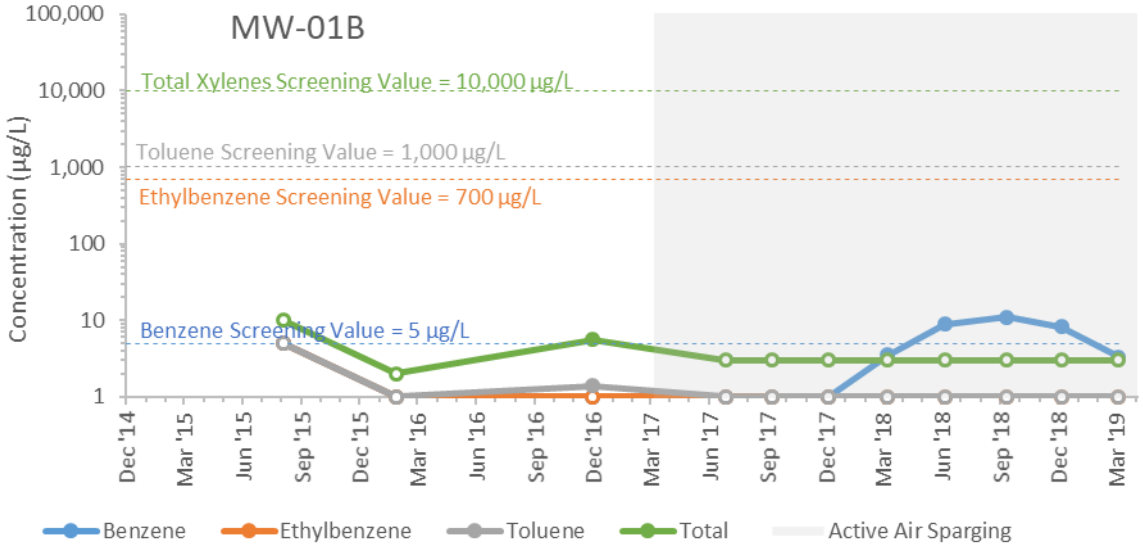


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

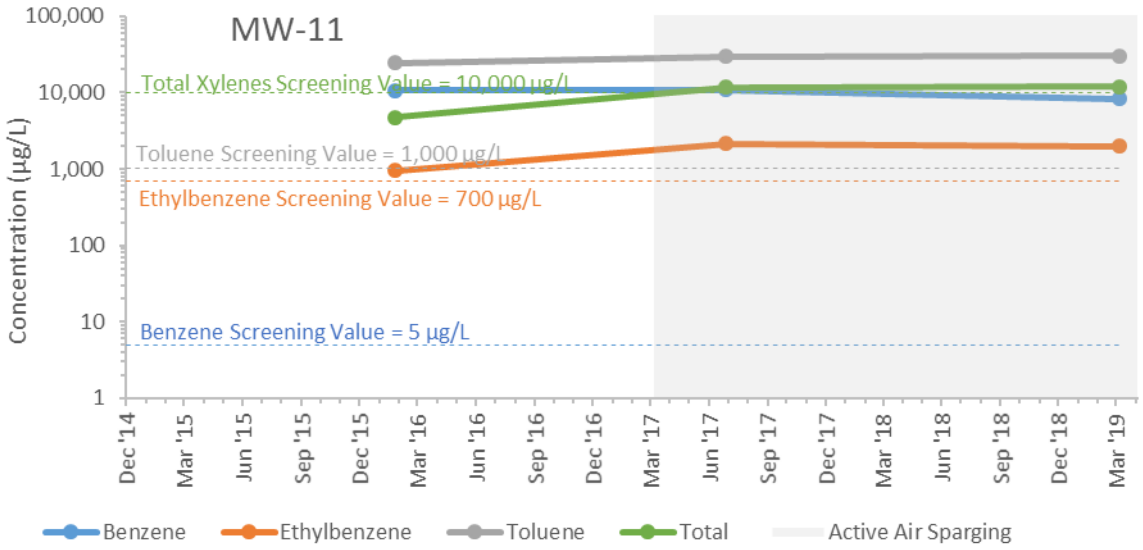


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

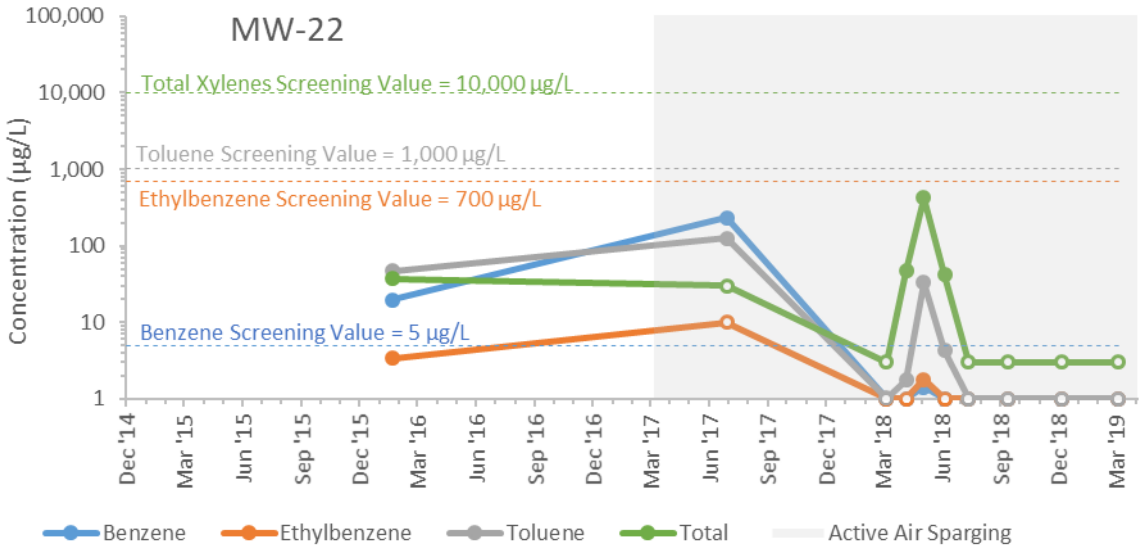
Shallow Bedrock Monitoring Well Trends:



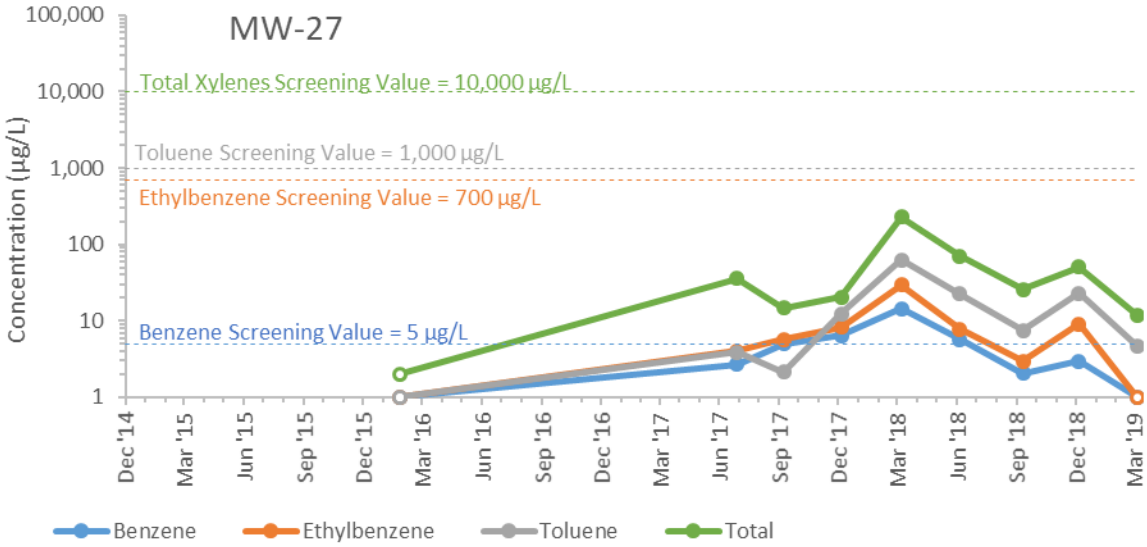
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



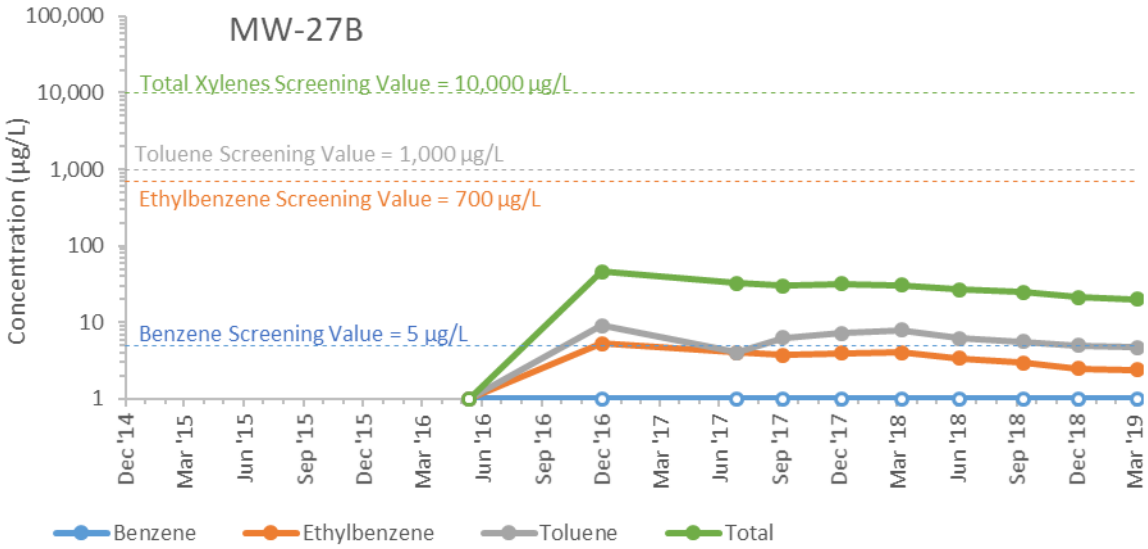
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



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.