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October 2017

Voluntary Remediation Program Fifth Progress Report and Corrective Action Plan

Roper Pump Company
HSI No. 10901
Commerce, Georgia

Prepared for:

Roper Pump Company

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Commerce, Georgia
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Responsive partner.
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PE Certification

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long-term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Adam Hayes, P.E.
Senior Managing Engineer-Southeast Region

October 31, 2017

Registration No.
State of Georgia

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1.0 Introduction

The Roper Pump Company ("Roper") facility is located at 3475 Old Maysville Road in Commerce, Jackson County, Georgia (HSI Site No. 10901) ("Site"). The Site location is shown on **Figure 1**. The Voluntary Remediation Program ("VRP") Application was submitted to the Georgia Environmental Protection Division ("EPD") on December 18, 2014. EPD approved the VRP Application in a letter dated April 13, 2015. This Fifth VRP Progress Report provides a summary of activities conducted from April 2017 through October 2017 ("Report Period").

1.1 HISTORICAL ACTIVITIES

The Roper Pump Company manufactures gear pumps, progressive cavity pumps, flow dividers, and power sections for clients in the energy, transportation, and food and beverage industries. In May 2009 during construction activities associated with a facility building expansion, soil and groundwater adjacent to an abandoned storm sewer line were found to have elevated concentrations of volatile organic compounds ("VOCs"), primarily tetrachloroethene ("PCE") and trichloroethene ("TCE"). A Release Notification was submitted to the EPD pursuant to the Hazardous Site Response Act ("HSRA") on July 13, 2009. The facility was listed on the Georgia Hazardous Site Inventory ("HSI") on November 23, 2009 as HSI No. 10901 for releases of 1,1,2-trichloroethane (1,1,2-TCA) to soil and groundwater above a reportable quantity. Other contaminants documented in groundwater included 1,1,2,2-tetrachloroethane, 1,1-dichloroethene, chloroform, cis-1,2-dichloroethene ("cis-1,2-DCE"), PCE, TCE, benzene, methyl ethyl ketone, and trans-1,2-DCE.

Corrective actions conducted at the Site to date includes: excavation of contaminated soil; installation and operation of an SVE system; and the installation of a 60 mil HDPE vapor barrier beneath the office portion of the building expansion.

1.2 SITE GEOLOGY AND HYDROGEOLOGY

The Site is in the Piedmont Physiographic Province of Georgia. Soils in the Piedmont are derived through weathering of the underlying metamorphic rocks, predominantly composed of gneisses and schists. According to the December 2014 VIRP, the Natural Resources Conservation Service ("NRSC") Soil Survey described the Site as being composed of predominantly Cecil sandy loam developed primarily from fine to coarse grained gneisses followed by hornblende and tale schists.

The Piedmont Province typically consists of crystalline bedrock with discontinuous fractures containing water, which are hydraulically connected to the saprolite (weathered bedrock and soil or residuum) above. The degree of fracturing and size of the fracture apertures (openings) tends to decrease with depth.

Groundwater in the Piedmont Province occurs under unconfined conditions where the potentiometric surface mimics the ground surface topography. Along topographically low areas, the water table typically occurs within soil and saprolite of the hydrogeological profile. Along topographically high areas, the water table often occurs in underlying crystalline bedrock. The saprolite-bedrock aquifer is recharged by rainfall and discharges into streams in valley bottoms. The saprolite stores and transmits water in the pore spaces

between the soils (clays, silts, and sands) that comprise the saprolite. The saprolite has a much higher storage capacity but lower transmissivity than the underlying bedrock. The bedrock stores and transmits water through secondary porosity features (fractures, joints, and faults). The bedrock can transmit very large volumes of water; the transmissivity depends on the density and orientation of the secondary porosity features. Based on the local topography around the Site and available site information, shallow groundwater generally flows in an easterly direction.

2.0 Summary of Site Activities

During this Report Period, the following activities were conducted:

- Install one pilot test performance monitoring well (MW-21D) in the alley downgradient of well MW-13D and upgradient of wells MW-7 and MW-12D (and the pilot test barrier wall);
- Install the pilot test groundwater injections;
- April 20, 2017 site visit and meeting with EPD;
- Conduct pilot test post-injection monitoring (May through August 2017);
- Complete the soil vapor extraction ("SVE") system evaluation;
- Install vertical delineation monitoring wells MW-13, MW-12, MW-21, MW-22 and MW-23;
- Submit an Underground Injection Control Notification Form to EPD;
- Conduct groundwater sampling of new monitoring wells and selected monitoring wells to establish pre-treatment baseline conditions;
- Summarize historical groundwater data;
- Update the conceptual site model ("CSM"); and
- Prepare the final corrective action plan and submit the Fifth VRP Progress Report to EPD.

2.1 PERFORMANCE WELL INSTALLATION

Monitoring well MW-21D was installed on April 17, 2017 to evaluate groundwater conditions migrating from the center of the plume toward the pilot test. The well location is shown on **Figure 2**.

The monitoring well was constructed as threaded, two-inch diameter PVC wells with 10 feet of screen installed from 50 to 60 feet below ground surface ("bgs"). The top of casing elevation has not yet been surveyed for the new monitoring well. A summary of Site monitoring well construction details is provided in **Table 1.** Boring logs and well construction diagrams are provided in **Appendix A.**

2.2 PILOT TEST GROUNDWATER INJECTIONS

During the week of April 17, 2017, Wenck Associates, Inc. ("Wenck"), along with ORIN Technologies and Atlas Geo-Sampling, mobilized to perform groundwater injections for a pilot test.

In April 2017, Wenck advanced twelve (12) direct push borings in the alley. The borings were installed at locations intended to comprise a barrier wall upgradient of monitoring wells MW-7 and MW-12D. In general, the injection borings were advanced to a total depth of approximately 50 feet and the treatment chemistry was injection from 22 feet to 50 feet from the bottom up.

A combination of Bio-available Absorbent Media ("BAM") and ELS™ Microemulsion was injected in the boring locations. BAM is a sustainable, pyrolized, recycled cellulosic bio-mass product (>80% fixed carbon) derived from a proprietary blend of recycled organic materials with a high cation exchange and an estimated half-life of 500 years. BAM has diverse pore

sizes with a minimum total surface area of up to 1,133 square meters per gram. BAM has the ability to provide ample usable surface area for maximizing microbial colonization and thereby an active microbial community. BAM's affinity for organic and inorganic compounds supports maximum contact (bio-availability through high sorbency) with microbes allowing for complete degradation.

ELS™ Microemulsion is a lecithin-based substrate of food-grade carbon used to enhance anaerobic bioremediation. ELS creates reducing conditions and serves as an electron donor for dechlorinating bacteria, promoting enhanced reductive dechlorination reactions. Lecithin is composed primarily of phospholipids, which have both hydrophilic and hydrophobic regions in their molecular structure. Additional information regarding the chemical injection pilot testing is presented in Section 5.1.

EPD conducted a Site visit on April 20, 2017. EPD representatives met with Wenck representatives to observe the groundwater pilot test injections, conduct a tour the property, and view the locations of the groundwater monitoring wells. The proposed full-scale *in situ* corrective action strategy was also discussed at this time.

2.3 PILOT TEST POST-INJECTION MONITORING

Water level measurements and post-injection field parameter readings were collected monthly from May through August 2017 from the following monitoring wells: MW-6, MW-6D, MW-6DS, MW-7, MW-9S, MW-9D, MW-12D, and MW-21. Field parameters recorded included: pH, conductivity, oxidation reduction potential ("ORP"), temperature, and dissolved oxygen ("DO"). During the second (June 2017) post-injection monitoring event, groundwater samples were collected for target VOC parameter analyses from the following monitoring wells: MW-6, MW-6D, MW-7, MW-9S, MW-12D, and MW-21. The results of the pilot study are discussed in Section 6.1.

2.4 SVE SYSTEM ASSESSMENT

The primary objective of the SVE system assessment was to evaluate the SVE system's performance and determine if relatively simple system modifications may possibly reduce contaminants in unsaturated soils below the building expansion.

The SVE system includes 119 extraction wells installed around and underneath the loading dock ramp and building expansion. Approximately 30 of the wells are located below the newer building addition and a 60 mil HDPE vapor barrier. The wells are connected to 18 separate lines that tieback into four (4) main horizontal collection manifold pipes.

Vacuum is provided by a 10-horsepower ("hp") AMETEK/ROTRON regenerative blower that can produce a maximum flow of 615 scfm and maximum vacuum of 140 inches H_2O (10.3 inches Hg). The system includes a liquid knock-out tank and off-gas is treated with two 2,000-lb activated carbon vessels. The design also includes approximately eight horizontal passive vent lines that were installed to allow "make-up" air to enter the subsurface. The system began operation in November 2010.

Wenck performed an initial field assessment of the system components on March 23, 2017. The following provides a summary of initial system observations:

- Total flow rate of approximately 480 scfm at 36 inches H_2O (2.64 inches Hg);
- Vapor recovery rates essentially at 0.0 lbs/day;
- The carbon has not been changed since July 2013, which confirms very low vapor recovery rates;
- Vacuums was observed at roof stacks connected to the horizontal "make-up" lines which suggested short-circuiting of ambient air through the system:
- Water accumulation in line 4-1 has been a regular occurrence; and
- Most of the system lines and extraction wells are under concrete and inaccessible. The system does not include access vaults or in-line valves.

Upon completion of the initial observations, Wenck made a series of adjustments in an attempt to optimize the SVE system. The make-up air roof stacks were covered to seal off the ambient air short circuiting and concentrate vacuum on the subsurface extraction wells. Extraction legs were also closed at the manifold valves to increase the total vacuum applied to the well field. The

The system was allowed to equilibrate for approximately one month and follow-up measurements were recorded on April 20, 2017. The following provides a summary of post-adjustment observations:

- Total flow rate of approximately 220 scfm at 95 inches H_2O (6.98 inches Hg);
- Vapor recovery rates at 1.59 lbs/day; and
- Water accumulation in the knock-out tank became a regular occurrence.

A cost-benefit analysis was performed and concluded that the monthly cost for electrical service to the system was on the order of $600 per month. Additional costs for system monitoring, carbon exchange, and water management from the knock-out tank were estimated to average approximately $1,200 to $1,500 per month.

Based on the results of this assessment, Wenck has determined that continued operation of the system would not materially improve overall site conditions and is an inefficient use of resources. Based on these results, the system was deactivated in April 2017. The equipment will remain on site and Roper personnel will periodically "bump" the system and perform maintenance as needed to maintain the equipment in good working order.

2.5 DELINEATION WELL INSTALLATION

Additional vertical delineation activities were performed at the site in response to the comment letter from EPD, dated June 19, 2017. The delineation activities were performed to specifically address the EPD's request to complete additional plume characterization "proximal to and downgradient of the area classified as containing potential source material, specifically around MW-7 and boring B-10."

Monitoring wells MW-12, MW-13, MW-21, MW-22, and MW-23 were installed from October 2 to 5, 2017 at locations shown on **Figure 2**. The monitoring wells were constructed as threaded, two-inch diameter PVC wells with 10 feet of screen. The results of the pilot study and groundwater samples collected during the installation of MW-12D were used to select the screened interval for the new wells. A summary of the wells and the screened intervals is provided below:

Center of the Plume:

- MW-13 and MW-21: 30 to 40 feet bgs; and
- MW-12 and MW-22:35 to 45 feet bgs.

Downgradient of the Center of the Plume:

- MW-23: 40 to 50 feet bgs.

The top of casing elevations will be surveyed during the next reporting period. A summary of monitoring well construction details is provided in **Table 1.** Boring logs and well construction diagrams are provided in **Appendix A.**

2.6 UNDERGROUND INJECTION CONTROL APPLICATION

An Underground Injection Control ("UIC") permit application was prepared and submitted to the EPD UIC Unit on October 6, 2017. The UIC permit application included required historical site information, pilot testing results, and details for the full-scale corrective action implementation.

2.7 GROUNDWATER SAMPLING

On October 12 and 13, 2017, Wenck collected groundwater samples from the new wells and selected wells at the site. The sampling activities were performed in general accordance with the U.S. Environmental Protection Agency ("EPA") Region 4 Science and Ecosystem Support Division ("SESD") Quality System and Technical Procedures for surface water (SESDPROC-201-R3) sampling and groundwater (SESDPROC-301-R3) sampling. All groundwater water samples were analyzed for VOC (EPA method 8260) analysis. The locations of the monitoring wells are shown on **Figure 2**. The monitoring well construction details are presented in **Table 1** and the water level measurements collected during the sampling event are presented in **Table 2**. Water quality field parameters measured during the October 2017 event are provided in **Table 3**. A description of the groundwater sampling procedures is presented in Section 3.0 and the groundwater sampling field forms are provided in **Appendix B**.

3.0 Sampling Procedures

3.1 WATER LEVEL MEASUREMENTS

Prior to sampling, depths to groundwater and total well depths were measured using a water level indicator. Previously marked reference points were used to ensure consistency of measurements. Depths were measured to the nearest 0.01 foot. Water level measurement results are presented in **Table 2.** A potentiometric surface map depicting groundwater flow across the site is presented on **Figure 3**.

Measured depth to water ranged from 16.85 to 23.51 feet below top of casing ("TOC"). The water table elevations ranged from 875.87 feet above mean sea level ("msl") to 878.79 feet msl. Groundwater elevations recorded on October 12, 2017 indicated that groundwater beneath the site flows to the east with an average hydraulic gradient of 0.029 feet/foot.

3.2 GROUNDWATER SAMPLING

Groundwater sampling in October 2017 included collection of samples from sixteen (16) monitoring wells (MW-4, MW-6, MW-6D, MW-6DS, MW-7, MW10-9S, MW-9D, MW-12, MW-12D, MW-13, MW-13D, MW-15D, MW-21, MW-21D, MW-22, and MW-23).

The following field parameters were measured using direct reading instruments: DO, pH, conductivity ("SC"), water temperature, turbidity, and oxidation-reduction potential ("ORP"). The results of these measurements are presented in **Table 3**. Groundwater parameters during purging were considered stable when at least three (3) sets of readings were within the following ranges:

- pH (± 0.1 SU);
- SC (± 10%);
- Temperature (± 1°C);
- DO (± 0.2mg/L or 10%, whichever was greater); and
- ORP (± 10 mV).

Pumping rates were established at 0.1 liters per minute and adjusted to accommodate drawdown, if necessary. Purge water from the wells was placed into 55-gallon steel drums. The drums of investigation-derived waste ("IDW") were properly labeled prior to leaving the site.

Groundwater samples were collected after field parameters stabilized. The samples were collected in laboratory supplied pre-preserved bottles, placed in a cooler with ice, and submitted under chain-of-custody control to Pace Analytical Services, LLC ("Pace") for laboratory analysis. All groundwater samples (plus appropriate quality control samples) were analyzed to determine concentrations of VOCs using EPA method 8260B. Field logs of the sampling activities are provided in **Appendix B**.

Decontamination of non-disposable equipment was performed during the sampling event. Equipment was cleansed after each use with phosphate-free laboratory detergent and rinsed with distilled water in general accordance with the EPA SESD OP for *Field Equipment Cleaning and Decontamination* (SESDPROC-205-R3, December 2015). The equipment was then allowed to air dry.

4.0 Discussion of Analytical Results

A pilot study was performed in April 2017, and post-pilot study monitoring was performed monthly between May and August 2017. The pilot study results are discussed in Section 6.1. Additional wells along with select existing wells were sampled in October 2017 evaluate groundwater conditions in and immediately down-gradient of the center of the plume and to assist in full-scale treatment design (horizontal and vertical treatment areas). The results of the October 2017 groundwater sampling are summarized below.

Groundwater samples were collected from sixteen (16) monitoring well. As shown on **Table 4**, eight (8) constituents were detected above the laboratory reporting limit. Of those constituents, four (4) were detected at concentrations above the Type 4 RRS, including: 1,1,2,2-Tetrachloroethane, cis-1,2-DCE, PCE, and TCE. Results are as follows:

- 1,1,2,2-Tetrachloroethane exceeded the RRS at MW-7 (0.014 mg/L).
- Cis-1,2-DCE exceeded the RRS at seven (7) wells: MW-7 (0.240 mg/L), MW-9S (0.24 mg/L), MW-12 (0.140 mg/L), MW-13 (1.6 mg/L), MW-21 (0.360 mg/L), MW-22 (0.600 mg/L), and MW-23 (0.700 mg/L).
- PCE exceeded the RRS at nine (9) wells: MW-7 (1.9 mg/L), MW-9S (1.2 mg/L), MW-12 (64.0 mg/L), MW-13 (72.0 mg/L), MW-13D (4.1 mg/L), MW-15D (1.3 mg/L), MW-21 (39.0 mg/L), MW-22 (47.0 mg/L), and MW-23 (5.5 mg/L).
- TCE exceeded the RRS at fifteen (15) wells: MW-4 (0.019 mg/L), MW-6D (0.020 mg/L), MW-6DS (0.024 mg/L), MW-7 (0.6 mg/L), MW-9S (0.260 mg/L), MW-9D (0.018 mg/L), MW-12 (2.8 mg/L), MW-12D (0.031 mg/L), MW-13 (2.8 mg/L), MW-13D (7.0 mg/L), MW-15D (0.110 mg/L), MW-21 (2.9 mg/L), MW-22 (0.790 mg/L), and MW-23 (3.7 mg/L).

Laboratory reports and supporting chain-of-custody documentation are included in **Appendix C**. In comparison to groundwater conditions in 2015 and 2016, an increase in parent product, PCE at MW-7 and MW-13D suggest the groundwater plume beneath the building is migrating. However, wells located along the side-gradient and down-gradient portion of the plume remain stable (MW-9D, MW-11 and MW-15D). Additionally, seasonal variations of water quality parameters, such as OPR and DO indicate that seasonally groundwater conditions can vary.

5.0 Conceptual Site Model

A CSM was previously developed which provides the basis for identifying and evaluating potential contaminant sources and transport mechanisms for contaminant migration through the environment, as well as evaluation of potential risk to receptors. The CSM defines site characteristics, release sources, extent of the plume(s), likely fate and transport mechanisms, potential exposure pathways, and potential sensitive receptors that could be impacted. The following sections summarize the latest understanding of the CSM based on the most recent site information.

5.1 CONSTITUENTS OF CONCERN

Environmental assessment activities have been ongoing at the Site since 2009 and have identified constituents of concern ("COCs") at the site. The most recent groundwater analytical testing identified four (4) compounds which were detected at concentrations greater than non-residential RRS including the following:

- 1,1,2,2-tetrachloroethane ("1,1,2,2-TCA");
- Cis-1,2-dichloroethene ("cis-DCE");
- Tetrachloroethene ("PCE"); and
- Trichloroethene ("TCE").

5.2 CENTER OF THE PLUME

The VRP application included a discussion of historical activities that contributed to the impacts at the Site. The information indicates that the cause of VOCs released to the subsurface was from a spill(s) that occurred in the vicinity of the abandoned storm sewer located near the overhang storage. The abandoned storm sewer extends underground from the inlet located under Loading Dock #1, northwest to the storm drain. Site information collected since the original VRP application supports this assessment and demonstrates that the highest concentrations of VOC in groundwater are present near the abandoned storm sewer including areas beneath existing buildings. PCE concentrations in groundwater decrease along a gradient with increasing distance down-gradient of the abandoned storm sewer.

5.3 GROUNDWATER FLOW CHARACTERISTICS

As previously discussed, water level measurements collected on October 12, 2017 (**Table 2**) were used to develop a potentiometric surface map for the Site. As shown on **Figure 3**, the groundwater elevation data indicates groundwater beneath the site flows to the east with an average hydraulic gradient of 0.029 feet/foot.

5.4 EXTENT OF GROUNDWATER IMPACTS

Groundwater analytical results are presented on **Figure 4**. The extents of the four (4) constituents above the EPD-approved Type 4 RRS individual and their concentrations above delineation criteria are presented on isoconcentration maps as **Figures 5** through **8**.

Groundwater sampling information indicates that concentrations of 1,1,2,2-TCA greater than the applicable delineation criteria and Type 4 risk reduction standard ("RRS") are confined

to on-site wells in the center of the plume (MW-22, MW-13, MW-21, and MW-7). The horizontal extent of 1,1,2,2-TCA was previously delineated to the northeast, east, and southeast by monitoring wells MW-10, MW-4, and MW-3 as shown on **Figure 5**.

Concentrations of PCE and TCE greater than the applicable Type 4 RRS remain in the center of the plume and have migrated downgradient toward the northeast property boundary. PCE in wells MW-12, MW-13 and MW-21 reported PCE at 64,000 ug/L, 72,000 ug/L, and 39,000 ug/L. Downgradient of the center of the plume, PCE was reported at MW-23 at 5,500 ug/L. The full-scale groundwater treatment plan includes chemical injection in the center of the plume and along the northeast property boundary to reduce concentrations and prevent further downgradient migration of PCE and TCE. The horizontal extents of PCE and TCE were previously delineated to the northeast, east, and southeast by monitoring wells MW-10, MW-18, MW-19, and MW-20 as shown on **Figures 6 and 7**.

Concentrations of cis-DCE greater than the applicable delineation criteria and Type 4 risk RRS are primarily confined to on-site wells MW-22, MW-9S, MW-12, MW-13, MW-21, and MW-7. Groundwater sampling information indicates that cis-DCE concentrations greater than the RRS have migrated slightly downgradient toward MW-23 but horizontal extent of cis-DCE was previously delineated to the northeast, east, and southeast by monitoring wells MW-10, MW-4, and MW-3 as shown on **Figure 8**.

Vertical delineation activities at the site have been performed to evaluate the distribution of groundwater impacts through the aquifer. Bedrock monitoring well MW-15D was installed to provide vertical delineation information for the Site. In addition, deep monitoring wells MW-6D, MW-9D, MW-12D, and MW-13D provide information regarding vertical distribution of impacts. **Figure 9** presents a cross section location map. Groundwater concentration information and concentration results are depicted on cross section **Figures 10 and 11**.

During the reporting period, significant efforts have been made to further evaluate the groundwater conditions of the plume. Specifically, samples were collected during the pilot testing indicated that the majority of the material was located between 30 and 40 feet bgs. A number of wells (MW-12, MW-13, MW-21 and MW-22) were strategically installed to monitor this zone within the center of the plume. Monitoring well MW-23, was installed slightly deeper in the down-gradient portion of the plume.

Groundwater sampling performed in October 2017 indicates that the highest groundwater impacts area located within a vertical zone extending from approximately 30 to 45 feet bgs. PCE concentrations in wells from this vertical zone including MW-22, MW-7, MW-12, MW-13 and MW-21 were reported at 47,000 ug/L, 19,000 ug/L, 64,000 ug/L, 72,000 ug/L, and 39,000 ug/L, respectively.

The October 2017 sampling also demonstrates that concentrations in the center of the plume decrease significantly within the deeper zones at depths ranging from 50 feet to 86.5 feet bgs. PCE concentrations in wells from the deeper vertical zone including MW-9D, MW-12D, MW-13D, and MW-21D were reported at <5 ug/L, 8.8 ug/L, 4,100 ug/L, 1,000 ug/L, and 39,000 ug/L, respectively.

The full-scale groundwater treatment plan includes chemical injection in the center of the plume and along the northeast property boundary to reduce concentrations and prevent further downgradient migration of PCE and TCE. Additional vertical delineation activities, to the extent technically practicable, will be performed as needed following completion of the planned full-scale remediation activities.

6.0 Groundwater Corrective Action Plan

6.1 PILOT TEST RESULTS

On February 8, 2017, Roper met with EPD to summarize the conditions at the Site and outline a milestone schedule for full-scale remediation. The proposed approach for the facility included injection for *in situ* treatment of impacted groundwater beneath the Site. The following sections provide summary of pilot testing results and the full-scale corrective action strategy.

6.1.1 Clean Water Design Testing

A Pilot Test Injection Well Notification form was submitted to the UIC Unit on April 12, 2017. The clean water injection boring was located approximately 20 feet southeast from boring DT-2. Drilling with a 1-inch rod, refusal was reached at approximately 52 feet bgs. Clean water was injected with a dual diaphragm pump from 48 to 52 feet bgs. Approximately100 gallons of water was injected in this interval in 12 minutes, which is approximately eight to nine gallons per minute ("gal/min"). Pressures steadied at 40 pounds per square inch ("psi"). Groundwater elevations were observed to be influenced in nearby well MW-12D (located approximately 25 feet away), which is screened from 81 to 86 feet bgs.

The injection rods were then pulled up to the 36 to 40 feet bgs depth interval and 100 gallons were injected in 30 minutes, which equates to just over 3 gal/min. The influence was again seen in groundwater elevation at well MW-12D. No influence was seen in well MW-7 (located approximately 30 feet away), which is only 25 feet deep. The injection rods were then pulled up to the 20 to 24 feet bgs depth interval and just over 100 gallons were injected in 17 minutes, which equates to approximately 6.5 gal/min. Again, there was no real influence observed in water levels at well MW-7 (increased approximately 0.04 feet). The water level in well MW-12D began to drop while injecting into the shallow depth interval.

The results of the design testing and clean water injection were presented in the Fourth VRP Progress Report dated April 28, 2017.

6.1.2 Chemical Injection Pilot Testing

Chemical injection pilot testing was performed by Orin Technologies, LLC beginning on April 17, 2017. The pilot testing included injection of BAM treatment chemistry at each of the 12 injection points. In addition, three points were selected to receive soluble carbon treatment chemistry. Nine points were advanced as a Barrier Wall (BW-1 through BW-9) upgradient of MW-7 and MW-12D and three (3) points were advanced upgradient of MW-21 (near SA-1 through SA-3).

During the pilot test mobilization, an average of 600 gallons of 6% wt./wt. BAM solution was injected at barrier wall points BW-1, BW-2, BW-3, BW-4, BW-5, BW-6, and BW-7. Approximately 800 gallons of 6% wt./wt. BAM solution was injected at BW-8 and BW-9. A 21% ELS™ solution was also injected into the barrier wall points BW-5, BW-6, and BW-7.

Approximately 600 gallons and 440 gallons of 6% wt./wt. BAM solution was injected into points SA-1 and SA-3. Approximately 100 gallons of 6% wt./wt. BAM solution was injected at location SA-2. Further information regarding the pilot test injections and Safety Data Sheets ("SDS") for the injection chemicals is provided in **Appendix D**.

The pilot test post-injection monitoring results demonstrated that the BAM/ELS solution was influencing the formation and improving site conditions. During the monitoring period ORP measurements decreased significantly at monitoring wells MW-7, MW-9D, and MW-12D. These measurements indicate that the injection was improving conditions conducive for reductive dichlorination. Conductivity measurements at these well locations also increased which demonstrates that the injection activities successfully distributed the BAM solution through the formation.

The overall observation was that the BAM and ELS resulted in a decreased concentration of VOCs at MW-7, along with decrease in ORP in addition to an increase in the conductivity. The pilot study was located in the middle of the groundwater plume. Therefore, post-injection monitoring of parameters was influenced by upgradient groundwater conditions that were determined after additional wells were installed.

The pilot test post-injection monitoring results also demonstrated notable reductions in PCE concentrations at MW-7 and MW-9S. The PCE concentration at MW-7 decreased 3.0 mg/L (18.8%) and the concentration at MW-9S decreased 0.35 mg/L (71%).

6.2 FULL-SCALE CORRECTIVE ACTION PLAN

The full-scale remediation approach will include chemical injection through a series of borings spaced in a grid-like pattern. The borings would be advanced to the appropriate depth using direct push technology ("DPT"). The treatment chemistry will be injected into the rods to create minimal positive pressure before commencing injection into the surrounding formation. The rods will then be raised through the vertical treatment zone while simultaneously injecting the treatment chemistry into the formation.

The remedial injection treatment chemistry will be prepared using ORIN's specialized injection equipment. The treatment chemistry will be mixed and temporarily staged prior to injection in 200-gallon tanks located inside ORIN's enclosed injection trailer. The tank will first be filled with the proper amount of water to achieve the appropriate treatment chemistry solution concentration. Multiple tanks will be mixed and used during the injection, which enables work to proceed steadily and efficiently. The treatment chemistry will be pumped into the formation using ORIN's air-driven, chemically resistant pumps. The rate, pressure, and volume will be monitored using a chemically resistant inline electronic flow meter.

The treatment will include a combination of BAM and Anaerobic BioChem Carbon ("ABC"). ABC is a patented mixture of lactates, fatty acids, alcohols and a phosphate buffer. The lactate components serve as the short-term (more quickly consumed) components and the fatty acids serve as long-term releasing components.

The remedial impacted footprint in the Center of the Plume and Barrier Wall is approximately 11,000 and 6,000 ft^2 respectively. The vertical extent of remediation shall extend from approximately 25 to 65 feet bgs, or probe refusal. Approximately 71 and 43 DPT injection locations will be used for treatment within the center of the plume and Barrier Wall, respectively. Half of the locations within each area will receive water soluble carbon and all of the locations will receive BAM. In the center of the plume, every other row, perpendicular to groundwater flow direction, will vary in treatment chemistry. In the Barrier Wall, every other DPT injection location will vary in treatment chemistry. The approximate injection locations are shown on **Figure 12**.

Each location will inject an average of 450 gallons of either 6% BAM only or both 6% BAM and 1.7% water soluble carbon treatment chemistry into each of their respective DPT points. A treatment flow diagram and injection component details are included in **Attachment E**.

7.0 Planned Activities and Schedule

As provided in **Table 7**, Activities planned for the next six-month reporting period (November 2017 through March 2018) include the following:

- Survey horizontal and vertical locations of monitoring wells (November 2017);
- Complete full-scale injection field activities (December 2017); and
- Conduct monthly post-injection monitoring (January through June 2018).

The Sixth VRP Progress Report will be submitted by April 30, 2018.

Tables

TABLE 1
Monitoring Well Construction Details

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI No. 10901

WENCK
Responsive partner.
Exceptional outcomes.

Well Number	Well Completion Date	Top of Casing Elevation (feet-NGVD)	Depth of Screened Interval (feet BGS)	Screen Length (feet)
MW-1	2/10/2014	895.62	11.5 - 26.5	15
MW-2	2/10/2014	896.57	9.9 - 24.9	15
MW-3	2/17/2014	901.06	11.9 - 26.9	15
MW-4	2/18/2014	899.10	9.7 - 24.7	15
MW-5	2/18/2014	898.65	9.9 - 24.9	15
MW-6	2/17/2014	898.33	9.2 - 24.2	15
MW-6D	2/14/2014	898.25	33 - 43	10
MW-6DS	2/14/2014	898.31	61 - 66	5
MW-7	2/18/2014	898.12	9.4 - 24.4	15
MW-8	10/28/2014	903.70	24.5 - 34.5	10
MW-9D	10/29/2014	898.48	63.5 - 68.5	5
MW-9S	10/29/2014	898.31	16 - 26	10
MW-10	10/29/2014	906.94	29.5 - 39.5	10
MW-11	10/29/2014	901.31	24 - 34	10
MW-12	10/2/2017	TBD	35 - 45	10
MW-12D	8/31/2015	898.27	81.5 - 86.5	5
MW-13	10/2/2017	TBD	30 - 40	10
MW-13D	8/28/2015	898.26	64 - 69	5
MW-14	8/27/2015	899.10	25 - 35	10
MW-15D	2/24/2016	898.10	74 - 84	10
MW-16	2/25/2016	900.87	25 - 35	10
MW-17	2/25/2016	899.92	30 - 40	10
MW-18	8/26/2016	886.50	30 - 40	10
MW-19	12/2/2016	906.86	25 - 40	15
MW-20	12/9/2016	900.11	25 - 40	15
MW-21	10/3/2017	TBD	30 - 40	10
MW-21D	4/17/2017	TBD	50 - 60	10
MW-22	10/4/2017	TBD	30 - 40	10
MW-23	10/4/2017	TBD	40 - 50	10

Notes:
NGVD- National Geodetic Vertical Datum
BGS- Below Ground Surface
TBD- To Be Determined in next report period

Prepared by: SEF Date: 10/20/2017
Reviewed by: KR Date: 10/24/2017

TABLE 2
Summary of Groundwater Elevations

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

Well Number	Date Measured	Top of Casing Elevation (feet)	Depth of Screened Interval (feet BLS)	Water Depth (feet)	Groundwater Elevation (feet)
MW-4	10/12/17	899.1	9.7-24.7	23.23	875.87
MW-6	05/25/17	898.33	9.2-24.2	20.16	878.17
	06/26/17			19.89	878.44
	07/18/17			19.57	878.76
	08/24/17			19.42	878.91
	10/12/17			19.54	878.79
MW-6D	05/25/17	898.25	33-43	20.14	878.11
	06/26/17			19.88	878.37
	07/18/17			19.55	878.70
	08/24/17			19.42	878.83
	10/12/17			19.56	878.69
MW-6DS	05/25/17	898.31	61-66	21.45	876.86
	06/26/17			20.23	878.08
	07/18/17			19.89	878.42
	08/24/17			19.73	878.58
	10/12/17			19.78	878.53
MW-7	05/25/17	898.12	9.4-24.4	21.12	877.00
	06/26/17			20.85	877.27
	07/18/17			20.52	877.60
	08/24/17			20.31	877.81
	10/12/17			20.78	877.34
MW-9D	05/25/17	898.48	63.5-68.5	21.24	877.24
	06/26/17			20.99	877.49
	07/18/17			20.67	877.81
	08/24/17			20.46	878.02
	10/12/17			20.53	877.95
MW-9S	05/25/17	898.31	16-26	20.96	877.35
	06/26/17			20.71	877.60
	07/18/17			20.39	877.92
	08/24/17			20.17	878.14
	10/12/17			20.24	878.07
MW-12	10/12/17	TBD	35-45	20.55	
MW-12D	05/25/17	898.27	81.5-86.5	21.49	876.78
	06/26/17			21.17	877.10
	07/18/17			20.85	877.42
	08/24/17			20.63	877.64
	10/12/17			20.36	877.91
MW-13	10/12/17	TBD	30-40	20.37	
MW-13D	05/25/17	898.26	64-69	NS	0.00
	06/26/17			20.74	0.00
	07/18/17			NS	0.00
	10/12/17			20.34	877.92
MW-15D	10/12/17	898.10	74-84	23.51	874.59
MW-21	10/12/17	TBD	30-40	20.71	
MW-21D	05/25/17	TBD	50-60	21.69	
	06/26/17			21.41	
	07/18/17			21.33	
	08/24/17			20.87	
	10/12/17			20.97	
MW-22	10/12/17	TBD	30-40	16.85	
MW-23	10/12/17	TBD	40-50	23.37	

Notes:
Elevations measured to an assumed datum of 1000.00 feet
TBD-To Be Determined in next report period

Prepared by: SEF Date: 10/20/2017
Reviewed by: KR Date: 10/24/2017

TABLE 3
Summary of Groundwater Parameters

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

WENCK
Responsive partner.
Exceptional outcomes.

Well ID	Date Sampled	Temp (°C)	pH (SU)	Conductivity (ug/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-4	10/12/2017	**21.6**	**4.86**	**0.045**	**56.1**	**306.2**
MW-6	9/2/2015	**75.90**	**5.18**	**0.059**	**5.58**	**437.00**
	3/3/2016	**17.52**	**4.89**	**0.091**	**6.76**	**516.00**
	6/26/2017	**22.45**	**5.44**	**0.074**	**0.85**	**18.60**
	7/18/2017	**23.70**	**4.76**	**0.076**	**6.13**	**165.70**
	8/24/2017	**19.61**	**4.90**	**0.080**	**5.97**	**195.60**
	10/12/2017	**23.10**	**5.01**	**0.070**	**5.95**	**277.80**
MW-6D	9/3/2015	**21.86**	**5.84**	**0.019**	**2.88**	**372.00**
	3/4/2016	**17.05**	**5.40**	**0.043**	**3.24**	**359.00**
	5/25/2017	**22.62**	**5.51**	**0.036**	**5.59**	**210.00**
	6/26/2017	**23.28**	**5.63**	**0.031**	**5.25**	**45.60**
	7/18/2017	**22.33**	**5.04**	**0.030**	**5.28**	**180.10**
	10/12/2017	**22.40**	**5.00**	**0.028**	**4.45**	**335.80**
MW-6DS	9/2/2015	**75.00**	**5.54**	**0.018**	**5.03**	**410.00**
	3/3/2016	**16.95**	**4.93**	**0.027**	**5.48**	**520.00**
	5/25/2017	**21.57**	**5.76**	**0.037**	**5.00**	**189.30**
	6/26/2017	**23.08**	**6.18**	**0.041**	**5.16**	**3.50**
	7/18/2017	**23.27**	**5.42**	**0.041**	**0.58**	**143.00**
	10/12/2017	**22.40**	**5.21**	**0.030**	**5.12**	**289.80**
MW-7	9/4/2015	**74.40**	**5.32**	**0.046**	**5.21**	**419.00**
	5/25/2017	**21.53**	**4.98**	**0.052**	**5.46**	**252.20**
	6/26/2017	**21.95**	**5.43**	**0.070**	**4.62**	**20.90**
	7/18/2017	**23.75**	**4.99**	**0.090**	**4.05**	**76.50**
	8/24/2017	**22.91**	**5.11**	**0.091**	**3.94**	**132.10**
	10/13/2017	**22.50**	**4.88**	**0.087**	**3.71**	**486.40**
MW-9D	9/2/2015	**24.99**	**11.29**	**0.201**	**2.54**	**37.00**
	3/2/2016	**16.82**	**9.71**	**0.229**	**0.91**	**78.00**
	8/31/2016	**23.29**	**10.11**	**0.153**	**3.34**	**2.00**
	5/25/2017	**20.64**	**10.17**	**0.101**	**1.63**	**1.20**
	6/26/2017	**20.95**	**9.31**	**0.093**	**2.97**	**-80.60**
	7/18/2017	**23.29**	**9.32**	**0.117**	**2.00**	**-139.00**
	8/24/2017	**23.29**	**9.28**	**0.114**	**2.29**	**-22.20**
	10/12/2017	**20.50**	**9.90**	**0.099**	**2.81**	**53.10**
MW-9S	9/2/2015	**73.90**	**4.39**	**0.101**	**6.82**	**432.00**
	5/25/2017	**20.54**	**5.24**	**0.124**	**4.23**	**208.80**
	6/26/2017	**21.30**	**5.79**	**0.130**	**0.01**	**-1.20**
	7/18/2017	**22.19**	**5.02**	**0.138**	**2.83**	**71.70**
	8/24/2017	**22.07**	**5.05**	**0.142**	**5.10**	**189.80**
	10/13/2017	**20.60**	**4.79**	**0.123**	**5.64**	**285.20**

TABLE 3
Summary of Groundwater Parameters

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

Well ID	Date Sampled	Temp (°C)	pH (SU)	Conductivity (ug/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-12	10/13/2017	**21.90**	**6.21**	**0.085**	**0.80**	**57.20**
MW-12D	9/3/2015	**70.80**	**11.12**	**0.080**	**6.20**	**172.00**
	3/3/2016	**18.72**	**8.67**	**0.097**	**3.01**	**231.00**
	8/31/2016	**24.98**	**9.39**	**0.092**	**5.71**	**82.00**
	5/25/2017	**21.67**	**9.21**	**0.092**	**3.65**	**57.40**
	6/26/2017	**21.99**	**9.20**	**0.104**	**3.75**	**-44.90**
	7/18/2017	**23.40**	**9.15**	**0.109**	**3.89**	**-122.10**
	8/24/2017	**22.90**	**8.87**	**0.100**	**4.84**	**24.40**
	10/12/2017	**21.60**	**9.31**	**0.080**	**5.31**	**62.50**
MW-13	10/13/2017	**20.60**	**5.18**	**0.055**	**1.38**	**189.90**
MW-13D	9/3/2015	**71.30**	**10.53**	**0.070**	**3.46**	**148.00**
	3/3/2016	**19.71**	**5.74**	**0.049**	**1.66**	**395.00**
	8/31/2016	**21.47**	**5.56**	**0.115**	**2.83**	**291.00**
	6/27/2017	**20.97**	**6.44**	**0.048**	**3.94**	**-17.80**
	10/13/2017	**20.60**	**6.13**	**0.038**	**4.42**	**177.50**
MW-15D	10/12/2017	**21.40**	**6.41**	**0.040**	**3.21**	**186.70**
MW-21	10/13/2017	**20.70**	**6.44**	**0.130**	**1.13**	**20.30**
MW-21D	5/25/2017	**20.71**	**6.21**	**0.030**	**5.98**	**186.40**
	6/26/2017	**21.73**	**6.48**	**0.032**	**6.36**	**3.90**
	7/18/2017	**22.14**	**7.21**	**0.037**	**5.97**	**-61.80**
	8/24/2017	**22.70**	**6.37**	**0.035**	**6.22**	**89.20**
	10/13/2017	**20.70**	**6.38**	**0.029**	**5.75**	**144.20**
MW-22	10/13/2017	**20.70**	**5.13**	**0.059**	**5.92**	**271.00**
MW-23	10/12/2017	**20.50**	**5.51**	**0.056**	**3.83**	**173.80**

Notes:

Prepared by: SEF Date: 10/20/2017
Reviewed by: KR Date: 10/24/2017

TABLE 4
Summary of Groundwater Analytical Results
Volatile Organic Compounds

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI No. 10901

WENCK
Responsive partner.
Exceptional outcomes.

Sample ID	Date Sampled	1,1,2,2-Tetrachloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	Benzene (µg/L)	Chloroform (µg/L)	cis-1,2-dichloroethene (µg/L)	Tetrachloroethene (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)
Delineation Criteria (Type 1 RRS)		0.2	5	7	5	80	70	5	1000	100	5
	Type 2 RRS	0.89	5	100	5.4	80	70	19	1000	310	5
	Type 4 RRS	1.3	5	520	8.72	80	200	98	5200	2000	5.2
MW-1	2/24/2014	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-1	11/7/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-1	9/2/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-1	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-2	2/24/2014	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	11/7/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-2	9/3/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-2	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-3	2/24/2014	<1	<1	<1	<1	<1	<1	4.5	<1	<1	**35**
MW-3	5/19/2014	<5	<5	<5	<5	7.1	<5	<5	<5	<5	**23**
MW-3	11/5/2014	<5	<5	<5	<5	<5	<5	**8.3**	<5	<5	**55**
MW-3	9/4/2015	<5	<5	<5	<5	<5	<5	**10**	<5	<5	**50**
MW-3	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	**22**
MW-4	2/24/2014	<1	<1	<1	<1	<1	14	**189**	<1	<1	**130**
MW-4	5/19/2014	<5	<5	<5	<5	38	<5	**24**	<5	<5	**11**
MW-4	11/5/2014	<5	<5	<5	<5	<5	10	**170**	<5	<5	**98**
MW-4	9/4/2015	<5	<5	<5	<5	<5	11	**130**	<5	<5	**98**
MW-4	3/4/2016	<5	<5	<5	<5	<5	6.7	**88.8**	<5	<5	**53.4**
MW-4	10/12/2017	<2	<2	<2	<5	<2	<70	**13.0**	<2	<2	**19**
MW-5	2/24/2014	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-5	11/6/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-5	9/2/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-5	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-6	2/24/2014	<1	<1	<1	<1	3.6	**1100**	**930**	<1	1.9	**630**
MW-6	11/5/2014	<5	<5	<5	<5	<5	**190**	**110**	<5	<5	**95**
MW-6	9/2/2015	<5	<5	<5	<5	<5	**110**	**120**	<5	<5	**40**
MW-6	3/3/2016	<5	<5	<5	<5	<5	**74.2**	**119**	<5	<5	**23**
MW-6	6/27/2017	<2	<2	<2	<5	<2	<70	**6.2**	<2	<2	**5.1**
MW-6	10/12/2017	<2	<2	<2	<5	<2	<70	<5	<2	<2	<5
MW-6D	2/24/2014	<1	<1	<1	<1	2.6	15	**20**	<1	<1	**87**
MW-6D	11/6/2014	<5	<5	<5	<5	<5	<5	**17**	<5	<5	**29**
MW-6D	9/2/2015	<5	<5	<5	<5	<5	<5	**18**	<5	<5	**30**
MW-6D	3/4/2016	<5	<5	<5	<5	<5	22.7	**93.4**	<5	<5	**133**
MW-6D	6/27/2017	<2	<2	<2	<5	<2	<70	**19.0**	<2	<2	**22**
MW-6D	10/12/2017	<2	<2	<2	<5	<2	<70	**13.0**	<2	<2	**20**
MW-6DS	2/24/2014	<1	<1	<1	<1	4.5	**124**	**100**	<1	<1	**133**
MW-6DS	11/6/2014	<5	<5	<5	<5	<5	<5	**14**	<5	<5	**110**
MW-6DS	9/3/2015	<5	<5	<5	<5	<5	20	**110**	<5	<5	**210**
MW-6DS	3/3/2016	<5	<5	<5	<5	<5	<5	**5.9**	<5	<5	**32.8**
MW-6DS	10/12/2017	<2	<2	<2	<5	<2	<70	**73.0**	<2	<2	**24**
MW-7	5/1/2009	NA	NA	NA	NA	NA	NA	**1900**	NA	NA	**240**
MW-7	2/24/2014	**3.8**	<1	<1	<1	<1	25	**2400**	<1	<1	**170**
MW-7	11/6/2014	**9.2**	<5	<5	<5	<5	27	**14000**	<5	<5	**180**
MW-7	9/4/2015	<500	<500	<500	<500	<500	<500	**16000**	<500	<500	<500
MW-7	6/27/2017	**16**	<2	2.6	<5	4	**370.0**	**13000**	<2	2	**490**
MW-7	10/12/2017	**14**	<2	3	<5	4	**240.0**	**19000**	<2	<2	**600**
MW-8	11/7/2014	<5	<5	<5	<5	<5	<5	**70**	<5	<5	**12**
MW-8	9/3/2015	<5	<5	<5	<5	<5	<5	**70**	<5	<5	**9.6**
MW-8	3/4/2016	<5	<5	<5	<5	<5	<5	**46**	<5	<5	**7.1**

Notes:
µg/L = micrograms per liter
RRS = Risk Reduction Standard
<5.0 = Analyte not detected above the laboratory detection limit
5.7 = Exceeds Delineation Criteria
190 = Exceeds Industrial RRS
NA = Not Analyzed

TABLE 4
Summary of Groundwater Analytical Results
Volatile Organic Compounds

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI No. 10901

WENCK
Responsive partner.
Exceptional outcomes.

Sample ID	Date Sampled	1,1,2,2-Tetrachloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	Benzene (µg/L)	Chloroform (µg/L)	cis-1,2-dichloroethene (µg/L)	Tetrachloroethene (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)
Delineation Criteria (Type 1 RRS)		0.2	5	7	5	80	70	5	1000	100	5
Type 2 RRS		0.89	5	100	5.4	80	70	19	1000	310	5
Type 4 RRS		1.3	5	520	8.72	80	200	98	5200	2000	5.2
MW-9D	11/6/2014	<5	<5	<5	<5	16	<5	<5	<5	<5	**7.8**
MW-9D	9/2/2015	<5	<5	<5	<5	<5	<5	**7.1**	<5	<5	**31**
MW-9D	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	**13.9**
MW-9D	10/12/2017	<2	<2	<2	<5	<2	<70	<5	<2	<2	**18**
MW-9S	11/7/2014	<5	<5	<5	<5	<5	**240**	**1600**	<5	<5	**600**
MW-9S	9/2/2015	<5	**10**	<5	<5	<5	**260**	**490**	<5	<5	**540**
MW-9S	6/27/2017	<2	<2	<2	<5	<2	**250**	**140**	<2	<2	**240**
MW-9S	10/12/2017	<2	<2	<2	<5	<2	**240**	**1200**	<2	<2	**260**
MW-10	11/7/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	**6.1**
MW-10	9/3/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-10	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-11	11/7/2014	<5	<5	<5	**44**	<5	<5	**110**	<5	<5	**59**
MW-11	9/4/2015	<5	<5	<5	**43**	<5	<5	**97**	<5	<5	**55**
MW-11	3/2/2016	<5	<5	<5	**52.6**	<5	<5	**129**	<5	<5	**64.7**
MW-12	10/12/2017	<2	<2	**13**	<5	4.1	**140**	**64000**	4.2	<2	**2800**
MW-12D	3/3/2016	<5	<5	<5	<5	<5	<5	**35.8**	<5	<5	**140**
MW-12D	10/12/2017	<2	<2	<2	<5	<2	<70	**8.8**	<2	<2	**31**
MW-13	10/12/2017	**36**	<2	**30**	<5	16	**1600**	**72000**	130	15	**2200**
MW-13D	9/3/2015	<5	<5	<5	<5	<5	5.5	**140**	<5	<5	**770**
MW-13D	3/3/2016	<5	<5	<5	<5	<5	13.2	**320**	<5	<5	**1200**
MW-13D	6/27/2017	<2	<2	<2	<5	<2	<70	**390**	<2	<2	**880**
MW-13D	10/12/2017	<2	<2	<2	<5	<2	<70	**4100**	<2	<2	**1000**
MW-14	9/3/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-14	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-15D	3/4/2016	<5	<5	<5	<5	<5	<5	**1540**	<5	<5	**89**
MW-15D	10/12/2017	<2	<2	<2	<5	<2	<70	**1300**	<2	<2	**110**
MW-16	3/3/2016	<5	<5	<5	<5	<5	5.2	**26.1**	<5	<5	**24.9**
MW-17	3/4/2016	<5	<5	<5	<5	<5	15.5	**553**	<5	<5	**158**
MW-17	12/15/2016	<5	<5	<5	<5	<5	19.3	**554**	<5	<5	**183**
MW-18	9/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-18	12/15/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-19	12/15/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	**6.2**
MW-20	12/15/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MW-21	10/12/2017	**3.2**	<2	**15**	<5	5.5	**360**	**39000**	29	2.3	**2900**
MW-21D	4/18/2017	<2	<2	<2	<5	<2	<5	**140**	<2	<2	**62**
MW-21D	6/27/2017	<2	<2	<2	<5	<2	<70	**220**	<2	<2	**90**
MW-21D	10/12/2017	<2	<2	<2	<5	<2	<70	**1000**	<2	<2	**190**
MW-22	10/12/2017	**24**	<2	**14**	<5	14	**680**	**47000**	37.0	9.8	**790**
MW-23	10/12/2017	<2	<2	<2	<5	5.8	**700**	**5500**	2.5	<2	**3700**
B-1	5/22/2009	<5	<5	<5	<5	16	**2300**	**600**	<5	29	**2500**
B-10	5/21/2009	**100**	**86**	**37**	<5	23	**4500**	**93000**	130	47	**1400**
B-11	5/21/2009	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
B-20	5/22/2009	<5	<5	<5	<5	<5	8.5	**530**	<5	<5	**7.4**
SB-1	5/21/2009	<5	<5	<5	<5	10	**250**	**190**	<5	<5	**810**
SB-9	5/22/2009	<5	<5	<5	<5	<5	**90**	**4900**	<5	<5	**1400**
TW-1	5/27/2009	<5	<5	<5	<5	<5	<5	<5	<5	<5	**14**
TW-2	5/27/2009	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
TW-3	5/27/2009	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
TW-4	5/27/2009	<5	<5	<5	**130**	<5	<5	**9**	<5	<5	**6.7**
TW-5	5/27/2009	<5	<5	<5	<5	<5	<5	<5	<5	<5	**25**
TW-6	5/27/2009	<5	<5	<5	<5	<5	<5	**19**	<5	<5	**6**
TW-7	5/27/2009	<5	<5	<5	<5	<5	9.4	**33**	<5	<5	**60**
TW-8	5/27/2009	<5	<5	<5	<5	<5	**230**	**37**	<5	<5	**180**

Notes:

µg/L = micrograms per liter
RRS = Risk Reduction Standard
<5.0 = Analyte not detected above the laboratory detection limit
5.7 = Exceeds Delineation Criteria
190 = Exceeds Industrial RRS
NA = Not Analyzed

Prepared by: SEF Date: 10/20/2017
Reviewed by: KR Date: 10/24/2017

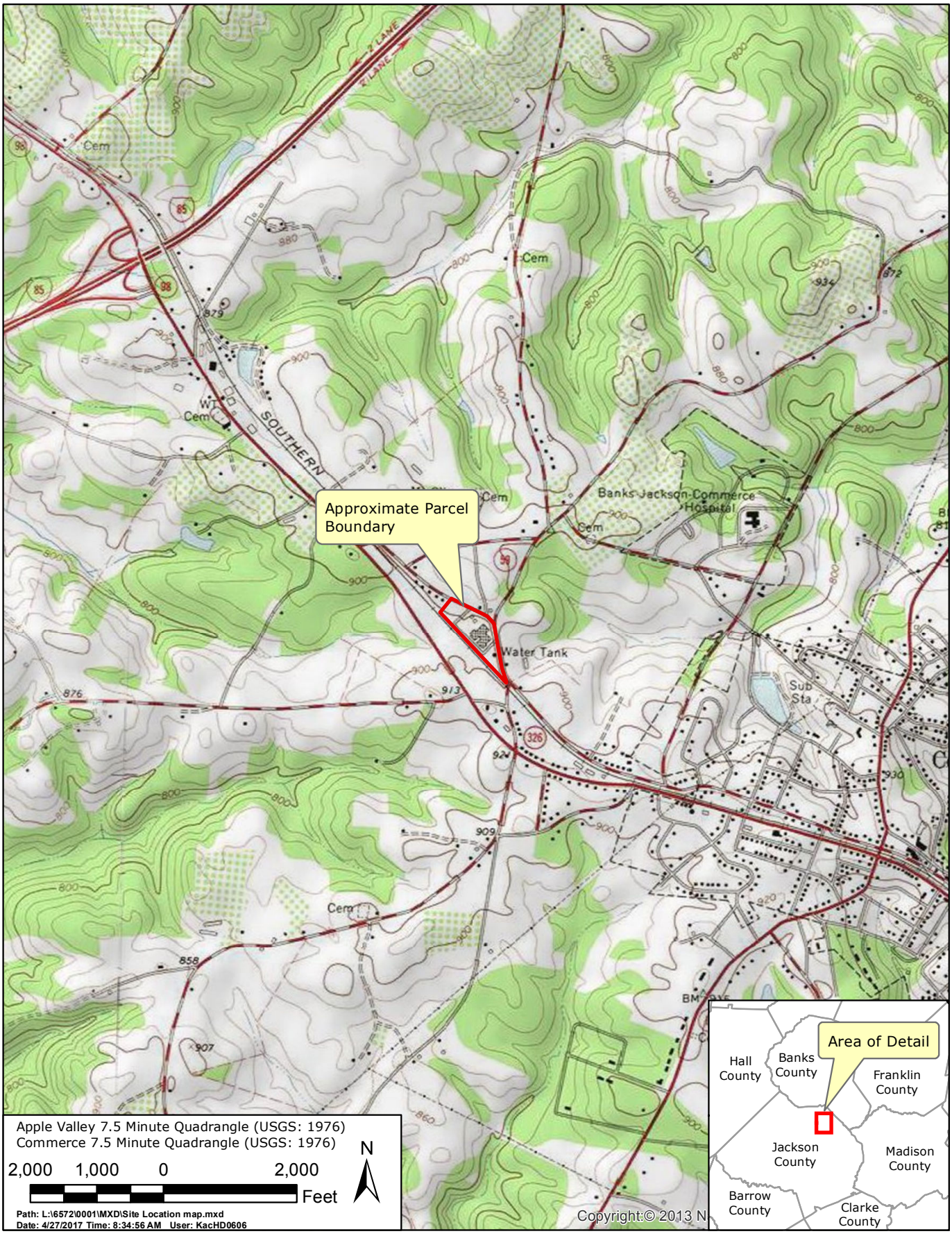
TABLE 5
Projected VRP Schedule

WENCK
Responsive partner.
Exceptional outcomes.

Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI No. 10901

Date	Activity
November 2017	Survey horizontal and vertical locations of new monitoring wells
December 2017	Full-scale injection activities
January 2018	Post-Injection Monitoring
February 2018	Post-Injection Monitoring
March 2018	Post-Injection Monitoring
April 2018	Post-Injection Monitoring
April 2018	Submit Sixth VRP Progress Report

Figures



ROPER PUMP COMPANY - HSI NO. 10901

Site Location Map

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

OCT 2017

Figure 1

Legend

- Monitoring Wells
- Approximate Parcel Boundary

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901

ROPER PUMP COMPANY

3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
SITE DETAIL MAP

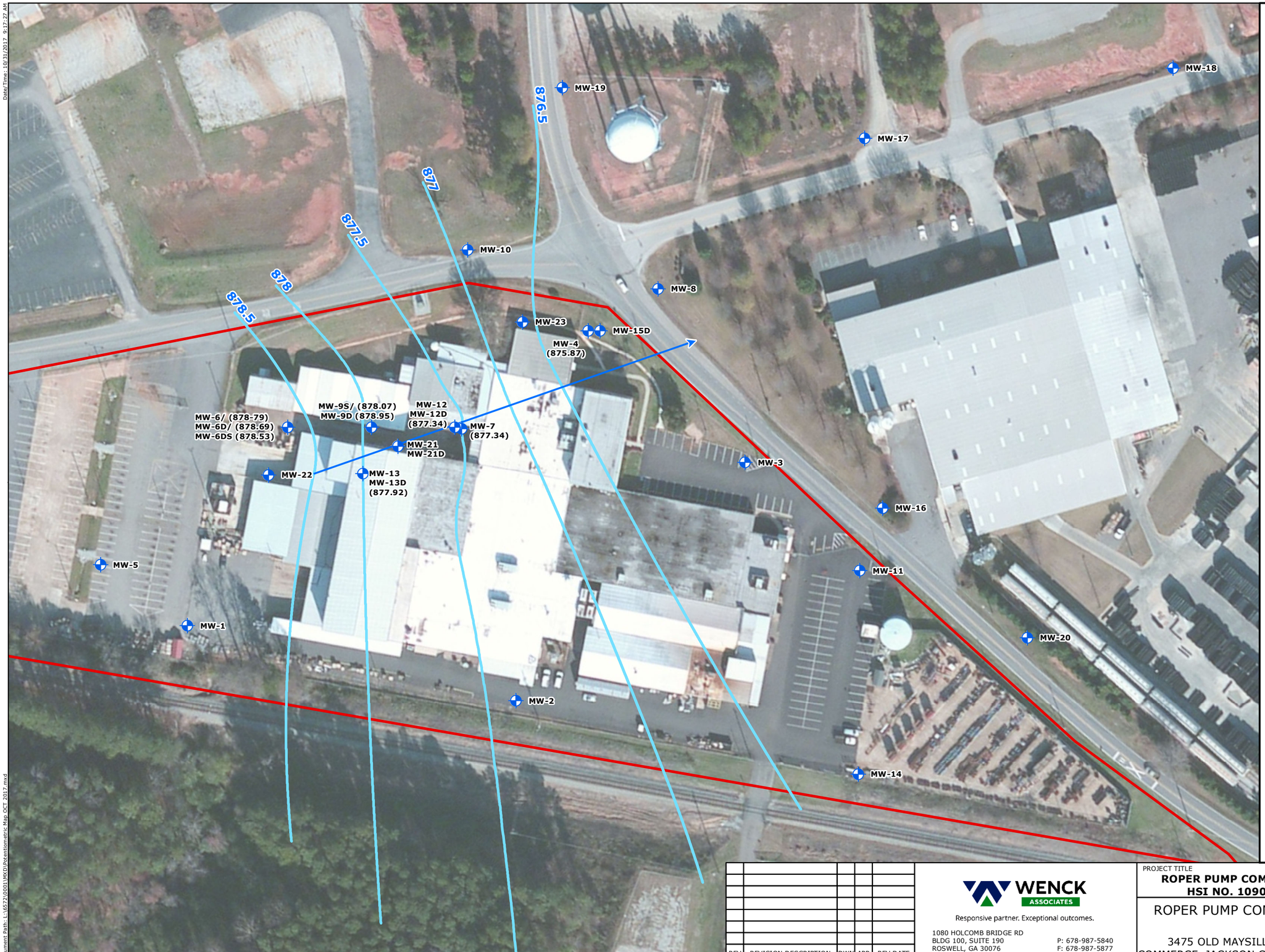
DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE: AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	2	0

Date/Time: 10/31/2017 - 9:14:54 AM

Document Path: L:\6572\0001\MXD\Site Detail Map_Cad.mxd



Legend

- Monitoring Wells
- Approximate Parcel Boundary
- 877 Groundwater Contour
- Groundwater Flow Direction

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901

ROPER PUMP COMPANY

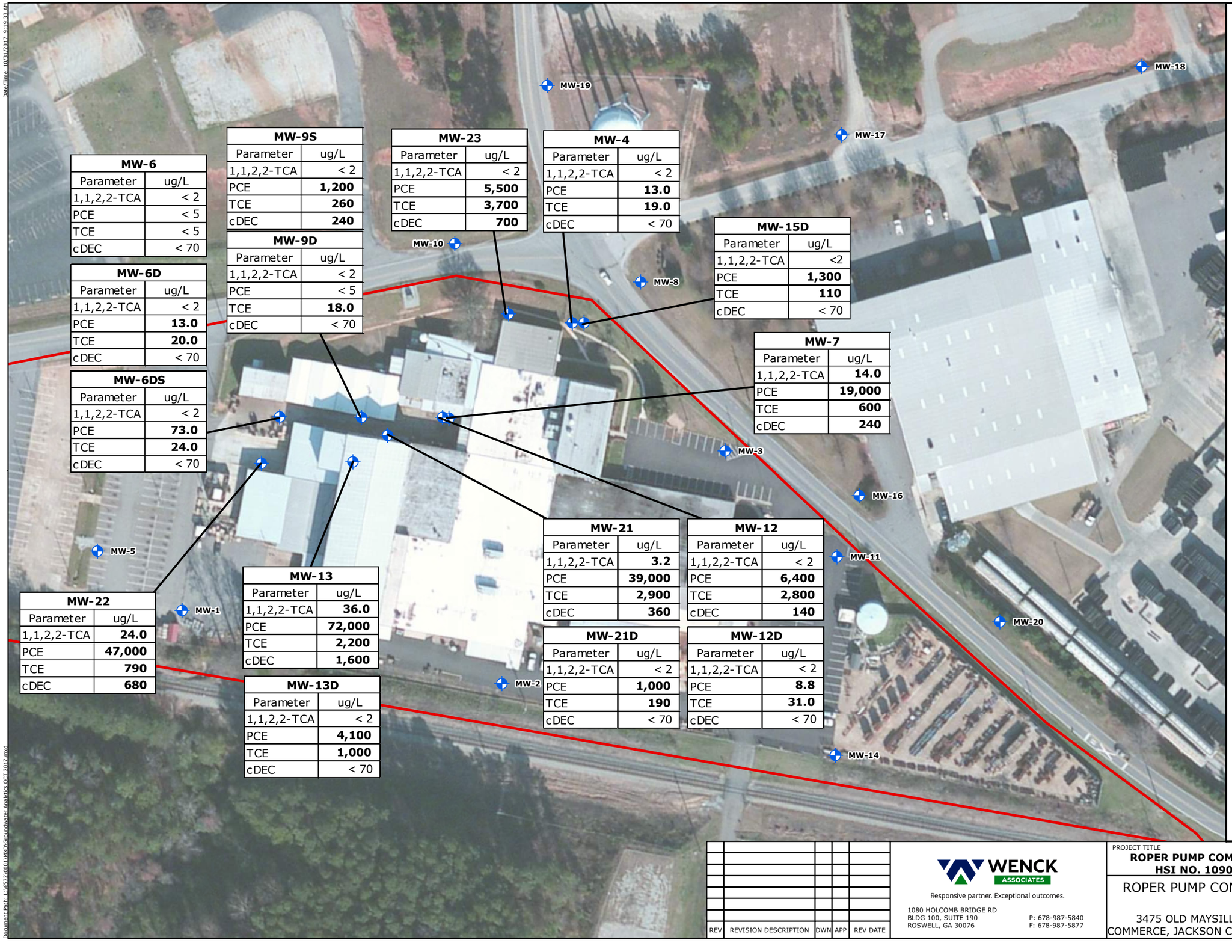
3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
POTENTIOMETRIC SURFACE MAP
OCTOBER, 2017

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE: AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	3	0



MW-6	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	< 5
TCE	< 5
cDEC	< 70

MW-6D	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**13.0**
TCE	**20.0**
cDEC	< 70

MW-6DS	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**73.0**
TCE	**24.0**
cDEC	< 70

MW-22	
Parameter	ug/L
1,1,2,2-TCA	**24.0**
PCE	**47,000**
TCE	**790**
cDEC	**680**

MW-9S	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**1,200**
TCE	**260**
cDEC	**240**

MW-9D	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	< 5
TCE	**18.0**
cDEC	< 70

MW-13	
Parameter	ug/L
1,1,2,2-TCA	**36.0**
PCE	**72,000**
TCE	**2,200**
cDEC	**1,600**

MW-13D	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**4,100**
TCE	**1,000**
cDEC	< 70

MW-23	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**5,500**
TCE	**3,700**
cDEC	**700**

MW-4	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**13.0**
TCE	**19.0**
cDEC	< 70

MW-15D	
Parameter	ug/L
1,1,2,2-TCA	<2
PCE	**1,300**
TCE	**110**
cDEC	< 70

MW-7	
Parameter	ug/L
1,1,2,2-TCA	**14.0**
PCE	**19,000**
TCE	**600**
cDEC	**240**

MW-21	
Parameter	ug/L
1,1,2,2-TCA	**3.2**
PCE	**39,000**
TCE	**2,900**
cDEC	**360**

MW-21D	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**1,000**
TCE	**190**
cDEC	< 70

MW-12	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**6,400**
TCE	**2,800**
cDEC	**140**

MW-12D	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	**8.8**
TCE	**31.0**
cDEC	< 70

Legend

- Monitoring Wells
- Approximate Parcel Boundary

Notes

1, 1, 2, 2 - TCA: 1, 1, 2, 2 - Tetrachloroethane
PCE: Tetrachloroethene
TCE: Trichloroethene
cDEC: Cis -1, 2 - Dichloroethene
ug/L: micrograms per liter

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901

ROPER PUMP COMPANY

3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
GROUNDWATER ANALYTICAL RESULTS OCTOBER 2017

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	4	0

Date/Time: 10/31/2017 12:38:29 PM

MW-19 (NS)
MW-18 (NS)
MW-17 (NS)
MW-10 (NS)
MW-8 (NS)
MW-23 (< 2)
MW-15D (< 2)
MW-4 (< 2)
MW-9S (< 2)
MW-9D (< 2)
MW-12 (< 2)
MW-12D (< 2)
MW-6 (<2)/ MW-6D/ MW-6DS
MW-7 (14.0)
MW-21 (3.2)
MW-21D (< 2)
MW-22 24.0
MW-13 (36.0)
MW-13D (<2)
MW-3 (NS)
MW-16 (NS)
MW-5 (NS)
MW-11 (NS)
MW-1 (NS)
MW-20 (NS)
MW-2 (NS)
MW-14 (NS)

Legend

- Monitoring Wells
- Approximate Parcel Boundary

1,1,2,2-TCA Concentration ug/L

- -3 - 2
- 2 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- 25 - 30
- > 30

Notes

1, 1, 2, 2 - TCA: 1, 1, 2, 2 - Tetrachloroethane
ug/L: micrograms per liter

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901
ROPER PUMP COMPANY
3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
1, 1, 2, 2-TCA ISOCONCENTRATION MAP

DWN BY	CH'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE: AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	5	0

Document Path: I:\6572\A0001\M\2017 1 2 2 TCA OCT 2017.mxd

Date/Time: 10/31/2017 - 1:04:44 PM

MW-19 (NS)
MW-18 NS
MW-17 NS
MW-10 (NS)
MW-8 (46.0)
MW-23 (5,500)
MW-15D (1,300)
MW-4 (13.0)
MW-6 (< 5)
MW-6D (13.0)
MW-6DS (73.0)
MW-9D (< 5)
MW-9S (12,000)
MW-12 (6,400)
MW-12D (8.8)
MW-7 (19,000)
MW-21 (39,000)
MW-21D (1,000)
MW-22 (47,000)
MW-13 (72,000)
MW-13D (4,100)
MW-3 (NS)
MW-16 (NS)
MW-5 (NS)
MW-1 (NS)
MW-11 (129)
MW-20 (NS)
MW-2 (NS)
MW-14 (NS)

Legend

- Monitoring Wells
- Approximate Parcel Boundary

PCE Concentration ug/L

- < 40
- 40 - 1,000
- 1,000 - 10,000
- 10,000 - 30,000
- 30,000 - 50,000
- > 50,000

Notes
PCE: Tetrachloroethene
ug/L: micrograms per liter

N

0 50 100
Feet

Document Path: I:\6572\0001\MXD\PCE OCT 2017.mxd

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901
ROPER PUMP COMPANY
3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
PCE ISOCONCENTRATION MAP

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	6	0

MW-19 (NS)
MW-18 (NS)
MW-17 (NS)
MW-10 (< 5)
MW-8 (7.1)
MW-15D (NS)
MW-23 (3,700)
MW-4 (19)
MW-9S (260)
MW-9D (18.0)
MW-12 (2,800)
MW-12D (31.0)
MW-6 (< 5)/
MW-6D (20.0)
MW-6DS(24.0)
MW-7 (600)
MW-21 (2,900)
MW-21D (190)
MW-22 (790)
MW-13 (2,200)
MW-13D (1,000)
MW-3 (22.0)
MW-16 (24.9)
MW-5 (< 5)
MW-11 (64.7)
MW-1 (< 5)
MW-20 (< 5)
MW-2 (NS)
MW-14 (< 5)

Legend

- Monitoring Wells
- Approximate Parcel Boundary

TCE Concentration ug/L

- < 5
- 5 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 2,000
- 2,000 - 2,500
- 2,500 - 3,000
- > 3,000

Notes
TCE: Trichloroethene
ug/L: micrograms per liter

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901
ROPER PUMP COMPANY
3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
TCE ISOCONCENTRATION MAP

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	7	0

Date/Time: 10/31/2017 12:57:02 PM

MW-19 (NS)
MW-18 (NS)
MW-17 (NS)
MW-10 (< 5)
MW-8 (< 5)
MW-15D (<70)
MW-23 (700)
MW-4 (<70)
MW-6 (< 70)/ MW-6D (< 70)/ MW-6DS (< 70)
MW-9S (240) MW-9D (<70)
MW-12 (140) MW-12D (< 70)
MW-7 (240)
MW-21 (360_ MW-21D (< 70)
MW-22 (680)
MW-13 (1,600) MW-13D (< 70)
MW-3 (< 5)
MW-16 (NS)
MW-5 (NS)
MW-11 (< 5)
MW-1 (NS)
MW-20 (NS)
MW-2 (NS)
MW-14 (< 5)

Legend

- Monitoring Wells
- Approximate Parcel Boundary

cDCE Concentration ug/L

- < 70
- 70 - 250
- 250 - 750
- 750 - 1,000
- > 1,000

Notes

cDCE: Cis -1, 2 - Dichloroethene
ug/L: micrograms per liter

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901

ROPER PUMP COMPANY

3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
cDCE ISOCONCENTRATION MAP

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	8	0

Document Path: I:\6572\0001\MXD\cDCE OCT 2017 Shallow.mxd

Legend

- Monitoring Wells
- Approximate Parcel Boundary
- Cross Sections

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901

ROPER PUMP COMPANY

3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
CROSS SECTION
LOCATION MAP

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

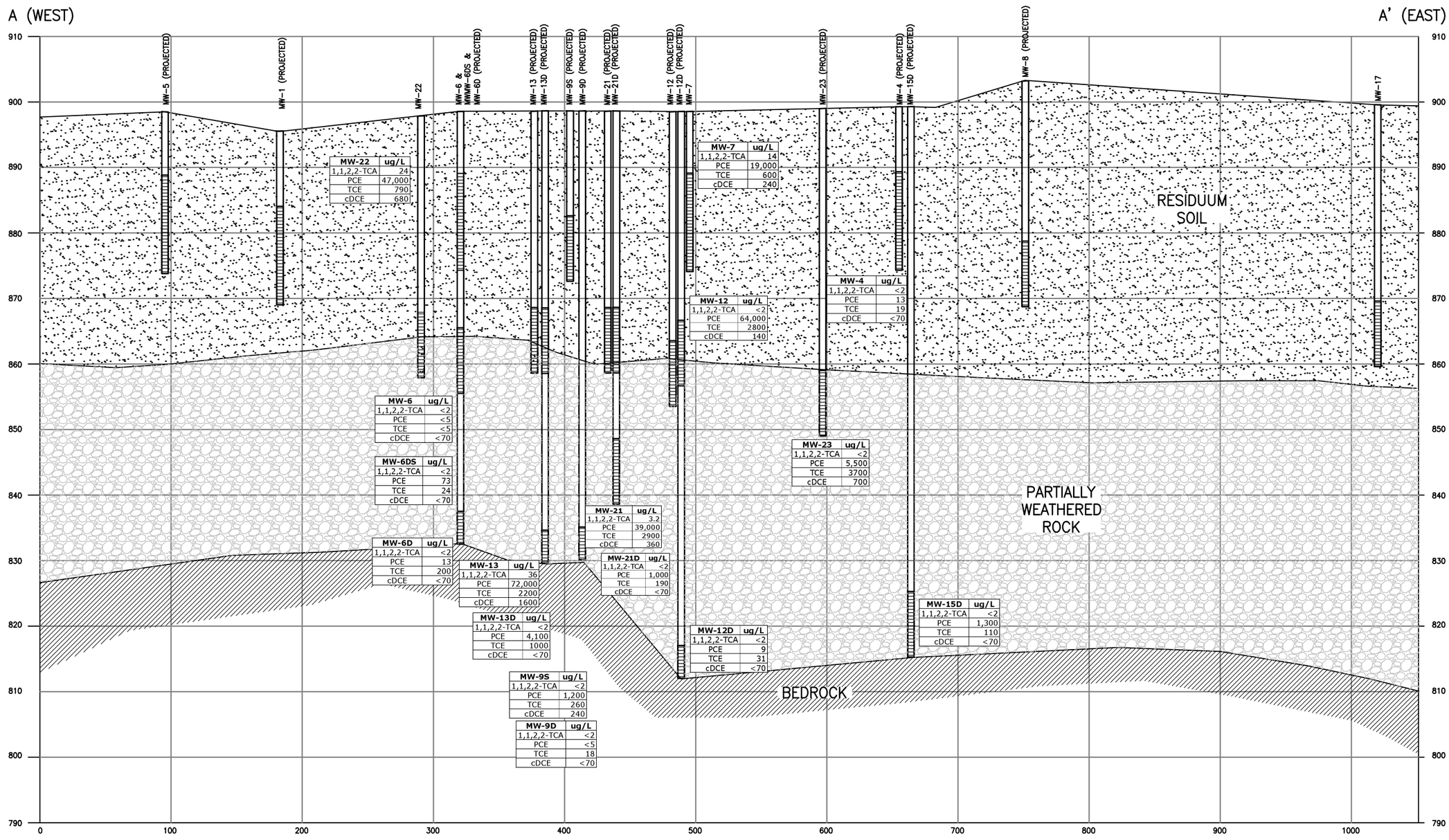
SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	9	0

Date/Time: 10/31/2017 9:22:13 AM

Document Path: L:\6572\0001\MXD\Cross Sections.mxd

Plot Date & Time: 31 October 2017 9:37 AM



LEGEND

- RESIDUUM SOIL
- PARTIALLY WEATHERED ROCK
- BEDROCK
- WATER TABLE
- SCREEN
- PROJECTED — WELL PROJECTED INTO PLANE OF CROSS-SECTIONS

20 FEET

100 FEET

SCALE

NOTE:
ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER (ug/L)

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

PRIME CONSULTANT

WENCK

Responsive partner. Exceptional outcomes.

PROJECT TITLE

ROPER PUMP COMPANY
3475 OLD MAYSVILLE ROAD
COMMERCE, JACKSON COUNTY, GEORGIA
HSI NO. 10901

SHEET TITLE

CROSS SECTION A–A'

DWN BY	CHK'D	APP'D	DWG DATE
JVB	AH	AH	OCTOBER 2017

SCALE AS SHOWN

PROJECT NO. 6572-0001

SHEET NO. FIGURE 10

REV NO.

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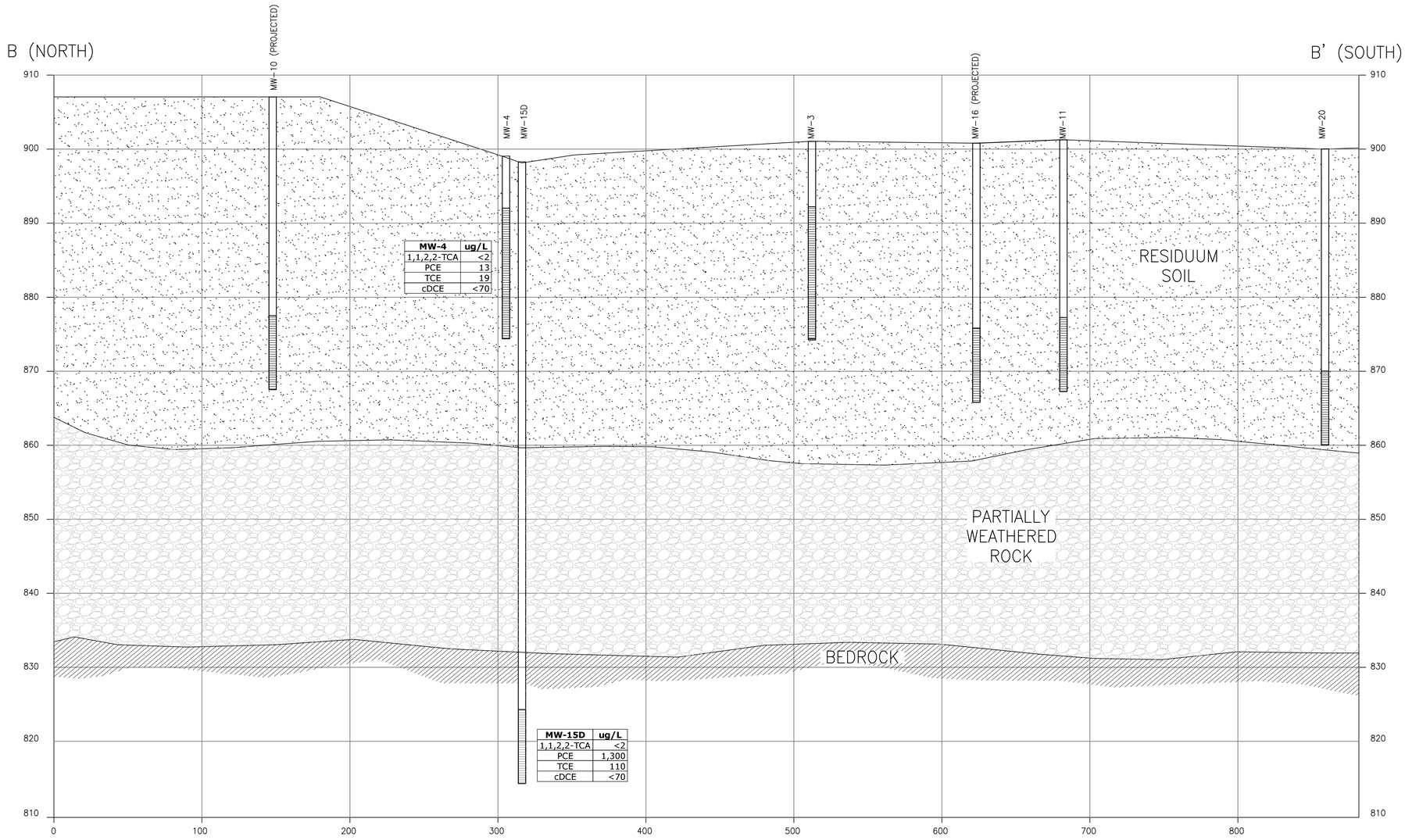

LEGEND

- RESIDUUM SOIL
- PARTIALLY WEATHERED ROCK
- BEDROCK
- WATER TABLE
- SCREEN
- PROJECTED — WELL PROJECTED INTO PLANE OF CROSS-SECTIONS

20 FEET

100 FEET

SCALE

NOTE:
ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER (ug/L)

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

PRIME CONSULTANT

WENCK

Responsive partner. Exceptional outcomes.

PROJECT TITLE

ROPER PUMP COMPANY
3475 OLD MAYSVILLE ROAD
COMMERCE, JACKSON COUNTY, GEORGIA
HSI NO. 10901

SHEET TITLE

CROSS SECTION B-B'

DWN BY	CHK'D	APP'D	DWG DATE
JVB	AH	AH	OCTOBER 2017

SCALE AS SHOWN

PROJECT NO.	SHEET NO.	REV NO.
6572-0001	FIGURE 11	

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Legend

- Monitoring Wells
- Approximate Parcel Boundary

Injection Locations

- Down Gradient Barrier Wall
- Indoor Source Area Treatment
- Outdoor Source Area Treatment

Note:
Injection locations to be determined in the field based on obstructions and undergound utilities.

N

0 50 100
Feet

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.
1080 HOLCOMB BRIDGE RD
BLDG 100, SUITE 190
ROSWELL, GA 30076
P: 678-987-5840
F: 678-987-5877

PROJECT TITLE
ROPER PUMP COMPANY
HSI NO. 10901

ROPER PUMP COMPANY

3475 OLD MAYSILLE RD
COMMERCE, JACKSON COUNTY, GA

SHEET TITLE
FULL-SCALE
INJECTION LOCATIONS

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	10/24/2017

SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	12	0

Date/Time: 10/31/2017 9:23:40 AM

Document Path: L:\6572\0001\MXD\Injection Locations.mxd

Appendix A

Boring Logs and Well Construction Diagrams

WENCK

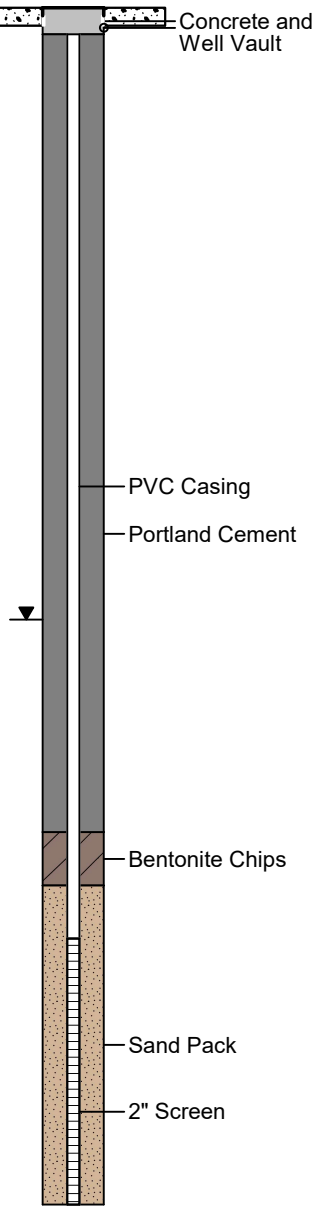
Responsive partner. Exceptional outcomes.

LOG OF BORING MW-12

Roper Pump
Old Maysville Rd
Project # 6572

Date Started	: 10/2/17	Drilling Contractor	: GeoLab
Date Completed	: 10/2/17	Driller	: AJ, Van, & Ben
Hole Diameter	: 8 inch	Logged By	: WAB
Drilling Method	: HSA 4x8		
Sampling Method	: Dual Tube (4')		

Depth in Feet	Approx Surf Elev	USCS	GRAPHIC	DESCRIPTION	PID (PPM)
0				Concrete and Rebar	0.0
		CL		Red, dry, SILTY CLAY, little fine to medium grained sand (FILL)	
		SM		Red, brown, and orange, dry, SILTY fine to medium grained SAND, with some clay (RESIDUUM)	0.0
5					0.0
10		SM		Grey, moist, SILTY SAND, micaceous (SAPROLITE)	0.0
15					0.0
20		SM		Grey and white, wet, SILTY SAND, fine to coarse grained sand, micaceous (SAPROLITE)	7.1
25					90.8
30					37.8
35					44.7
40					20.4
45				EOB @ 45'	



WENCK

Responsive partner. Exceptional outcomes.

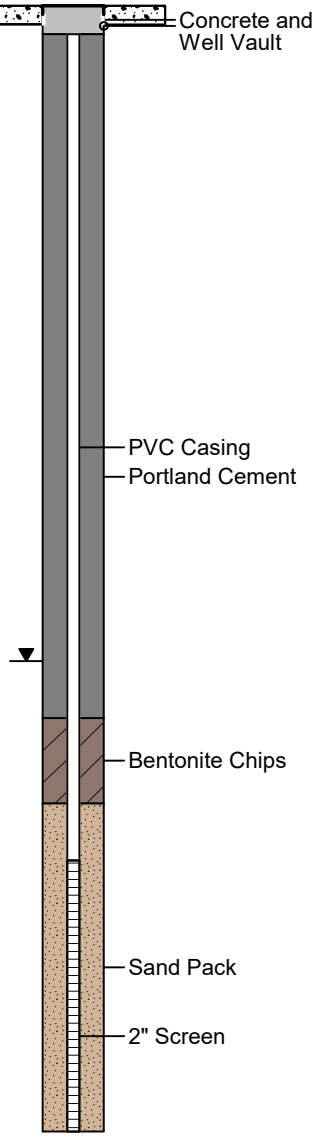
LOG OF BORING MW-13

Roper Pump
Old Maysville Rd
Project # 6572

Date Started	: 10/2/17	Drilling Contractor	: GeoLab
Date Completed	: 10/2/17	Driller	: AJ, Van, & Ben
Hole Diameter	: 8 inch	Logged By	: WAB
Drilling Method	: HSA 4x8		
Sampling Method	: Dual Tube (4')		

Depth in Feet	Approx Surf Elev	USCS	GRAPHIC	DESCRIPTION	PID (PPM)
0				Concrete and Rebar	
		SM		Brown, dry, SILTY SAND, fine grained (FILL)	0.0
		SM		Red, brown, and orange, dry, SILTY fine to medium grained SAND, with some clay (RESIDUUM)	0.0
5					0.0
10					0.0
15					0.0
20		ML		Red-brown, moist, SILT, with litte sand, micaceous (SAPROLITE)	196.7
25					218.9
30		ML		Brown, wet, SILT, with little fine grained sand, micaceous (SAPROLITE)	283.3
35					22.9
40				EOB @ 39.45' Refusal	

Well: MW-13
TOC Elev.: TBD



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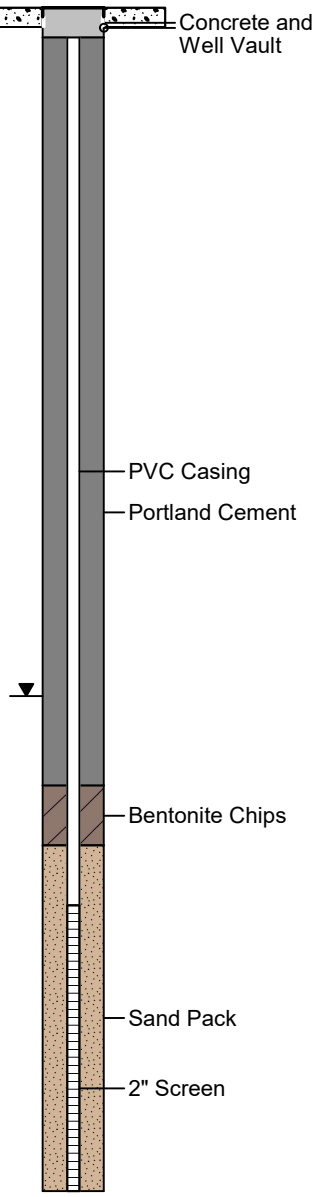
LOG OF BORING MW-21

Roper Pump
Old Maysville Rd
Project # 6572

Date Started	: 10/3/17	Drilling Contractor	: GeoLab
Date Completed	: 10/3/17	Driller	: AJ, Van, & Ben
Hole Diameter	: 8 inch	Logged By	: WAB
Drilling Method	: HSA 4x8		
Sampling Method	: Dual Tube (4')		

Depth in Feet	Approx Surf Elev	USCS	GRAPHIC	DESCRIPTION	PID (PPM)
0				Concrete and Rebar	0.0
				Red-brown, dry, SILTY CLAY (FILL)	0.0
5		CL		Micaceous @ 5-10'	0.0
10				Brown, dry, SILT, some fine to coarse grained sand, micaceous, (SAPROLITE)	0.0
15		ML			0.0
20					12.3
25		SM		Grey and white, fine to coarse grained SAND, some silt, trace fine gravel, micacceous (SAPROLITE)	249.7
30				Grey, wet, fine to medium grained SAND, and silt, micaceous (SAPROLITE)	92.9
35		SM		EOB @ 39.55'	31.3
40					



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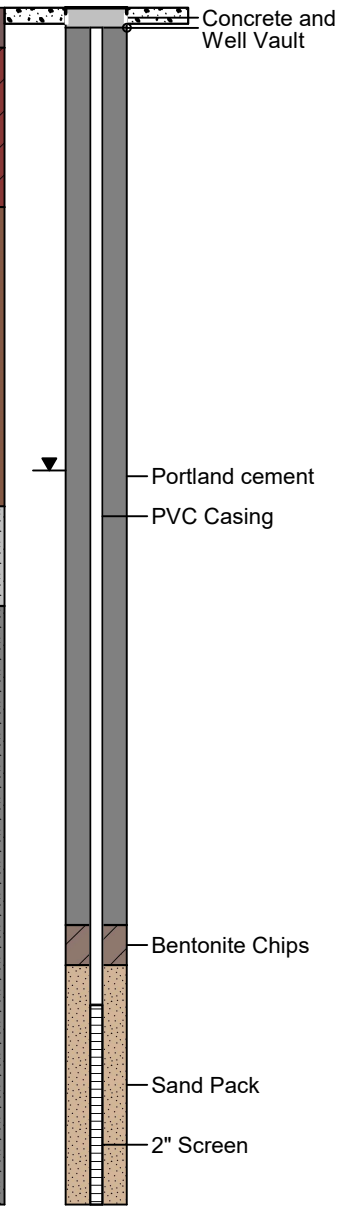
LOG OF BORING MW-21D

Roper Pump
Old Maysville Rd
Project # 6572

Date Started	: 4/17/17	Drilling Contractor	: Atlas-Geo
Date Completed	: 4/17/17	Driller	: Mike and Ben
Hole Diameter	: 6.25 inch	Logged By	: RM
Drilling Method	: HSA		
Sampling Method	: Dual Tube (4')		

Depth in Feet	Approx Surf Elev	USCS	GRAPHIC	DESCRIPTION
0				Concrete and Rebar
		CL		Red-brown, dry, SILTY CLAY (FILL)
10		ML		Brown, dry, SILT, some fine to coarse grained sand, micaceous (RESIDUUM)
20		SM		Grey-white, dry, fine to coarse grained SAND, some silt, trace fine gravel, micaceous (SAPROLITE)
30		SM		Grey, wet, fine to medium grained SAND, and silt, micaceous (SAPROLITE)
40				
50				
60				EOB @ 60' Refusal



WENCK

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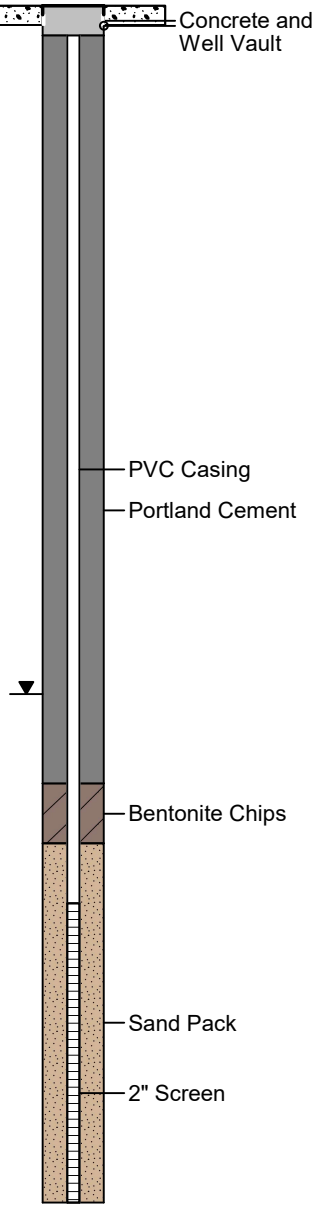
LOG OF BORING MW-22

Roper Pump
Old Maysville Rd
Project # 6572

Date Started	: 10/4/17	Drilling Contractor	: GeoLab
Date Completed	: 10/4/17	Driller	: AJ, Van, & Ben
Hole Diameter	: 8 inch	Logged By	: WAB
Drilling Method	: HSA 4x8		
Sampling Method	: Dual Tube (4')		

Depth in Feet	Approx Surf Elev	USCS	GRAPHIC	DESCRIPTION	PID (PPM)
0				Concrete and Rebar	0.0
		CL		Red-brown, dry, SILTY CLAY, trace fine to medium grained sand (FILL)	0.0
5		SM		Red-brown and orange-brown, moist, SILTY fine to medium grained SAND (RESIDUUM)	0.4
10		SM		Yellowish-brown, dry, medium grained SAND, some silt, trace clay (RESIDUUM)	96.9
15		SM		Red-brown, dry, fine to medium grained SAND, some silt, micaceous (SAPROLITE)	102.2
20		ML		Orange-brown, wet, SILT, some fine sand (SAPROLITE)	35.1
25		ML		Orange-brown, wet, SILT, some fine grained sand (SAPROLITE)	46.2
30					123.2
35					149.2
40				EOB @ 40'	



WENCK

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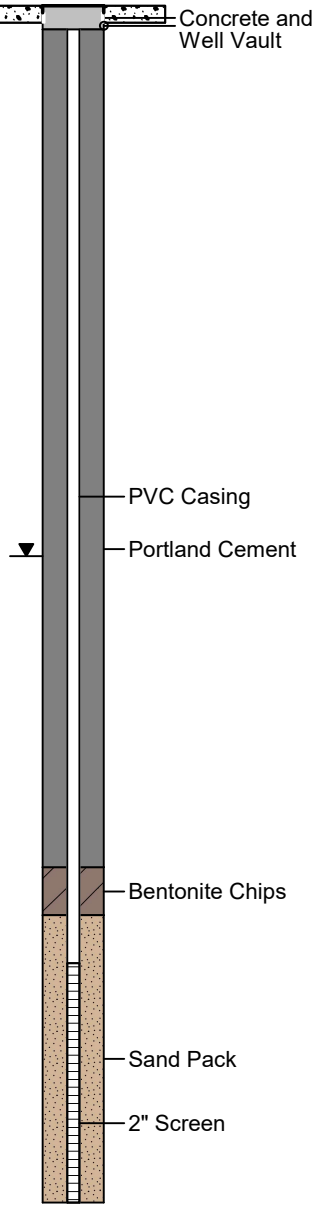
LOG OF BORING MW-23

Roper Pump
Old Maysville Rd
Project # 6572

Date Started	: 10/4/17	Drilling Contractor	: GeoLab
Date Completed	: 10/4/17	Driller	: AJ, Van, & Ben
Hole Diameter	: 8 inch	Logged By	: WAB
Drilling Method	: HSA 4x8		
Sampling Method	: Dual Tube (4')		

Depth in Feet	USCS	DESCRIPTION	PID (PPM)
0	ML	Concrete and Rebar	0.0
	ML	Red, dry, SILT, some fine to medium grained sand (FILL)	0.0
5	ML	Red-brown, dry SILT, little fine grained sand, micaceous (RESIDUUM)	0.0
10	ML	Grey-brown, moist, SILT, some fine to medium grained sand, micaceous (RESIDUUM)	0.0
15			0.0
20	ML	Grey-brown, moist, SILT, and fine to medium grained sand (SAPROLITE)	0.5
25			4.3
30			5.2
35	SM	Grey and white, very moist to wet, fine to coarse grained SAND, some silt, trace fine gravel (SAPROLITE)	4.6
40	SM	Grey, wet, fine to medium grained SAND, and silt, micaceous (SAPROLITE)	76.3
45			64.3
50		EOB @ 50'	



Appendix B

Field Sampling Forms

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Rope Pump	Project Number: 6572-000		
Location: Commerce, GA	Well ID: MW-23		
Date: 10/12/17	Start Time at Well: 11:00	End Time at Well: 12:15	
Sampler: STULLER	Weather: Sunny 80's - 90's	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 40 (ft) to 50 (ft)		Initial Depth to Water (ft): 23.37
Total Well Depth (ft): 50	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 4.34	3 Well Vol. (gal): 13.02
			Total Vol. Purged (gal): 4.5L

Well capacity (gallons per foot): 0.75" = 0.02; 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 45	Final Depth of Tubing (ft): 45	Total Purge Time: 50 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (~~gpm~~): 0.1 L/m	Final Purge Rate (~~gpm~~): 0.1 L/m	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI Pro Plus)

11:13

Reading Time	Total Volume Purged (~~gal~~)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
11:17	.5L	23.41	21.1	5.93	60.4	3.54		clear	159.7
11:22	1.0L	23.41	21.1	5.95	58.6	3.50		" "	158.0
11:27	1.5L	23.42	21.0	5.52	59.5	3.48		" "	161.7
11:32	2.0L	23.42	20.7	5.54	57.0	3.65		" "	170.4
11:37	2.5L	23.42	20.7	5.49	57.4	3.72		" "	180.0
11:42	3.0L	23.42	20.6	5.47	57.2	3.78		" "	174.0
11:47	3.5L	23.42	20.6	5.49	56.0	3.80		" "	172.9
11:52	4.0L	23.43	20.5	5.50	56.0	3.81		" "	173.0
11:57	4.5L	23.43	20.5	5.51	56.0	3.83		" "	173.8
11:57	S	a	lu	↑	↑	e		" "	

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): STULLER		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 11:57	Time Sampling Completed: 12:02
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-23	11:57	3	40mL	HCL	VOC/ 8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-4	
Date: 10/02/17	Start Time at Well: 1140	End Time at Well: 1203
Sampler: WAB	Weather: Sunny HOT / 85%	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: _____ (ft) to _____ (ft)		Initial Depth to Water (ft): 23.23
Total Well Depth (ft): 24.7	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 0.24	3 Well Vol. (gal): 0.72
			Total Vol. Purged (gal): 2.0L

Well capacity (gallons per foot): 0.75" = 0.02; 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 24.0	Final Depth of Tubing (ft): 24.0	Total Purge Time: 25 min	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)_____
Initial Purge Rate (gpm): 0.1 L/m	Final Purge Rate (gpm): 0.9L/m	Purge Method (circle one): Low Flow-Low Stress Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 YSI ProPlus

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1140									
1145	0.5L → 23.89		21.8	5.42	48.9	62.0			255.1
1150	1.0L	24.52	21.6	5.03	46.2	54.5			277.8
1155	1.5L	Dry	21.6	4.86	45.1	56.1			306.2
1200	2.0L	SAMPLE							
		Allowed to recharge							

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): William Barnett		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 1200	Time Sampling Completed: 1205
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-4	1200	3	40ml	HCl	VOCs	Grab

Notes: Clear / No Odor

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: B6572-0001	
Location: Commerce, GA	Well ID: MW-15D	
Date: 10/12/17	Start Time at Well: 1230	End Time at Well: 13:40
Sampler: WAB	Weather: Sunny Hot / 88°	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 75 (ft) to 85 (ft) ?		Initial Depth to Water (ft): 23.51
Total Well Depth (ft): 85	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 10.02	3 Well Vol. (gal): 30.06 Total Vol. Purged (gal): 4.01

Well capacity (gallons per foot): 0.75" = 0.02; 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 80	Final Depth of Tubing (ft): 80	Total Purge Time: 45 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (~~gpm~~): .1 L/m	Final Purge Rate (~~gpm~~): .1 L/m	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1230 0235	.5L	24.24	21.7	6.38	47.4	43.6	—	—	183.3
1240	1.0L	24.26	20.4	6.41	44.8	40.8			180.7
1245	1.5L	24.32	21.5	6.43	47.1	3.5			180.9
1250	2.0L	24.44	21.7	6.45	42.5	3.73			181.5
1255	2.5L	24.57	21.5	6.41	41.3	3.26			184.2
1300	3.0L	24.69	21.3	6.42	41.3	3.20			184.4
1305	3.0L	24.69	21.4	6.42	40.8	3.22			185.0
1310	3.5L	24.65	21.3	6.41	40.9	3.22			185.6
1315	4.0L	24.65	21.4	6.41	40.8	3.21			186.7
1315	5	a	Lu	P	1	e			

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): WAB		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 13:15	Time Sampling Completed: 13:20
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-15D	13:15	3	40ml	HCl	VOC 8260	G

Notes:

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001		
Location: Commerce GA	Well ID: MW-9D		
Date: 10/12/17	Start Time at Well: 3:00	End Time at Well: 4:15	
Sampler: SFuller	Weather: Clear 80's-90's	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 63.5 (ft) to 68.5 (ft)	Initial Depth to Water (ft): 20.53	
Total Well Depth (ft): 67.60	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 7.67	3 Well Vol. (gal): 23.01
			Total Vol. Purged (gal): 4.4L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 66	Final Depth of Tubing (ft): 66	Total Purge Time: 50 min	Purge Equipment (circle one): ~~Baller~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (~~gpm~~): 0.1 L/m	Final Purge Rate (~~gpm~~): 0.1 L/m	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

3:15

Reading Time	Total Volume Purged (~~gal~~)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
3:18	0.4L	21.19	21.9	9.72	121.1	2.91		clr/no	99.8
3:23	0.9L	21.36	21.1	9.55	118.4	1.70		" "	99.5
3:28	1.4L	21.55	20.8	9.61	116.0	1.71		" "	92.6
3:33	1.9L	21.60	20.5	9.70	102.5	2.08		" "	78.2
3:38	2.4L	21.66	20.8	9.78	98.0	2.45		" "	66.0
3:43	2.9L	21.68	20.5	9.84	99.3	2.56		" "	61.9
3:48	3.4L	21.70	20.6	9.84	99.3	2.75		" "	57.5
3:53	3.9L	21.71	20.5	9.88	99.3	2.80		" "	54.9
3:58	4.4L	21.73	20.5	9.90	99.3	2.81		" "	53.1
3:59	5	a	m	P	l	e			

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): SFuller		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 3:59	Time Sampling Completed: 4:04
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-9D	3:59	3	40ml	HCL	VOC/8260	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Ropper Pump		Project Number: 6572-0001	
Location: Commerce, GA		Well ID: MW-6DS	
Date: 10/12/17	Start Time at Well: 1550		End Time at Well: 1627
Sampler: AB	Weather: Sunny Hot 92°F		Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 61 (ft) to 66 (ft)		Initial Depth to Water (ft): 19.78
Total Well Depth (ft): 66.45	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 7.60	3 Well Vol. (gal): 22.8
			Total Vol. Purged (gal): 3.0L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 60.00	Final Depth of Tubing (ft): 60.00	Total Purge Time: 37 min	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1 L	Final Purge Rate (gpm): 0.1L	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI-556 (Pro) Lamotte 2020 Horiba U53

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1550									
1555	.5L	20.83	22.16	5.51	31.16	5.27	—	—	253.9
1600	1.0L	21.88	22.4	5.26	31.3	4.96			275.5
1605	1.5L	22.84	22.3	5.21	31.0	5.07			285.1
1610	2.0L	23.59	22.4	5.20	30.9	5.09			286.7
1615	2.5L	24.22	22.3	5.21	31.2	5.11			288.9
1620	3.0L	24.57	22.4	5.21	30.9	5.12			289.8
1625	SAMPLE								
1630									

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): AB		Collection Method (circle one): Bailer Straw method Vacuum Jug (Other)			Time Sampling Initiated: 1623	Time Sampling Completed: 1627
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-6DS	1623	3	40mL	HCl	VOC	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump		Project Number: 6572-0001	
Location: Commerce, GA		Well ID: MW-12D	
Date: 10/12/17	Start Time at Well: 4:15		End Time at Well: 5:15
Sampler: 3 Fullers	Weather: Clear 80's-90's		Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 81.5 (ft) to 86.5 (ft)		Initial Depth to Water (ft): 20.36
Total Well Depth (ft): 86.5	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 10.78	3 Well Vol. (gal): 32.34
			Total Vol. Purged (gal): 3.0L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 84	Final Depth of Tubing (ft): 84	Total Purge Time: 38 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (~~gpm~~): 0.1 L/m	Final Purge Rate (~~gpm~~): 0.1 L/m	Purge Method (circle one): (Low Flow-Low Stress) ~~Micro-purge~~	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

4:30

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
4:35	.5L	~~20~~.43	22.0	9.35	82.2	5.47		cls/no	68.9
4:40	1.0L	21.47	21.9	9.32	81.6	5.30		" "	67.9
4:45	1.5L	21.48	21.7	9.30	80.8	5.29		" "	66.3
4:50	2.0L	21.48	21.7	9.32	80.0	5.33		" "	63.7
4:55	2.5L	21.48	21.6	9.32	80.0	5.31		" "	63.1
5:00	3.0L	21.49	21.6	9.31	80.0	5.31		" "	62.5
5:03	3	a	m	P	l	e			

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; **Conductivity** - ± 5%; **Dissolved Oxygen** - ± 0.2 mg/L (or 10% saturation); **Turbidity** - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print):		Collection ~~Method~~ (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 5:03	Time Sampling Completed: 5:08
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-12D	5:03	3	40ml	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-6D	
Date: 10/12/17	Start Time at Well: 1700	End Time at Well: 17:52
Sampler: WB	Weather: Sunny Hot 90°	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 33 (ft) to 43 (ft)		Initial Depth to Water (ft): 19.56
Total Well Depth (ft): 43.33	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 3.87	3 Well Vol. (gal): 11.61
			Total Vol. Purged (gal): 2.5L

Well capacity (gallons per foot): 0.75" = 0.02; 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 38.0	Final Depth of Tubing (ft): 38.0	Total Purge Time: 32 min	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)
Initial Purge Rate (gpm): .1 L	Final Purge Rate (gpm): .1 L	Purge Method (circle one): Low Flow Low Stress Micro-purge	Meter(s) used (circle one): YSI 556 MPO Lamotte 2020 Horiba U53

1700

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1705	1.5L	20.33	22.6	5.02	28.3	5.07	—	—	320.4
1710	1.0L	20.46	22.4	5.00	27.9	6.45			332.7
1715	2.0L	20.52	22.2	4.98	28.2	5.14			334.8
1720	2.0L	20.59	22.1	5.00	28.0	5.10			336.9
1725	2.5L	20.62	22.4	~~5.02~~ 5.02	28.1	4.95			335.8
		Sample							

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): William Smith		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 1727	Time Sampling Completed: 17:32
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-6D	1727	3	40mL	HCl	VOC	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Ropes Pump	Project Number: 6572-000		
Location: Commerce, GA	Well ID: MW-6		
Date: 10/12/2017	Start Time at Well: 5:25	End Time at Well: 6:25	
Sampler: SFuller	Weather: clear 80's - 90's	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 9.2 (ft) to 24.2 (ft)		Initial Depth to Water (ft): 14.54
Total Well Depth (ft): 24.00	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 0.72	3 Well Vol. (gal): 2.16
			Total Vol. Purged (gal): 3.2L

Well capacity (gallons per foot): 0.75" = 0.02; 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 17.21	Final Depth of Tubing (ft): 17.21	Total Purge Time: 40 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)
Initial Purge Rate (gpm): 0.1L/m	Final Purge Rate (gpm): 0.1L/m	Purge ~~Method~~ (circle one): Low Flow-Low Stress ~~Micro-purge~~	Meter(s) used ~~(circle one)~~: YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

5:35

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
5:37	0.2L	19.60	23.6	6.71	69.9	6.47		clr/no	171.6
5:42	0.7L	19.66	23.7	~~6.545~~	63.2	6.11		" "	235.7
5:47	1.2L	19.69	23.5	5.23	65.6	6.13		" "	254.5
5:52	1.7L	19.69	23.4	5.14	68.2	5.92		" "	263.0
5:57	2.2L	19.70	23.2	5.06	70.2	5.90		" "	267.9
6:02	2.7L	19.70	23.2	5.03	70.2	5.94		" "	270.3
6:07	3.2L	19.70	23.1	5.01	70.2	5.95		" "	277.8
6:09	S	A	M	P	1	E			

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): SFuller		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 6:09	Time Sampling Completed: 6:14
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-6		3	40ml	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001		
Location: Commerce, GA	Well ID: MW-21D		
Date: 10/13/17	Start Time at Well: 8:10	End Time at Well: 9:16	
Sampler: SFuller	Weather: Over cast 70's	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 50 (ft) to 60 (ft)		Initial Depth to Water (ft): 20.97
Total Well Depth (ft): 59.72	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 6.31	3 Well Vol. (gal): 18.93
			Total Vol. Purged (gal): 2.3L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 55	Final Depth of Tubing (ft): 55	Total Purge Time:	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)_____
Initial Purge Rate (~~gpm~~): 0.1L/m	Final Purge Rate (~~gpm~~): 0.1L/m	Purge Method (circle one): ~~Low Flow-Low Stress~~ ~~Micro-purge~~	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI Pro Plus)

8:25

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
8:28	0.3L	21.24	20.7	6.68	30.4	5.57		cls/no	131.1
8:33	0.8L	21.24	20.6	6.35	29.6	5.56		" "	140.5
8:38	1.3L	21.24	20.7	6.39	29.3	5.68		" "	139.7
8:43	1.8L	21.25	20.7	6.38	29.3	5.67		" "	141.8
8:48	2.3L	21.25	20.7	6.38	29.3	5.75		" "	144.2
8:51	S	a	M	P	1	C			

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): SFULLER		Collection ~~Method~~ (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 8:51	Time Sampling Completed: 8:56
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-21D	8:51	3	40ml	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump		Project Number: 6572-0001	
Location: Commerce, GA		Well ID: MW-22	
Date: 10/13/17	Start Time at Well: 850		End Time at Well: 957
Sampler: WB	Weather: Overcast 72°		Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: _____ (ft) to _____ (ft)		Initial Depth to Water (ft): 16.85
Total Well Depth (ft): 40	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 3.77	3 Well Vol. (gal): 11.31
			Total Vol. Purged (gal): 5.0L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 35'	Final Depth of Tubing (ft): 35'	Total Purge Time: 56 min	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)_____
Initial Purge Rate (gpm): .1L	Final Purge Rate (gpm): .1L	Purge Method (circle one): Low Flow-Low Stress Micro-purge	Meter(s) used (circle one): YSI EXO Lamotte 2020 Horiba U53

850

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
855	0.5L	17.13	21.0	5.20	65.7	4.50	—	—	263.1
900	1.0L	17.16	20.9	5.16	65.3	4.44	—	—	264.3
905	1.5L	17.17	20.3	5.21	67.2	4.67			262.8
910	2.0L	17.19	20.4	5.19	65.3	4.77			263.4
915	2.5L	17.21	20.6	5.18	62.7	4.99			265.8
920	3.0L	17.21	20.8	5.15	61.7	5.11			268.3
925	3.5L	17.24	20.8	5.15	61.1	5.55			267.9
930	4.0L	17.24	20.7	5.15	60.7	5.72			269.1
935	4.5L	17.24	20.8	5.13	60.4	5.86			270.4
940	5.0L	17.24	20.7	5.13	59.9	5.92			271.0
			SAMPLE						

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): William Barnett		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 941	Time Sampling Completed: 946
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-22	941	3	40ml	HCl	VOC's	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-95	
Date: 10/13/17	Start Time at Well: 9:20	End Time at Well: 10:36
Sampler: SFuller	Weather: Overcast 70's	Comments:

WELL CHARACTERISTICS

Well Diameter (in):	Well Screen Depth Interval:	Initial Depth to Water (ft):
2	16 (ft) to 26 (ft)	20.24

Total Well Depth (ft):	Well Capacity (gallons per foot):	1 Well Volume (gallons):	3 Well Vol. (gal):	Total Vol. Purged (gal):
25.15	0.163	0.80	2.4	3.2L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft):	Final Depth of Tubing (ft):	Total Purge Time:	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1L/m	Final Purge Rate (gpm): 0.1L/m	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): ~~YSI 556~~ Lamotte 2020 Horiba U53 (YSI ProPlus)

9:36

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
9:38	0.2L	20.33	20.4	5.16	114.2	3.23		cls/no	205.2
9:43	0.7L	20.34	20.6	5.09	114.9	4.69		" "	229.9
9:48	1.2L	20.34	20.6	4.82	121.1	5.81		" "	267.4
9:53	1.7L	20.34	20.6	4.79	122.6	5.82		" "	276.8
9:58	2.2L	20.34	20.6	4.79	123.6	5.70		" "	281.2
10:03	2.7L	20.34	20.6	4.78	123.6	5.64		" "	283.7
10:08	3.2L	20.35	20.6	4.79	123.6	5.64		" "	285.2
10:11	S	a	m	p	l	e			

Stabilization: **Temperature** - ± 0.1°; **pH** - ± 0.1; **Conductivity** - ± 5%; **Dissolved Oxygen** - ± 0.2 mg/L (or 10% saturation); **Turbidity** - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): SFuller	Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other	Time Sampling Initiated: 10:11	Time Sampling Completed: 10:16

Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-95	10:11	3	40mL	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-21	
Date: 9/13/17	Start Time at Well: 10:25	End Time at Well: 11:40
Sampler: SFuller	Weather: Overcast 70's	Comments:

WELL CHARACTERISTICS

Well Diameter (in):	Well Screen Depth Interval:	Initial Depth to Water (ft):
2	30 (ft) to 40 (ft)	20.71

Total Well Depth (ft):	Well Capacity (gallons per foot):	1 Well Volume (gallons):	3 Well Vol. (gal):	Total Vol. Purged (gal):
39.55	0.163	3.07	9.21	3.3L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft):	Final Depth of Tubing (ft):	Total Purge Time:	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)
35	35	40 min	

Initial Purge Rate (gpm):	Final Purge Rate (gpm):	Purge Method (circle one):	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53
0.1 L/m	0.1 L/m	Low Flow-Low Stress Micro-purge	YSI ProPlus

10:40

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
10:43	0.3L	20.80	21.1	6.34	136.6	1.34		cls/no	126.2
10:48	0.8L	20.80	21.0	6.36	131.6	1.33		" "	79.3
10:53	1.3L	20.80	20.9	6.37	128.7	1.36		" "	47.0
10:58	1.8L	20.80	20.8	6.39	128.8	1.24		" "	35.5
11:03	2.3L	20.80	20.8	6.41	130.6	1.17		" "	27.1
11:08	2.8L	20.80	20.8	6.44	130.6	1.15		" "	22.1
11:13	3.3L	20.80	20.7	6.44	130.6	1.13			20.3
11:16	S	a	M	P	1	C			

Stabilization: Temperature - ± 0.1°; **pH** - ± 0.1; **Conductivity** - ± 5%; **Dissolved Oxygen** - ± 0.2 mg/L (or 10% saturation); **Turbidity** - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print):	Collection Method (circle one): Bailer Straw method Vacuum Jug Other	Time Sampling Initiated:	Time Sampling Completed:
SFuller		11:16	11:21

Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-21	11:16	3	40ml	HCl	VOC/8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: C572-0001	
Location: Commerce, GA	Well ID: MW-7	
Date: 10/13/17	Start Time at Well: 1115	End Time at Well: 1211
Sampler: WAB	Weather: Overcast 70's	Comments:

WELL CHARACTERISTICS

Well Diameter (in):	Well Screen Depth Interval:	Initial Depth to Water (ft):
2	9.4 (ft) to 24.4 (ft)	20.78

Total Well Depth (ft):	Well Capacity (gallons per foot):	1 Well Volume (gallons):	3 Well Vol. (gal):	Total Vol. Purged (gal):
24.42	0.163	0.59	1.77	4.0 L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft):	Final Depth of Tubing (ft):	Total Purge Time:	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump ~~Peristaltic Pump~~ Other (specify)
20.0	20.0	50 min	

Initial Purge Rate (gpm):	Final Purge Rate (gpm):	Purge Method (circle one): ~~Low Flow-Low Stress~~ ~~Micro-purge~~	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 YSI ProPlus
.1 L	.1 L		

~~1115~~ 1115

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1120	.5 L	20.48	22.6	4.91	99.2	4.35	—	—	367.8
1125	1.0 L	20.49	22.6	4.89	108.7	3.76			387.5
1130	1.5 L	20.51	22.6	4.88	104.6	3.67			411.5
1135	2.0 L	20.51	22.5	4.88	95.3	3.64			443.2
1140	2.5 L	20.51	22.6	4.88	93.6	3.79			451.6
1145	3.0 L	20.51	22.6	4.88	88.5	3.79			466.4
1150	3.5 L	20.51	22.5	4.88	88.4	3.73			484.2
1155	4.0 L	20.51	22.5	4.88	87.7	3.71			486.4
1158	S	A	M	P	L	E			

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print):	Collection Method (circle one): Bailer ~~Straw method~~ Vacuum Jug Other	Time Sampling Initiated:	Time Sampling Completed:
WAB		1158	1204

Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-7	1158	3	40ml	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Roper Pump		Project Number: 6572-0001	
Location: Commerce, GA		Well ID: MW-12	
Date: 10/3/17	Start Time at Well: 1350		End Time at Well: 1432
Sampler: WAB	Weather: Overcast 70's		Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 35 (ft) to 45 (ft)		Initial Depth to Water (ft): 20.55
Total Well Depth (ft): 45'	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 3.98	3 Well Vol. (gal): 11.94
			Total Vol. Purged (gal): 3.5L

Well capacity (gallons per foot): 0.75" = 0.02; 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 40.0	Final Depth of Tubing (ft): 40.0	Total Purge Time: 90 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump ~~Peristaltic Pump~~ Other (specify)_____
Initial Purge Rate (gpm): .1L	Final Purge Rate (gpm): 1.L	Purge Method (circle one): ~~Low Flow-Low Stress~~ Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1350 ~~1355~~	.5L	20.89	22.2	6.17	90.7	1.17	———	———	242.7
1400	1.0L	20.92	22.0	6.19	92.0	0.88			162.4
1405	1.5L	20.92	22.1	6.22	93.0	.80			108.5
1410	2.0L	20.90	22.3	6.23	91.6	.79			79.6
1415	2.5L	20.90	22.2	6.23	89.3	.78			67.1
1420	3.0L	20.90	21.9	6.21	86.9	.79			59.4
1425	3.5L	20.90	21.9	6.21	85.4	.80			57.2
		SAMPLE							

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): WAB		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1427	Time Sampling Completed: 1432
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-12	1427	3	40 ml	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-000	
Location: Commerce, GA	Well ID: MW-13	
Date: 10/13/17	Start Time at Well: 1:30	End Time at Well: 2:58
Sampler: SFuller	Weather: Overcast/mist 70's	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 30 (ft) to 40 (ft)		Initial Depth to Water (ft): 20.37
Total Well Depth (ft): 39.45 40	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 3.11	3 Well Vol. (gal): 9.33
			Total Vol. Purged (gal): 3.4L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 35	Final Depth of Tubing (ft): 35	Total Purge Time: 42 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (~~gpm~~): 0.14/m	Final Purge Rate (~~gpm~~): 0.14/m	Purge ~~Method~~ (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

2:06

Reading Time	Total Volume Purged (~~gal~~)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
2:10	0.4L	20.46	21.0	5.34	55.2	1.76		clr/no	188.2
2:15	0.9L	20.46	20.9	5.07	55.3	1.40		" "	203.9
2:20	1.4L	20.46	20.9	5.19	56.5	1.29		" "	196.7
2:25	1.9L	20.48	20.8	5.21	56.4	1.31		" "	194.1
2:30	2.4L	20.48	20.7	5.19	55.4	1.34		" "	192.5
2:35	2.9L	20.48	20.7	5.19	55.4	1.35		" "	191.0
2:40	3.4L	20.48	20.6	5.18	55.4	1.38		" "	189.9
2:43	3	a	Mu	P	1	C			

Stabilization: Temperature - ± 0.1°; **pH** - ± 0.1; **Conductivity** - ± 5%; **Dissolved Oxygen** - ± 0.2 mg/L (or 10% saturation); **Turbidity** - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): SFuller		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 2:43	Time Sampling Completed: 2:48
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-13	2:43	3	40 ml	HCL	VOC/8260	G

Notes:

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

Page 1 of 1

GROUNDWATER SAMPLING LOG

Project: Ropes Pump	Project Number: 6572-0001		
Location: Commerce, GA	Well ID: MW-13D		
Date: 10/13/17	Start Time at Well: 2:50	End Time at Well: 3:50	
Sampler: JFuller/WAB	Weather: Overcast/mid 70's	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 64 (ft) to 69 (ft)		Initial Depth to Water (ft): 29.34
Total Well Depth (ft): 69	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 7.93	3 Well Vol. (gal): 23.79
			Total Vol. Purged (gal): 2.2L

Well capacity (gallons per foot): **0.75"** = 0.02; **1"** = 0.04; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

PURGING DATA

Initial Depth of Tubing (ft): 66.5	Final Depth of Tubing (ft): 66.5	Total Purge Time: 20 min	Purge Equipment (circle one): ~~Bailer~~ Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)
Initial Purge Rate (gpm): 0.1 L/m	Final Purge Rate (gpm): 0.1 L/m	Purge Method (circle one): ~~Low Flow-Low Stress~~ Micro-purge	Meter(s) used (circle one): YSI 556 Lamotte 2020 Horiba U53 (YSI ProPlus)

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
3:04	0.2L	20.75	20.8	6.12	38.7	4.64		Clr/NO	178.7
3:09	0.7L	20.75	20.8	6.09	38.6	4.35		" "	180.2
3:14	1.2L	20.75	20.7	6.08	38.2	4.29		" "	179.3
3:19	1.7L	20.76	20.6	6.11	38.2	4.40		" "	177.8
3:24	2.2L	20.76	20.6	6.13	38.2	4.42		" "	177.5
3:27	S	a	M	P	T	E			

3:02
3:

Stabilization: Temperature - ± 0.1°; pH - ± 0.1; Conductivity - ± 5%; Dissolved Oxygen - ± 0.2 mg/L (or 10% saturation); Turbidity - ≤ 10 NTUs (or stable)

SAMPLING

Sampled by (print): JFT/WAB		Collection Method (circle one): Bailer ~~Straw method~~ Vacuum Jug Other			Time Sampling Initiated: 3:27	Time Sampling Completed: 3:32
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-13D	3:27	3	40ml	HCL	VOC/8260	G

Notes:

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Wenck

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 1080 Holcomb Bridge Road Bldg 100 Suite 190 Roswell, GA 30076

REPORT TO: Adam Hayes | CC: [illegible]

REQUESTED COMPLETION DATE: Standard TAT | PO #:

PROJECT NAME/STATE: Roper Pump/GA

PROJECT #: 6572-0001

ANALYSIS REQUESTED — CONTAINER TYPE: V; PRESERVATION: 1; Analysis: VOCs

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS (VOCs)	LAB ID NUMBER
[illegible]	11:57	GW		G	MW-23	3	
[illegible]	12:00				MW-4	3	
[illegible]	13:13				MW-15D	3	
[illegible]	15:57				MW-7D	3	
	16:25				MW-6DS	3	
	17:03				MW-12D	3	
	17:27				MW-6D	3	
	18:09				MW-6		
10/13/17	8:51				MW-21D		
	9:41				MW-22		
	10:11				MW-9S		
	11:16				MW-21		

CONTAINER TYPE
- P - PLASTIC
- A - AMBER GLASS
- G - CLEAR GLASS
- V - VOA VIAL
- S - STERILE
- O - OTHER

PRESERVATION
- 1 - HCl, ≤6°C
- 2 - H_2SO_4, ≤6°C
- 3 - HNO_3
- 4 - NaOH, ≤6°C
- 5 - NaOH/ZnAc, ≤6°C
- 6 - $Na_2S_2O_3$, ≤6°C
- 7 - ≤6°C not frozen

*MATRIX CODES:
- DW - DRINKING WATER
- WW - WASTEWATER
- GW - GROUNDWATER
- SW - SURFACE WATER
- ST - STORM WATER
- W - WATER
- S - SOIL
- SL - SLUDGE
- SD - SOLID
- A - AIR
- L - LIQUID
- P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Smith / Hammerfeld | DATE/TIME: 10/13/17 1530

RELINQUISHED BY: William Smith | DATE/TIME: 10/13/17 1700

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: [illegible] | DATE/TIME: 10/13/17 1700

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS

pH checked: Yes No (NA) | Ice: (Yes) No NA | Temperature: Min: 1.9 Max: | Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Rev. 12/15/2016

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Wenck

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
1800 Holcomb Bridge Road
Bldg 100 Suite 170
Roswell GA 30076

REPORT TO: Adam Hunt

CC: Kate Ross

REQUESTED COMPLETION DATE: Standard TAT

PO #:

PROJECT NAME/STATE: Roper Pump, GA

PROJECT #: 6572-0001

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		VOC (CONTAINER TYPE: V; PRESERVATION: 1)									LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
10/13/17	11:58	GW		G	MW-7			3										
↓	14:2[illegible]	↓		↓	MW-10			3										
↓	14:43	↓		↓	MW-13			3										
↓	15:27	↓		↓	MW-13D			3										
					Trip Blank			X										

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

SAMPLED BY AND TITLE: [illegible signature] / [illegible]
DATE/TIME: 10/13/17 1530

RELINQUISHED BY: [illegible signature]
DATE/TIME: 10/13/17 1700

RECEIVED BY:
DATE/TIME:

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB: [illegible signature]
DATE/TIME: 10/13/17 1700

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

pH checked: Yes No (NA)
Ice: (Yes) No NA
Temperature: Min: 1.9 Max:
Custody Seal: (Intact) Broken Not Present N/A
# of Coolers
Cooler ID:

Appendix C

Laboratory Analytical Reports
(To reduce the size of the paper copy, the laboratory analytical reports are provided with the electronic copy of the report.)

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

WENCK Associates

1080 Holcomb Bridge Road, Building 100, Suite 190

Roswell, GA 30076

Attention: Mr. Adam Hayes

Report Number: AAJ0491

October 19, 2017

Project: Roper Pump

Project #:6572-0001

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Signature

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-23	AAJ0491-01	Ground Water	10/12/17 11:57	10/13/17 17:00
MW-4	AAJ0491-02	Ground Water	10/12/17 12:00	10/13/17 17:00
MW-15D	AAJ0491-03	Ground Water	10/12/17 13:15	10/13/17 17:00
MW-9D	AAJ0491-04	Ground Water	10/12/17 15:59	10/13/17 17:00
MW-6DS	AAJ0491-05	Ground Water	10/12/17 16:23	10/13/17 17:00
MW-12D	AAJ0491-06	Ground Water	10/12/17 17:03	10/13/17 17:00
MW-6D	AAJ0491-07	Ground Water	10/12/17 17:27	10/13/17 17:00
MW-6	AAJ0491-08	Ground Water	10/12/17 18:09	10/13/17 17:00
MW-21D	AAJ0491-09	Ground Water	10/13/17 08:51	10/13/17 17:00
MW-22	AAJ0491-10	Ground Water	10/13/17 09:41	10/13/17 17:00
MW-9S	AAJ0491-11	Ground Water	10/13/17 10:11	10/13/17 17:00
MW-21	AAJ0491-12	Ground Water	10/13/17 11:16	10/13/17 17:00
MW-7	AAJ0491-13	Ground Water	10/13/17 11:58	10/13/17 17:00
MW-12	AAJ0491-14	Ground Water	10/13/17 14:27	10/13/17 17:00
MW-13	AAJ0491-15	Ground Water	10/13/17 14:43	10/13/17 17:00
MW-13D	AAJ0491-16	Ground Water	10/13/17 15:27	10/13/17 17:00
Trip Blank	AAJ0491-17	Water	10/12/17 00:00	10/13/17 17:00

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-23
Date/Time Sampled: 10/12/2017 11:57:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-01
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Chloroform	0.0058	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
cis-1,2-Dichloroethene	0.70	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 17:50	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-23
Date/Time Sampled: 10/12/2017 11:57:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-01
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1,1,2-Tetrachloroethane	0.0062	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Tetrachloroethene	5.5	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 17:50	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Toluene	0.0025	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Trichloroethene	3.7	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 17:50	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-23
Date/Time Sampled: 10/12/2017 11:57:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-01
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 19:29	7100484	LIH
Surrogate: Dibromofluoromethane	*97 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 19:29*	*7100484*	
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 17:50*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 17:50*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 19:29*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 17:50*	*7100484*	
Surrogate: Toluene-d8	*104 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 19:29*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 17:50*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 19:29*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-4
Date/Time Sampled: 10/12/2017 12:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-02
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-4
Date/Time Sampled: 10/12/2017 12:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-02
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Tetrachloroethene	0.013	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Trichloroethene	0.019	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH

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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-4
Date/Time Sampled: 10/12/2017 12:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-02
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 12:45	7100484	LIH
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 12:45*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 12:45*	*7100484*	
Surrogate: Toluene-d8	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 12:45*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 12:45*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-15D
Date/Time Sampled: 10/12/2017 1:15:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-03
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-15D
Date/Time Sampled: 10/12/2017 1:15:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-03
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1,1,2-Tetrachloroethane	0.0030	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Tetrachloroethene	1.3	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 12:22	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Trichloroethene	0.11	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-15D
Date/Time Sampled: 10/12/2017 1:15:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-03
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:10	7100484	LIH
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:10*	*7100484*	
Surrogate: Dibromofluoromethane	*96 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:22*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:22*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*111 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:10*	*7100484*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:22*	*7100484*	
Surrogate: Toluene-d8	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:10*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:22*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:10*	*7100484*	

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Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-9D
Date/Time Sampled: 10/12/2017 3:59:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-04
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH

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WENCK Associates
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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-9D
Date/Time Sampled: 10/12/2017 3:59:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-04
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Tetrachloroethene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Trichloroethene	0.018	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-9D
Date/Time Sampled: 10/12/2017 3:59:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-04
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 13:36	7100484	LIH
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:36*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:36*	*7100484*	
Surrogate: Toluene-d8	*104 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:36*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 13:36*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6DS
Date/Time Sampled: 10/12/2017 4:23:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-05
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6DS
Date/Time Sampled: 10/12/2017 4:23:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-05
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Tetrachloroethene	0.073	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Trichloroethene	0.024	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6DS
Date/Time Sampled: 10/12/2017 4:23:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-05
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:01	7100484	LIH
Surrogate: Dibromofluoromethane	*94 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:01*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:01*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:01*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*107 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:01*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-12D
Date/Time Sampled: 10/12/2017 5:03:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-06
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-12D
Date/Time Sampled: 10/12/2017 5:03:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-06
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Tetrachloroethene	0.0088	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Trichloroethene	0.031	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-12D
Date/Time Sampled: 10/12/2017 5:03:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-06
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:26	7100484	LIH
Surrogate: Dibromofluoromethane	*97 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:26*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*110 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:26*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:26*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*107 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:26*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6D
Date/Time Sampled: 10/12/2017 5:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-07
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH

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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6D
Date/Time Sampled: 10/12/2017 5:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-07
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Tetrachloroethene	0.013	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Trichloroethene	0.020	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6D
Date/Time Sampled: 10/12/2017 5:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-07
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 14:51	7100484	LIH
Surrogate: Dibromofluoromethane	*95 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:51*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:51*	*7100484*	
Surrogate: Toluene-d8	*100 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:51*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 14:51*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6
Date/Time Sampled: 10/12/2017 6:09:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-08
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6
Date/Time Sampled: 10/12/2017 6:09:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-08
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Tetrachloroethene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Trichloroethene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-6
Date/Time Sampled: 10/12/2017 6:09:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-08
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:16	7100484	LIH
Surrogate: Dibromofluoromethane	*94 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:16*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:16*	*7100484*	
Surrogate: Toluene-d8	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:16*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:16*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-21D
Date/Time Sampled: 10/13/2017 8:51:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-09
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-21D
Date/Time Sampled: 10/13/2017 8:51:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-09
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Tetrachloroethene	1.0	0.25	mg/L	EPA 8260B		50	10/18/17 11:00	10/18/17 12:47	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Trichloroethene	0.19	0.10	mg/L	EPA 8260B		50	10/18/17 11:00	10/18/17 12:47	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-21D
Date/Time Sampled: 10/13/2017 8:51:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-09
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 15:42	7100484	LIH
Surrogate: Dibromofluoromethane	*97 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:42*	*7100484*	
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:47*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:47*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:42*	*7100484*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:42*	*7100484*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:47*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 12:47*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 15:42*	*7100484*	

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-22
Date/Time Sampled: 10/13/2017 9:41:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-10
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Chloroform	0.014	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1-Dichloroethene	0.014	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
cis-1,2-Dichloroethene	0.68	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 13:13	7100484	LIH
trans-1,2-Dichloroethene	0.0098	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH

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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-22
Date/Time Sampled: 10/13/2017 9:41:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-10
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1,1,2-Tetrachloroethane	0.090	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1,2,2-Tetrachloroethane	0.024	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Tetrachloroethene	47	5.0	mg/L	EPA 8260B		1000	10/18/17 11:00	10/18/17 18:16	7100484	LIH
Tetrahydrofuran	0.021	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Toluene	0.037	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Trichloroethene	0.79	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 13:13	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-22
Date/Time Sampled: 10/13/2017 9:41:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-10
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:07	7100484	LIH
Surrogate: Dibromofluoromethane	*99 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:07*	*7100484*	
Surrogate: Dibromofluoromethane	*96 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:16*	*7100484*	
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:13*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:13*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:16*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:07*	*7100484*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:13*	*7100484*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:16*	*7100484*	
Surrogate: Toluene-d8	*117 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:07*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:16*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:13*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:07*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-9S
Date/Time Sampled: 10/13/2017 10:11:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-11
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
cis-1,2-Dichloroethene	0.24	0.10	mg/L	EPA 8260B		10	10/18/17 11:00	10/18/17 13:38	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-9S
Date/Time Sampled: 10/13/2017 10:11:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-11
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Tetrachloroethene	1.2	0.050	mg/L	EPA 8260B		10	10/18/17 11:00	10/18/17 13:38	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Trichloroethene	0.26	0.050	mg/L	EPA 8260B		10	10/18/17 11:00	10/18/17 13:38	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-9S
Date/Time Sampled: 10/13/2017 10:11:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-11
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:32	7100484	LIH
Surrogate: Dibromofluoromethane	*102 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:32*	*7100484*	
Surrogate: Dibromofluoromethane	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:38*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:38*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:32*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:38*	*7100484*	
Surrogate: Toluene-d8	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:32*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 13:38*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:32*	*7100484*	

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WENCK Associates
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Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-21
Date/Time Sampled: 10/13/2017 11:16:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-12
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Chloroform	0.0055	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1-Dichloroethene	0.015	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
cis-1,2-Dichloroethene	0.36	0.20	mg/L	EPA 8260B		10	10/18/17 11:00	10/18/17 14:03	7100484	LIH
trans-1,2-Dichloroethene	0.0023	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-21
Date/Time Sampled: 10/13/2017 11:16:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-12
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Methylene Chloride	0.028	0.020	mg/L	EPA 8260B		10	10/18/17 11:00	10/18/17 14:03	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1,1,2-Tetrachloroethane	0.029	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1,2,2-Tetrachloroethane	0.0032	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Tetrachloroethene	39	2.5	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 14:29	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Toluene	0.029	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Trichloroethene	2.9	2.5	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 14:29	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-21
Date/Time Sampled: 10/13/2017 11:16:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-12
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
m+p-Xylene	0.0052	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Xylenes, total	0.0052	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 16:58	7100484	LIH
Surrogate: Dibromofluoromethane	*100 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:58*	*7100484*	
Surrogate: Dibromofluoromethane	*100 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:29*	*7100484*	
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:03*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*111 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:29*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:03*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:58*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:03*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:29*	*7100484*	
Surrogate: Toluene-d8	*110 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:58*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*99 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:29*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:03*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 16:58*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-7
Date/Time Sampled: 10/13/2017 11:58:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-13
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Chloroform	0.0040	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1-Dichloroethene	0.0030	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
cis-1,2-Dichloroethene	0.24	0.20	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 14:54	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-7
Date/Time Sampled: 10/13/2017 11:58:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-13
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1,1,2-Tetrachloroethane	0.032	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1,2,2-Tetrachloroethane	0.014	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Tetrachloroethene	19	5.0	mg/L	EPA 8260B		1000	10/18/17 11:00	10/18/17 18:41	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Trichloroethene	0.60	0.50	mg/L	EPA 8260B		100	10/18/17 11:00	10/18/17 14:54	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-7
Date/Time Sampled: 10/13/2017 11:58:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-13
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:23	7100484	LIH
Surrogate: Dibromofluoromethane	*99 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:41*	*7100484*	
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:54*	*7100484*	
Surrogate: Dibromofluoromethane	*100 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:23*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*111 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:41*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:54*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:23*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:54*	*7100484*	
Surrogate: Toluene-d8	*100 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:41*	*7100484*	
Surrogate: Toluene-d8	*107 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:23*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 18:41*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 14:54*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:23*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-12
Date/Time Sampled: 10/13/2017 2:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-14
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Chloroform	0.0041	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1-Dichloroethene	0.013	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
cis-1,2-Dichloroethene	0.14	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-12
Date/Time Sampled: 10/13/2017 2:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-14
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1,1,2-Tetrachloroethane	0.022	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Tetrachloroethene	64	2.5	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 15:19	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Toluene	0.0042	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Trichloroethene	2.8	2.5	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 15:19	7100484	LIH

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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-12
Date/Time Sampled: 10/13/2017 2:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-14
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 17:48	7100484	LIH
Surrogate: Dibromofluoromethane	*99 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:19*	*7100484*	
Surrogate: Dibromofluoromethane	*101 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:48*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:48*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:19*	*7100484*	
Surrogate: Toluene-d8	*108 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:48*	*7100484*	
Surrogate: Toluene-d8	*100 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:19*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 17:48*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:19*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-13
Date/Time Sampled: 10/13/2017 2:43:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-15
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Chloroform	0.016	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1-Dichloroethane	0.0061	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1-Dichloroethene	0.030	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
cis-1,2-Dichloroethene	1.6	1.0	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 15:44	7100484	LIH
trans-1,2-Dichloroethene	0.015	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-13
Date/Time Sampled: 10/13/2017 2:43:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-15
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Methylene Chloride	0.52	0.50	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 15:44	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1,1,2-Tetrachloroethane	0.13	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1,2,2-Tetrachloroethane	0.036	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Tetrachloroethene	72	2.5	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 15:44	7100484	LIH
Tetrahydrofuran	0.023	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Toluene	0.13	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Trichloroethene	2.2	2.0	mg/L	EPA 8260B		500	10/18/17 11:00	10/18/17 15:44	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-13
Date/Time Sampled: 10/13/2017 2:43:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-15
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:13	7100484	LIH
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:44*	*7100484*	
Surrogate: Dibromofluoromethane	*100 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:13*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:44*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:13*	*7100484*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:44*	*7100484*	
Surrogate: Toluene-d8	*113 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:13*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 15:44*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:13*	*7100484*	

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1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-13D
Date/Time Sampled: 10/13/2017 3:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-16
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-13D
Date/Time Sampled: 10/13/2017 3:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-16
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Tetrachloroethene	4.1	0.25	mg/L	EPA 8260B		50	10/18/17 11:00	10/18/17 16:09	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Trichloroethene	1.0	0.25	mg/L	EPA 8260B		50	10/18/17 11:00	10/18/17 16:09	7100484	LIH

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: MW-13D
Date/Time Sampled: 10/13/2017 3:27:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: AAJ0491-16
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/17/17 9:00	10/17/17 18:39	7100484	LIH
Surrogate: Dibromofluoromethane	*100 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 16:09*	*7100484*	
Surrogate: Dibromofluoromethane	*100 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:39*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:39*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*112 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 16:09*	*7100484*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 16:09*	*7100484*	
Surrogate: Toluene-d8	*99 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:39*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*102 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 16:09*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/17/17 9:00*	*10/17/17 18:39*	*7100484*	

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: Trip Blank
Date/Time Sampled: 10/12/2017 12:00:00AM
Matrix: Water

Project: Roper Pump
Lab Number ID: AAJ0491-17
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	0.10	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH

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WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: Trip Blank
Date/Time Sampled: 10/12/2017 12:00:00AM
Matrix: Water

Project: Roper Pump
Lab Number ID: AAJ0491-17
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Tetrachloroethene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Trichloroethene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH

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WENCK Associates
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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491
Client ID: Trip Blank
Date/Time Sampled: 10/12/2017 12:00:00AM
Matrix: Water

Project: Roper Pump
Lab Number ID: AAJ0491-17
Date/Time Received: 10/13/2017 5:00:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	10/18/17 11:00	10/18/17 11:57	7100484	LIH
Surrogate: Dibromofluoromethane	*96 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 11:57*	*7100484*	
Surrogate: 1,2-Dichloroethane-d4	*109 %*	*78-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 11:57*	*7100484*	
Surrogate: Toluene-d8	*104 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 11:57*	*7100484*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*10/18/17 11:00*	*10/18/17 11:57*	*7100484*	

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

WENCK Associates
1080 Holcomb Bridge Road, Building 100, S
Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7100484 - EPA 5030B										
Blank (7100484-BLK1)					Prepared & Analyzed: 10/17/17					
Acetone	ND	0.10	mg/L							
Acrolein	ND	0.050	mg/L							
Acrylonitrile	ND	0.050	mg/L							
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L							
Benzene	ND	0.0050	mg/L							
Bromobenzene	ND	0.010	mg/L							
Bromochloromethane	ND	0.010	mg/L							
Bromodichloromethane	ND	0.010	mg/L							
Bromoform	ND	0.010	mg/L							
Bromomethane	ND	0.010	mg/L							
n-Butylbenzene	ND	0.010	mg/L							
sec-Butylbenzene	ND	0.010	mg/L							
tert-Butylbenzene	ND	0.010	mg/L							
Carbon Disulfide	ND	0.010	mg/L							
Carbon Tetrachloride	ND	0.0020	mg/L							
Chlorobenzene	ND	0.010	mg/L							
1-Chlorobutane	ND	0.010	mg/L							
Chloroethane	ND	0.0050	mg/L							
Chloroform	ND	0.0020	mg/L							
Chloromethane	ND	0.010	mg/L							
2-Chlorotoluene	ND	0.010	mg/L							
4-Chlorotoluene	ND	0.010	mg/L							
Dibromochloromethane	ND	0.010	mg/L							
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L							
1,2-Dibromoethane	ND	0.010	mg/L							
Dibromomethane	ND	0.010	mg/L							
1,2-Dichlorobenzene	ND	0.010	mg/L							
1,3-Dichlorobenzene	ND	0.010	mg/L							
1,4-Dichlorobenzene	ND	0.010	mg/L							
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L							
Dichlorodifluoromethane	ND	0.010	mg/L							
1,1-Dichloroethane	ND	0.0020	mg/L							
1,2-Dichloroethane	ND	0.0020	mg/L							
1,1-Dichloroethene	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.070	mg/L							
trans-1,2-Dichloroethene	ND	0.0020	mg/L							
1,2-Dichloropropane	ND	0.0020	mg/L							
1,3-Dichloropropane	ND	0.0020	mg/L							
2,2-Dichloropropane	ND	0.010	mg/L							
1,1-Dichloropropene	ND	0.010	mg/L							
cis-1,3-Dichloropropene	ND	0.0020	mg/L							

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Attention: Mr. Adam Hayes

October 19, 2017

Report No.: AAJ0491

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7100484 - EPA 5030B										
Blank (7100484-BLK1)					Prepared & Analyzed: 10/17/17					
trans-1,3-Dichloropropene	ND	0.0020	mg/L							
Ethylbenzene	ND	0.0020	mg/L							
Ethyl Methacrylate	ND	0.010	mg/L							
Hexachlorobutadiene	ND	0.010	mg/L							
p-Isopropyltoluene	ND	0.010	mg/L							
Hexachloroethane	ND	0.010	mg/L							
Iodomethane	ND	0.010	mg/L							
Isopropylbenzene	ND	0.010	mg/L							
Methacrylonitrile	ND	0.010	mg/L							
Methyl Acrylate	ND	0.010	mg/L							
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L							
Methylene Chloride	ND	0.0050	mg/L							
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L							
Methyl Methacrylate	ND	0.010	mg/L							
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L							
Methyl-tert-Butyl Ether	ND	0.010	mg/L							
Naphthalene	ND	0.010	mg/L							
2-Nitropropane	ND	0.010	mg/L							
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L							
n-Propylbenzene	ND	0.010	mg/L							
Styrene	ND	0.0050	mg/L							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L							
Tetrachloroethene	ND	0.0050	mg/L							
Tetrahydrofuran	ND	0.010	mg/L							
Toluene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.010	mg/L							
1,2,4-Trichlorobenzene	ND	0.010	mg/L							
1,1,1-Trichloroethane	ND	0.0020	mg/L							
1,1,2-Trichloroethane	ND	0.0020	mg/L							
Trichloroethene	ND	0.0050	mg/L							
Trichlorofluoromethane	ND	0.010	mg/L							
1,2,3-Trichloropropane	ND	0.010	mg/L							
1,2,4-Trimethylbenzene	ND	0.010	mg/L							
1,3,5-Trimethylbenzene	ND	0.010	mg/L							
Vinyl Acetate	ND	0.010	mg/L							
Vinyl Chloride	ND	0.0020	mg/L							
m+p-Xylene	ND	0.0050	mg/L							
o-Xylene	ND	0.0050	mg/L							
Xylenes, total	ND	0.0050	mg/L							
Surrogate: Dibromofluoromethane	*49*		*ug/L*	*50.000*		*98*	*80-120*			

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October 19, 2017

Report No.: AAJ0491

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7100484 - EPA 5030B										
Blank (7100484-BLK1)				Prepared & Analyzed: 10/17/17						
Surrogate: 1,2-Dichloroethane-d4	*54*		*ug/L*	*50.000*		*108*	*78-120*			
Surrogate: Toluene-d8	*52*		*ug/L*	*50.000*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*53*		*ug/L*	*50.000*		*106*	*80-120*			
LCS (7100484-BS1)				Prepared & Analyzed: 10/17/17						
Benzene	55		ug/L	50.000		110	67-134			
Chlorobenzene	52		ug/L	50.000		105	69-122			
1,1-Dichloroethene	71		ug/L	50.000		142	58-142			
Toluene	54		ug/L	50.000		107	68-127			
Trichloroethene	53		ug/L	50.000		106	72-132			
Surrogate: Dibromofluoromethane	*48*		*ug/L*	*50.000*		*97*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*53*		*ug/L*	*50.000*		*106*	*78-120*			
Surrogate: Toluene-d8	*51*		*ug/L*	*50.000*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*53*		*ug/L*	*50.000*		*107*	*80-120*			
Matrix Spike (7100484-MS1)	**Source: AAJ0491-02**			Prepared & Analyzed: 10/17/17						
Benzene	57		ug/L	50.000	0.0	114	67-134			
Chlorobenzene	50		ug/L	50.000	0.0	101	69-122			
1,1-Dichloroethene	80		ug/L	50.000	0.0	160	58-142			QM-05
Toluene	53		ug/L	50.000	0.0	107	68-127			
Trichloroethene	97		ug/L	50.000	19	156	72-132			QM-05
Surrogate: Dibromofluoromethane	*48*		*ug/L*	*50.000*		*97*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*55*		*ug/L*	*50.000*		*109*	*78-120*			
Surrogate: Toluene-d8	*50*		*ug/L*	*50.000*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*51*		*ug/L*	*50.000*		*102*	*80-120*			
Matrix Spike Dup (7100484-MSD1)	**Source: AAJ0491-02**			Prepared & Analyzed: 10/17/17						
Benzene	56		ug/L	50.000	0.0	112	67-134	2	9	
Chlorobenzene	50		ug/L	50.000	0.0	100	69-122	0.8	13	
1,1-Dichloroethene	79		ug/L	50.000	0.0	158	58-142	1	9	QM-05
Toluene	53		ug/L	50.000	0.0	107	68-127	0.2	9	
Trichloroethene	97		ug/L	50.000	19	156	72-132	0.3	11	QM-05
Surrogate: Dibromofluoromethane	*49*		*ug/L*	*50.000*		*98*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*55*		*ug/L*	*50.000*		*111*	*78-120*			
Surrogate: Toluene-d8	*52*		*ug/L*	*50.000*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*51*		*ug/L*	*50.000*		*102*	*80-120*			

PACE ANALYTICAL SERVICES, LLC.

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WENCK Associates
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Roswell GA, 30076
Attention: Mr. Adam Hayes

October 19, 2017

Laboratory Certifications

Code	Description	Number	Expires
GADW	Georgia DW Inorganics Eff: 07/01/2016	812	06/30/2018
GADWM	Georgia DW Microbiology Eff: 07/01/2015	812	12/09/2019
NC	North Carolina	381	12/31/2017
NELAC	FL DOH (Non-Pot. Water, Solids) Eff:: 07/01/2016	E87315	06/30/2018
NELDW	FL DOH NELAC (Drinking Water) Eff: 07/01/2016	E87315	06/30/2018
SC	South Carolina	98011001	10/31/2017
TX	Texas	T104704397-08-TX	03/31/2018
VA	Virginia	460204	12/14/2017

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October 19, 2017

Legend

Definition of Laboratory Terms

ND - None Detected at the Reporting Limit
TIC - Tentatively Identified Compound
CFU - Colony Forming Units
SOP - Method run per Pace Standard Operating Procedure
RL - Reporting Limit
DF - Dilution Factor
***** - Analyte not included in the NELAC list of certified analytes.

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for diphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Drinking Water Records will be available for at least 5 years and are subject to disposal after the 5 years have elapsed.

Definition of Qualifiers

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

Note: Unless otherwise noted, all results are reported on an as received basis.

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Wenck

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
1080 Holcomb Bridge Road
Bldg 100 Suite 190
Roswell, GA 30076

REPORT TO: Adam Hayes | CC: Katie Ross

REQUESTED COMPLETION DATE: Standard TAT | PO #:

PROJECT NAME/STATE: Roper Pump/GA

PROJECT #: 0572-0001

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	PRESERVATION	CONTAINER TYPE	LAB ID NUMBER
								ANALYSIS REQUESTED	
								CONTAINER TYPE:	
								PRESERVATION:	
								# of CONTAINERS ↓	
								VOC's ↓	
10/12/17	11:57	GW		G	MW-23	~~3~~			1
	12:00				MW-4	3			2
	13:15				MW-15D	3			3
	15:59				MW-9D	3			4
	16:23				MW-6DS	3			5
	17:03				MW-12D	3			6
	17:27				MW-6D	3			7
↓	18:09				MW-6	3			8
10/13/17	8:51				MW-21D	3			9
	9:41				MW-22	3			10
	10:11				MW-9S	3			11
↓	11:16	↓		↓	MW-21	3			12

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: William Bennett Blumenthal | DATE/TIME: 10/13/17 1530

RELINQUISHED BY: [signature] | DATE/TIME: 10/13/17 1700

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: M Zalman | DATE/TIME: 10/13/17 1700

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS

Custody Seal: (Intact) Broken Not Present N/A | # of Coolers | Cooler ID:

Received on ice: (Yes) No NA | Temperature: Min: 1.9 Max:

FOR LAB USE ONLY
LAB #: AAJ0491
Entered into LIMS:
Tracking #:

CHAIN OF CUSTODY RECORD

Pace Analytical® www.pacelabs.com

Pace Analytical Services, LLC - Atlanta GA
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Wench

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER: 1050 Holcomb Bridge Road Bldg 100 suite 190 Roswell, GA 30076

REPORT TO: Adam Hayes | CC: Katie Ross

REQUESTED COMPLETION DATE: Standard TAT | PO #:

PROJECT NAME/STATE: Roper Pump, GA

PROJECT #: 6572-0001

ANALYSIS REQUESTED — CONTAINER TYPE: V; PRESERVATION: 1; # of CONTAINERS: VOCs

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	VOCs	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
10/13/17	11:58	GW		G	MW-7	3	13	
↓	14:27	↓		↓	MW-12	3	14	
↓	14:43	↓		↓	MW-13	3	15	
↓	15:27	↓		↓	MW-13D	3	16	
					Trip Blank	X	17	

CONTAINER TYPE
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

***MATRIX CODES:**
DW - DRINKING WATER; S - SOIL
WW - WASTEWATER; SL - SLUDGE
GW - GROUNDWATER; SD - SOLID
SW - SURFACE WATER; A - AIR
ST - STORM WATER; L - LIQUID
W - WATER; P - PRODUCT

SAMPLED BY AND TITLE: [signature] / Sham[illegible] | DATE/TIME: 10/13/17 1530
RELINQUISHED BY: [signature] | DATE/TIME: 10/13/17 1700
RECEIVED BY: | DATE/TIME:
RELINQUISHED BY: | DATE/TIME:
RECEIVED BY LAB: M Lalman | DATE/TIME: 10/13/17 1700

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT, circled) OTHER FS
# of Coolers: | Cooler ID:

I checked: Yes No (NA, circled) | Ice: (Yes, circled) No NA | Temperature: Min: 1.9 Max: | Custody Seal: (Intact, circled) Broken Not Present N/A

FOR LAB USE ONLY
LAB #: AAJ0491
Entered into LIMS: M
Tracking #:

Rev. 12/15/2016

Sample Condition Upon Receipt

Pace Analytical

Client Name: Wenck Project # AAJ0491

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other _____

Optional: Proj Due Date: Proj Name:

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used IR-4 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.9 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: 10/13/17 MR

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.	
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.	
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.	
Sufficient Volume:	☑Yes	☐No	☐N/A	8.	
Correct Containers Used:	☑Yes	☐No	☐N/A	9.	
-Pace Containers Used:	☑Yes	☐No	☐N/A		
Containers Intact:	☑Yes	☐No	☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.	
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: GW					
All containers needing preservation have been checked.	☐Yes	☐No	☑N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A		
exceptions: (VOA), coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.	
Trip Blank Present:	☑Yes	☐No	☐N/A	16.	
Trip Blank Custody Seals Present	☑Yes	☐No	☐N/A		
Pace Trip Blank Lot # (if purchased): _____					

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST **Printed: 10/16/2017 10:44:24AM**

Attn: Ms. Kristen Rivera

Client: WENCK Associates
Project: Roper Pump
Date Received: 10/13/17 17:00

Work Order: AAJ0491
Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 17 **#Containers:** 51

Minimum Temp(C): 1.9 **Maximum Temp(C):** 1.9 **Custody Seal(s) Used:** Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

Appendix D

Pilot Test Results

ORIN Technologies

April 24, 2017

Kristen Ritter Rivera
Wenck Associates, Inc.
1080 Holcomb Bridge Rd.
Building 100, Suite 190
Roswell, GA 30076

Subject: Summary of Chemical Injection Activities Performed at a Confidential Client Site Located in Commerce, GA.

Dear Kristen:

The following is a summary of the work completed by ORIN Technologies, LLC (ORIN) for Wenck Associates, Inc. (Wenck) at a site located at 3475 Old Maysville Road in Commerce, Georgia (site).

On April 18th, 2017 ORIN began preparations for chemical injection activities by arriving on site and staging the injection trailer and site equipment. Pre-injection activities continued by discussing injection locations and health and safety parameters with Wenck and Atlas Geo-Sampling (Atlas) personnel. Prior to commencement of chemical injection, a tailgate health and safety meeting was held to discuss potential site hazards between ORIN, Wenck, and Atlas personnel. Chemical was delivered to the site the previous week prior to mobilization.

ORIN commenced injection activities on April 19th at approximately 7:35am. Approximately 600 gallons of Bioavailable Absorbent Media (BAM) treatment chemistry were allocated for each of the 12 injection points. In addition, three points were also going to receive 21% ELS treatment chemistry. Nine points were advanced as a Barrier Wall (BW-1 through BW-9) up gradient of MW-7 and MW-12D and three points were advanced near the Source Area (SA-1 through SA-3) up gradient of MW-21. Notes on injection point time, concentrations, pressures, flow rate, and volumes can be found in Table 1 of the attached excel spreadsheet *ORIN – Wenck Commerce, GA Post Injection Tables 4-22-17.*

A couple points short circuited around the current borehole or previously advanced adjacent boreholes. When this happened injection rates and pressures were decreased and additional bentonite was added to the daylighting borehole. In both cases this alleviated the issue and injections continued.

ORIN Technologies

During the afternoon of April 20th, ORIN deployed a pneumatic pump and a hose to extract groundwater from MW-7 and control the hydraulic gradient during injection activities. The operator lowered a hose down into the well and then extracted fluid from the well simultaneous to injection activities. The extracted medium was pumped into 55-gallons drums. A total of approximately 60 gallons was extracted from MW-7.

ORIN and Wenck periodically monitored the groundwater for treatment chemistry influence through the use of a down hole monitoring device and a water level meter. Data obtained can be found in Table 2 of the attached spreadsheet *ORIN – Wenck Commerce, GA Post Injection Tables 4-22-17.*

Injection work at the site was completed at 19:55pm on April 20th, 2017. A total of 6,940 gallons of treatment chemistry was injected into 12 DPT points.

If you have any questions regarding this injection, please give us a call at (608) 838-6699 or my cell at (608) 445-8584.

Sincerely,

Keith Becker
Project Manager
ORIN Technologies, LLC

Wenck Associates, Inc.

Confidential Client - Commerce, GA

Injection Summary Table 1

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ELS Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
BW-1	4/19/17	7:35		53-47	6%/0%	7	54	120	
				47-44	6%/0%	6	42	90	
				44-41	6%/0%	7	40	65	
				41-38	6%/0%	4	38	65	
				38-35	6%/0%	5	38	65	
				35-32	6%/0%	8	46	65	
				32-29	6%/0%	9	30	65	
			9:31	29-25	6%/0%	9	28	65	**600 Gallons**
BW-2	4/19/17	10:15		52-43	6%/0%	5	82	210	
				43-40	6%/0%	7	50	65	
				40-37	6%/0%	8	42	65	
				37-34	6%/0%	8	40	65	
				34-31	6%/0%	8	50	65	
				31-28	6%/0%	8	50	65	
			11:32	28-25	6%/0%	8	42	65	**600 Gallons**
BW-3	4/19/17	12:30		52-38	6%/0%	10	66	300	
				38-35	6%/0%	10	58	65	
				35-32	6%/0%	10	44	65	
				32-29	6%/0%	10	50	65	
				29-25	6%/0%	10	58	105	**600 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ELS Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
BW-4	4/19/17	14:16		52-42	6%/0%	7	49	135	
				42-39	6%/0%	9	36	65	
				39-36	6%/0%	10	54	80	
				36-33	6%/0%	10	40	80	
				33-30	6%/0%	10	40	80	
				30-27	6%/0%	10	52	80	
			15:28	27-25	6%/0%	10	52	80	**600 Gallons**
BW-8	4/19/17	16:09		52-40	6%/0%	7	76	180	
				40-37	6%/0%	10	70	70	
				37-34	6%/0%	10	72	70	
				34-31	6%/0%	10	64	70	
				31-28	6%/0%	12	64	70	
				28-25	6%/0%	12	72	70	
				25-22	6%/0%	12	74	70	
				22-19	6%/0%	12	70	70	
				19-16	6%/0%	12	70	70	
			17:26	16-14	6%/0%	12	66	60	**800 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ELS Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
BW-9	4/19/17	18:00		50-39	6%/0%	10	54	240	
				39-36	6%/0%	12	56	70	
				36-33	6%/0%	12	66	70	
				33-30	6%/0%	12	64	70	
				30-27	6%/0%	12	60	70	
				27-24	6%/0%	12	62	70	
				24-21	6%/0%	12	62	70	
				21-18	6%/0%	12	60	70	
			19:14	18-15	6%/0%	12	60	70	**800 Gallons**
BW-5	4/20/17	8:00		50-45	6%/21%	2	86	75	
				45-42	6%/21%	2	70	75	
				42-39	6%/21%	20	68	75	
				39-36	6%/21%	10	52	75	
				36-33	6%/21%	5	48	75	
				33-30	6%/21%	10	42	75	
				30-27	6%/21%	10	40	75	
			9:26	27-25	6%/21%	10	40	75	**600 Gallons**
BW-6	4/20/17	10:13		52-39	6%/21%	10	58	125	
				39-36	6%/21%	10	56	175	
				36-33	6%/21%	10	46	75	
				33-30	6%/21%	7	44	75	
				30-27	6%/21%	7	46	75	
				27-25	6%/21%	7	40	75	**600 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ELS Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
BW-7	4/20/17	12:26		48-44	6%/21%	5	74	130	
				44-41	6%/21%	5	68	65	
				41-39	6%/21%	5	68	65	
				39-36	6%/21%	5	60	65	
				36-33	6%/21%	5	56	65	
				33-30	6%/21%	5	56	65	
				30-27	6%/21%	5	56	65	
			14:30	27-25	6%/21%	5	44	80	**600 Gallons**
SA-1	4/20/17	15:23		52-49	6%/0%	7	62	115	
				49-46	6%/0%	7	62	105	
				46-43	6%/0%	7	64	60	
				43-40	6%/0%	7	70	60	
				40-37	6%/0%	7	54	60	
				37-34	6%/0%	7	54	60	
				34-31	6%/0%	7	48	60	
				31-28	6%/0%	7	46	40	
			17:07	28-25	6%/0%	7	46	40	**600 Gallons**
SA-2	4/20/17	17:50	18:30	50-38	12%/0%	2	74	100	Clogged screen
									100 Gallons

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ELS Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
SA-3	4/20/17	18:57		52-48	6%/0%	8	60	35	
				48-45	6%/0%	8	60	15	
				45-42	6%/0%	8	56	50	
				42-39	6%/0%	8	56	50	
				39-36	6%/0%	8	58	50	
				36-33	6%/0%	8	60	65	Ran out of daylight
			19:55	33-30	6%/0%	8	50	175	**440 Gallons**
							Total Gallons		**6940 Gallons**

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572-0001
Weather Conditions: Rain, 60°
Field Technician(s): RM
Contractor: Drin, Atlas

Date: 4/19/17
Time: 7:30

Injection Info:

Injection Point ID	BW-1	Water Source	Roper
Nearest Monitoring Well	MW-12D/7/19	Injectate Mixture (lbs)	BAM (100 lbs/200 gal)
Injection Method	Bottom-up	Total Product Injected (lbs)	300 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	600 gals
Depth of Point (ft)	53'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
47-53'	7:34	~~8:55~~	50 psi	2hrs	120 gals	~6 gpm flow
~~44-47'~~	~~7:55~~	8:06	40 psi	2hrs	90 ~~60~~ gals	~6
~~41-44'~~	~~8:20~~		45-50		65	~7
~~38-41'~~	8:44		40		65	Slower flow (~4 gpm)
~~35-38'~~			30 psi		65	5 gpm
~~32-35'~~			35		65	8
29-32'			30		65	9
25-29'		9:31	25-30		65	9 gpm

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-7/MW-12D/MW-19	21.53' / 21.90' / 22.10	7:30	
MW-12D	21.68' / 21.54' / 21.28'	7:55 / 8:50 / 9:30	
MW-7	21.44' / 21.40' / 21.28'	7:55 / 900 / 9:30	
MW-19	~~21.52'~~ 21.52' / 21.54' / 21.12'	7:57 / 8:55 / 9:30	
MW-13	21.26'	8:20	
MW-9D	21.58' / 21.48'	8:55 / 9:30	

Comments:

* No flow at 50-53', pulled up to 47-50'

MW-7: 33' away, MW-12D: 25' away, MW-19: 34' Away

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump Pilot Injection **Date:** 4/18/17
Project Number: 6572-0001 **Time:**
Weather Conditions: P. Cloudy, 80°
Field Technician(s): RM
Contractor: Atlas-Geo / Orin

Injection Info:

Injection Point ID	BW-1	Water Source	Roper Hydrant
Nearest Monitoring Well	MW-12D / MW-7 / MW-19	Injectate Mixture (lbs)	
Injection Method	Bottom - up	Total Product Injected (lbs)	
Depth to Water (ft)	~22 ft	Total Fluid Injected (gals)	
Depth of Point (ft)			

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-7 / 12D / 19	21.52' / 21.90' / 22.12'	14:36	

Comments:
MW-7: 33', MW-12D: 25', MW-19: 34' Away

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572 a00
Weather Conditions: Cloudy, 70°
Field Technician(s): RM
Contractor: Orin, Atlas

Date: 4/19/17
Time: 9:45

Injection Info:

Injection Point ID	BW-2	Water Source	Roper
Nearest Monitoring Well	7/12D/19/9D	Injectate Mixture (lbs)	BAM (½ lb/gal)
Injection Method	Radial, Bottom-Up	Total Product Injected (lbs)	300 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	600 gals
Depth of Point (ft)	51'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
43-51'	10:14		80 psi		210 gals	~5 gpm
40-43'			50		65	7 gpm
37-40'			40-45		65	8
34-37'			40		65	8
31-34'			50		65	8 gpm
28-31'			50		65	8
25-28'		11:37	42		65	8

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-7	21.32' / 21.02'	10:28 / 11:25	
MW-12D	21.65' / 21.69'	10:28 / 11:25	
MW-19	21.82'	10:30	
MW-9D	21.55'	10:30	
MW-13	21.32'	11:08	

Comments:

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572-0001
Weather Conditions: Cloudy 70°
Field Technician(s): RM / SE
Contractor: Orin / Atlas

Date: 4/19/17
Time: 11:50

Injection Info:

Injection Point ID	BW-3	Water Source	Roper
Nearest Monitoring Well	120/7/19/9/13	Injectate Mixture (lbs)	Brom (½ lb/gal)
Injection Method	Radial, 3' Bottom-up	Total Product Injected (lbs)	300 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	600 gals
Depth of Point (ft)	52'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
38 52'	12:30	1300	60 psi		300	10 gpm
35-38'			58		45	
32-35'			45		65	
29-32			50		65	
26-29		1331	60		65	

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-120	21.72' / 21.72' / 21.71'	11:55 / 12:43 / 1305	
MW-7	21.22' / 21.02' / 20.80'	11:55 / 12:43 / 1305	
MW-19	21.93' / 21.95' / 21.85'	11:55 / 12:45 / 1305	
MW-9D	21.50' / 21.47'	12:45 / 1305	

Comments:
Very slow rates / high pressures from 52' - 40' (80+). Began injecting 12:15, but making progress at 12:30
MW-120: 21' Away, MW-7: 26' Away

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572-0001
Weather Conditions: Cloudy, 75°
Field Technician(s): TM / SF
Contractor: Orin / Atlas

Date: 4/19/17
Time: 15:45

Injection Info:

Injection Point ID	BW-4	Water Source	Roper
Nearest Monitoring Well	7/12D/19/9D	Injectate Mixture (lbs)	BAM (½ lb/gal)
Injection Method	Radial- 3', Bo	Total Product Injected (lbs)	300 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	600 gals
Depth of Point (ft)	52'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
42-52'	14:16		49		135	7 gpm
39-42			36		65	9
36-39			54		80	10
33-36			40		80	10
30-33			40		80	10 gpm
27-30			52		80	10
24-27		15:29	50		80	10

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-7	21.05'	15:10	
MW-12D	21.39'	15:10	
MW-13	21.13'	15:20	

Comments:

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 4577.000
Weather Conditions: P. Cloudy, 75°
Field Technician(s): ZM, SF
Contractor: Orin, Atlas

Date: 4/20/17
Time: 7:30

Injection Info:

Injection Point ID	BW-5	Water Source	Roper Pump
Nearest Monitoring Well	MW-7 / 120 / 21	Injectate Mixture (lbs)	BAM (½ lb/gal) ERS (40 gals / 200 gals ERS)
Injection Method	Radial, Bottom Up	Total Product Injected (lbs)	300 lb BAM, 120 gals
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	600 gallons
Depth of Point (ft)	50'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
45-50	800		86		20	
42-45			70		20	
39-42			60		20	
36-39			52		240	
33-36			48		75	
30-33			42		75	
27-30			40		75	
24-27		9:26	40		75	

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes

Comments:

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572-0001
Weather Conditions: Sunny, 80°
Field Technician(s): RM, SE
Contractor: Drin, Atlas

Date: 4/20/17
Time: 9:40

Injection Info:

Injection Point ID	BW-6	Water Source	Roper
Nearest Monitoring Well	MW-120/7/21	Injectate Mixture (lbs)	BAM (½ lb/gal) 5 gals H2O
Injection Method	Radial, 3', Bottom Up	Total Product Injected (lbs)	300 lbs BAM, 120 gals EDS
Depth to Water (ft)	~52'	Total Fluid Injected (gals)	600 gals
Depth of Point (ft)	52'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
39-52	1013		58		125	10 gpm
36-39			56		175	10 gpm
33-36					75	10 gpm
30-33					75	7
27-30					75	7
24-27		1140			73	7

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes

Comments:

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6577-0001
Weather Conditions: Sunny, 80°
Field Technician(s): RM, SF
Contractor: Drm, Atlas

Date: 4/20/17
Time: 12:27

Injection Info:

Injection Point ID	BW-7	Water Source	Roper
Nearest Monitoring Well	MW-12D/7/21	Injectate Mixture (lbs)	BAM/ELS
Injection Method	Radial-3', Bottom Up	Total Product Injected (lbs)	300 lbs BAM, 120 gallons ELS
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	600 gallons
Depth of Point (ft)	48'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
44-48'	12:26				130	
41-44					65	
38-41					65	
35-38					65	
32-35					65	
29-32					68	
26-29		1430			80	

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes

Comments:

Injection Log

WENCK ASSOCIATES
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Project Name: Roper Pump
Project Number: 6572-0001
Date: 4/19/17
Time: 15:41
Weather Conditions: Cloudy, 80°
Field Technician(s): RM
Contractor: Orion, ~~Atlas~~ Atlas

Injection Info:

Injection Point ID	BW-8	Water Source	Roper
Nearest Monitoring Well	MW-7 / 12D	Injectate Mixture (lbs)	BAm (½ lb/gal)
Injection Method	Radial, 3' Bottom-Up	Total Product Injected (lbs)	400 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	800 gals
Depth of Point (ft)	52'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
40 ~~[illegible]~~ 52'	16:09		76		180	~7 gpm
37 ~~[illegible]~~			70		~~70~~	10 gpm
34 ~~[illegible]~~			72		70	10 gpm
31 ~~[illegible]~~			64		70	10 gpm
28 ~~[illegible]~~			64		70	12 gpm
25 ~~[illegible]~~			72		70	12 gpm
22-25			74		70	12
~~[illegible]~~ 17'		17:26		1:15	60	

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-12D	21.57' / 21.46' / 21.16'	16:06 / 16:14 / 16:30	
MW-7	21.08' / 20.97' / 20.92'	16:06 / 16:14 / 16:30	
MW-9S	21.22'	17:05	
MW-12D	21.07' / 21.11'	16:41 / 17:03	
MW-7	20.91' / 20.87'	16:41 / 17:03	
MW-19	~~[illegible]~~ 20.60' / 20.95'	16:45 / 17:05	
MW-9D	21.28' / 21.30'	1650 / 17:05	

Comments:
MW-7 - 12' Away, MW-12D: 5' Away
* Injected shallower than other points in order to see some influence in MW-7, which is screened 20-25'.

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572-8001
Weather Conditions: P. Sunny, 75°
Field Technician(s): RM
Contractor: Orica, Atlas

Date: 4/19/17
Time: 17:33

Injection Info:

Injection Point ID	BW-9	Water Source	Roper
Nearest Monitoring Well	MW-12D/7	Injectate Mixture (lbs)	BAM (1/2 lb/gal)
Injection Method	Packer, 3' - Bottom Up	Total Product Injected (lbs)	400 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	800 gals
Depth of Point (ft)	50'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
39-50'	18:00		54		240	10 gpm
36-39			56		70	12 gpm
33-36			64		70	12
30-33			64		70	12
27-30			60		70	12
24-27			62		70	12
21-24			62		70	12
18-21		19:14	60		70	12
15-18			60		70	12

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-12D	21.22'/21.20'	17:20/17:50	
MW-7	20.85'/20.83'	" "/" "	
MW-19	21.25'	17:25	
MW-9D	21.31'	" "	
MW-9S	21.21'	" "	
MW-13	21.00'	17:30	

Comments:
* See BW-8 for explanation of shallow injection depths.

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump
Project Number: 6572-0001
Weather Conditions: Sunny / 85°
Field Technician(s): EM, ~~BT~~
Contractor: Drin, Atlas

Date: 4/20/17
Time: 15:00

~~BAM~~ only

Injection Info:

Injection Point ID	SA-1	Water Source	Roper
Nearest Monitoring Well	MW-~~29~~ / MW-9D	Injectate Mixture (lbs)	BAM (½ lb/gal)
Injection Method	Radial, 3', Bottom Up	Total Product Injected (lbs)	~~≈~~ 267 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	515 gals
Depth of Point (ft)	52'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
49-52	15:23				115	
46-49					–	
43-46					120	
40-43					60	
37-40					60	
34-37					60	
31-34					60	
~~28-31~~		17:07			40	

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes
MW-21	21.77' / 21.50'	15:00 / 15:30	*5' from SA-1

Comments:
* Clog at 31-34'

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump **Date:** 4/20/17
Project Number: 6572-0001 **Time:** 17:30
Weather Conditions: Sunny, 85°
Field Technician(s): EM
Contractor: Otis, Atlas

Injection Info:

Injection Point ID	SA-2	Water Source	Roper
Nearest Monitoring Well	MW-21/90	Injectate Mixture (lbs)	SAM (1 lb/gal)
Injection Method	Radial, 3' Bottom-up	Total Product Injected (lbs)	100 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	100 gals
Depth of Point (ft)	~~52~~ 50'		

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
~~48-52~~	~~18:25~~					
47-50	17:50				—	
44-47					—	
41-44					—	
38-41		18:30			100	
~~35-38~~						
~~32-35~~						
~~29-32~~						
~~26-29~~						

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes

Comments:
* Radial Screen clogged. Pulled out and moved to SA-3.

Injection Log

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

Project Name: Roper Pump **Date:** 4/20/17
Project Number: 6572-0004 **Time:** 18:30
Weather Conditions: Sunny, 80°
Field Technician(s): RM
Contractor: Orin, Atlas

Injection Info:

Injection Point ID	SA-3	Water Source	Roper
Nearest Monitoring Well	MW-21 / 9D	Injectate Mixture (lbs)	BAM (½ lbs/gal)
Injection Method	Bottom Out, Bottom Up	Total Product Injected (lbs)	220 lbs
Depth to Water (ft)	~22'	Total Fluid Injected (gals)	440 (Chem) 35
Depth of Point (ft)	52'		Rinse

Injection Data:

Depth	Time Start	Time End	Pressure	Total Time	Total Injected	Notes
48-52'	18:57				35	
45-48					15	
42-45					50	
39-42					50	
36-39					50	
33-36					65	
30-33		19:55			175	
~~27-30~~						

Influence Data:

Nearby Point/Well ID	Water Level	Time	Notes

Comments:
* Using Bottom Out injection rod to minimize chances of clogging.

Appendix E

Full-Scale Treatment Information

Toll Free: 800-472-2232 **Email: wenckmp@wenck.com** **Web: wenck.com**

MINNESOTA
Maple Plain
763-479-4200
Golden Valley
763-252-6800
Windom
507-831-2703
New Hope
800-368-8831
Woodbury
651-294-4580

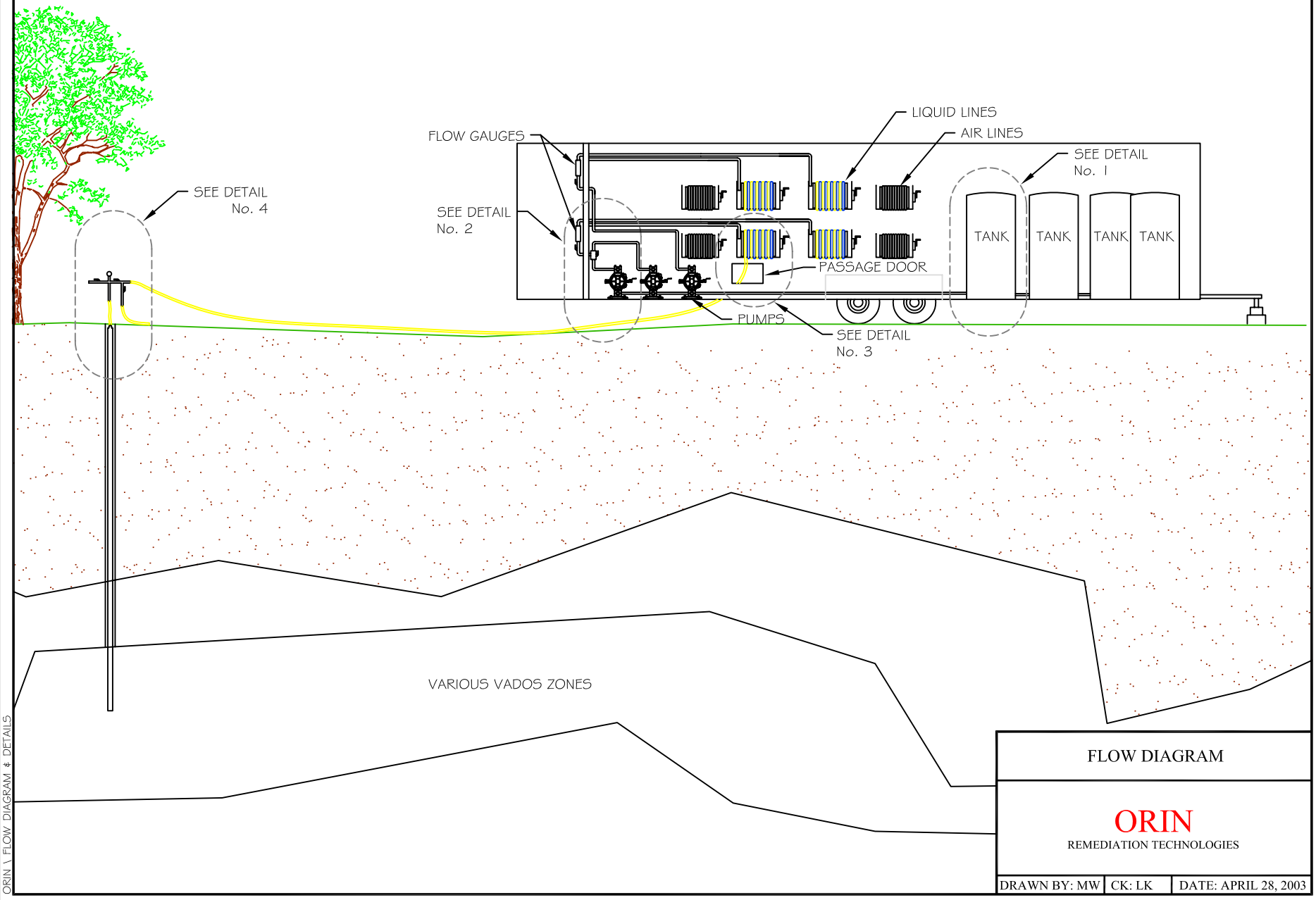
COLORADO
Denver
602-370-7420
Fort Collins
970-223-4705

GEORGIA
Roswell
678-987-5840

NORTH DAKOTA
Fargo
701-297-9600
Mandan
701-751-3370
Williston
800-472-2232

SOUTH DAKOTA
Pierre
605-222-1826

WYOMING
Cheyenne
307-634-7848
Sheridan
307-675-1148



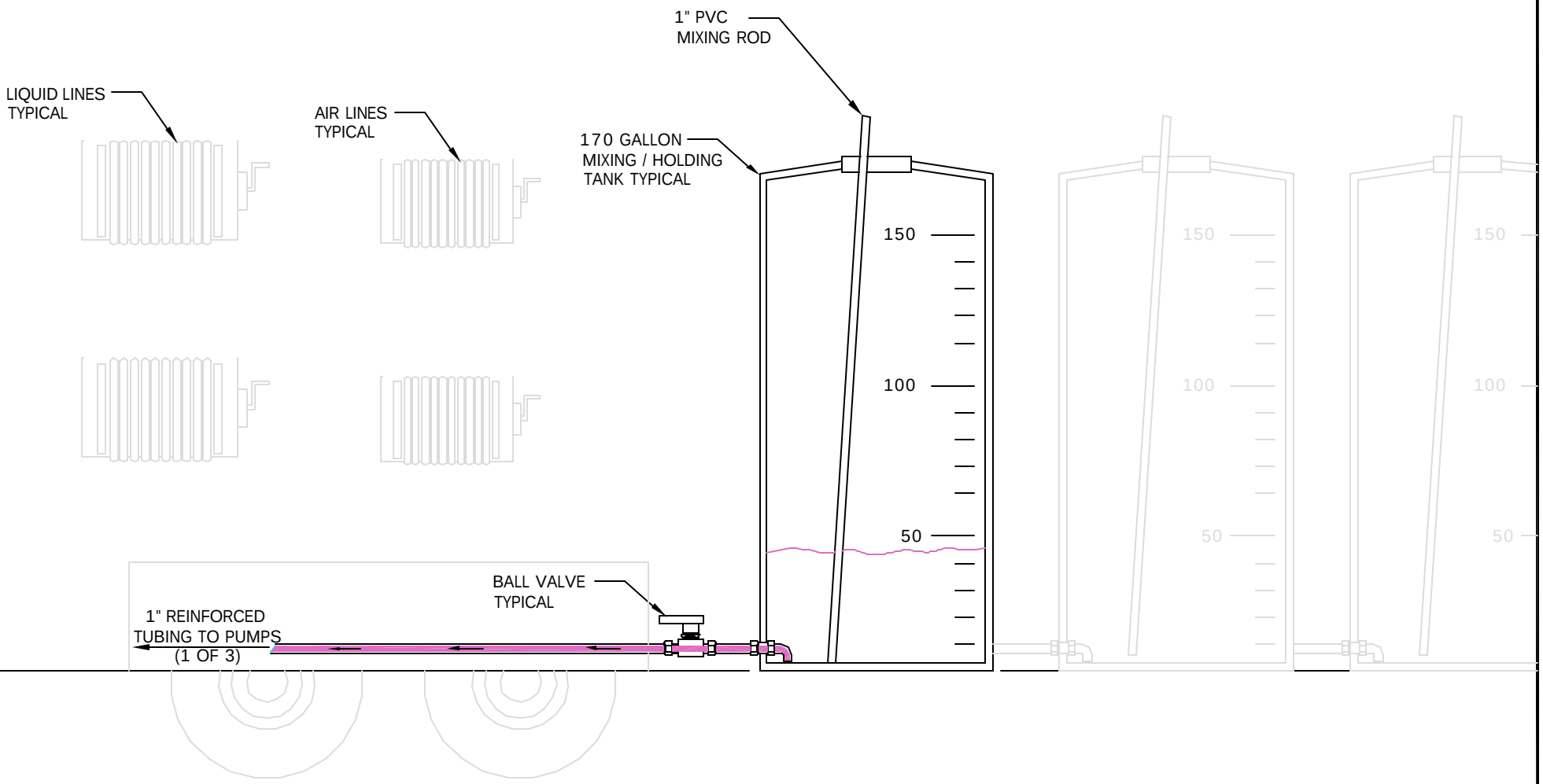
FLOW DIAGRAM

ORIN

REMEDIATION TECHNOLOGIES

DRAWN BY: MW	CK: LK	DATE: APRIL 28, 2003

ORIN \ FLOW DIAGRAM & DETAILS



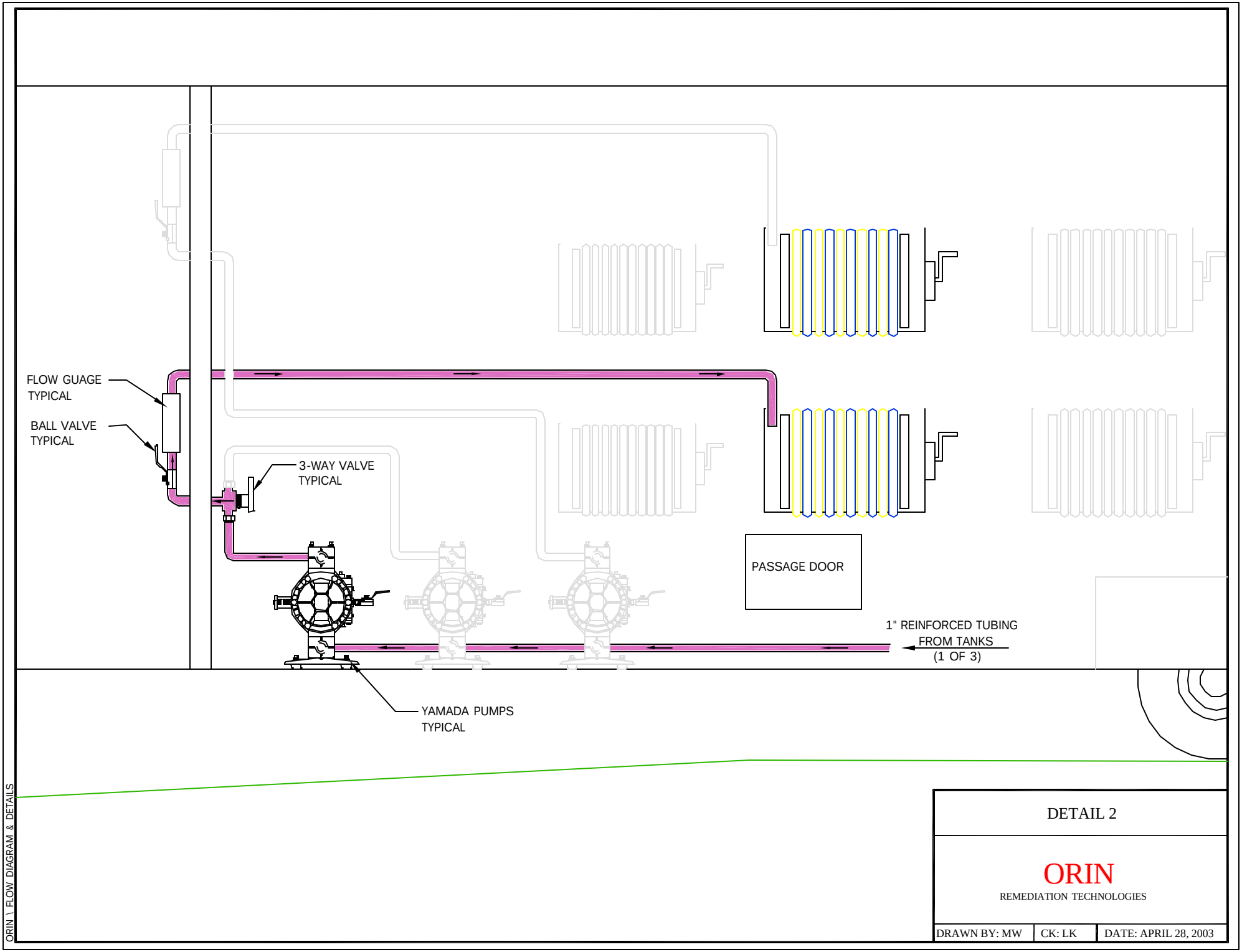
DETAIL 1

ORIN

REMEDIATION TECHNOLOGIES

DRAWN BY: MW	CK: LK	DATE: APRIL 28, 2003

ORIN \ FLOW DIAGRAM & DETAILS



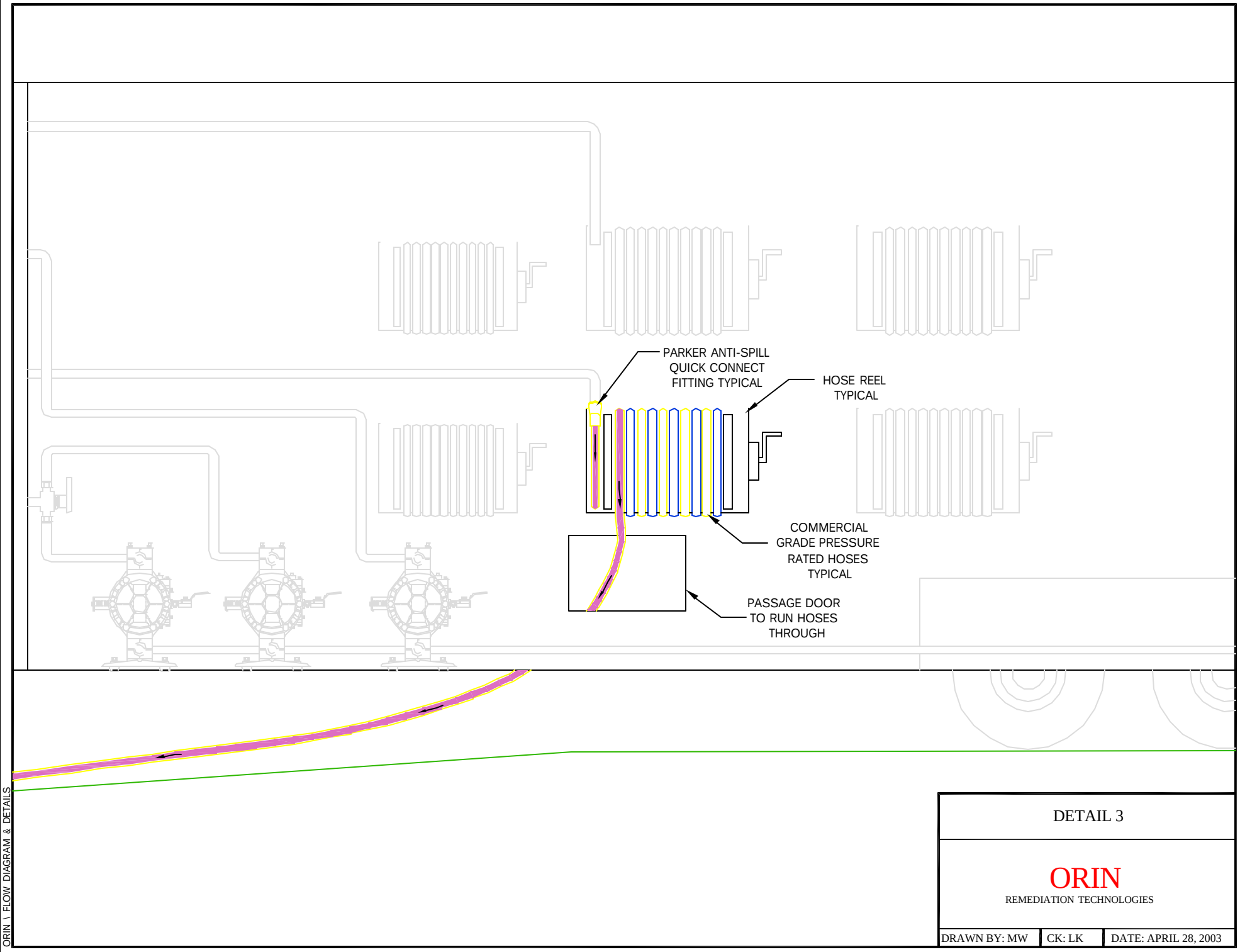
ORIN \ FLOW DIAGRAM & DETAILS

DETAIL 2

ORIN

REMEDIATION TECHNOLOGIES

DRAWN BY: MW	CK: LK	DATE: APRIL 28, 2003



DETAIL 3

ORIN

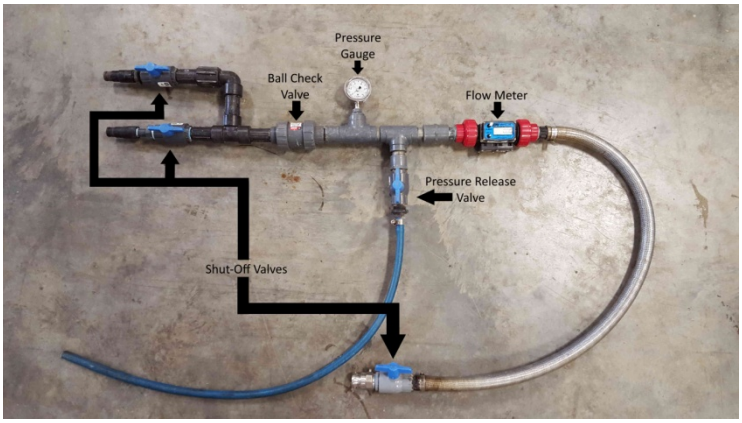
REMEDIATION TECHNOLOGIES

DRAWN BY: MW	CK: LK	DATE: APRIL 28, 2003

ORIN \ FLOW DIAGRAM & DETAILS

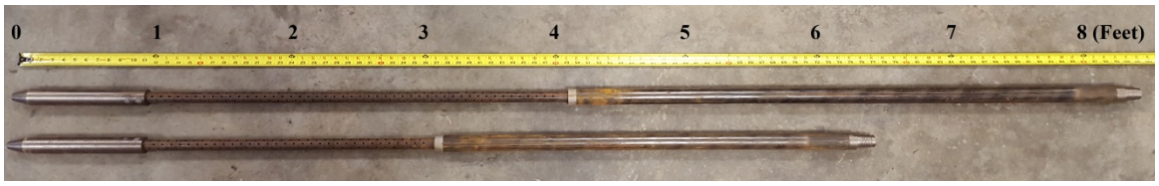
Proposed Injection Equipment

Injection Head



Manifold System

Side Injection Rod



SDS	Safety Data Sheet

Section I Chemical Product and Company Identification

Product Name	BAM M
Synonyms	BAM-C, BAM-WC, BAM-EC
CAS Number	7440-44-0
Active Ingredients	Pyrolized Cellulosic Material
Recommended Use	No data available
Restrictions on Use	No data available
Formulated by	ORIN Technologies
Address	405 Investment Court
Emergency Phone Number	**8 AM-5PM CST**: 608-838-6699 **5 PM -8 AM CST, Weekends, Holidays**: 262-82107024 **CHEMTREC**: 1-800-424-9300

Section II Hazard(s) Identification

Signal Word	Warning
Hazard Statements	May Cause Skin Irritation May cause Eye Irritation May cause Respiratory Irritation
Precautionary Statements - Prevention	Do not breathe dust, fume, gas Wash thoroughly after handling Use only outdoors or in a well-ventilated area Wear gloves, eye, and face protection and protective clothing
Precautionary Statement – Response	IF ON SKIN – Wash with plenty of soap and water IF INHALED – Remove victim to fresh air and keep at rest position comfortable for breathing. IF IN EYES –Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing Call a POISON CENTER or doctor if you feel unwell If skin irritation occurs: Get medical advice or attention. If eye irritation persists: Get medical advice or attention. Take off contaminated clothing and wash before reuse.
Storage	Store in a well ventilated place. Keep container tightly closed. Store in a secure manner.

Exposure Limits	**Synergistic Products**	**Sensitization/Irritancy:**	**Carcinogenicity/Teratogenicity/ Mutagenicity/Reproductive Effects:**
ND	ND	ND	None Known

Section III Composition and Information on Ingredients

Chemical Name	CAS#	w/w%
Carbon (Wood Derived)	7440-44-00	85-95 wt% dry basis
Minerals (Wood Derived)	N/A	5-10 wt% dry basis
Water	7780-20-0	

Hazardous Ingredients: NONE

Section IV First Aid Measures

Skin	Wash with soap and water. Not expected to be harmful under normal conditions of use.

Eyes	Remove Contacts. Flush promptly with plenty of water for at least 15 minutes.
Inhalation	Remove to fresh air.
Ingestion	If suffering gastrointestinal discomfort, treat symptomatically.

Section V Fire-Fighting Measures

Flammability	This product should not come into contact with naked flames.
Means of Extinction	Foam, Water Spray, CO_2

Flashpoint	NA	Auto-Ignition Temperature	ND
UEL	NA	TDG Flammability Class	ND
LEL	NA	Hazardous Combustion Products	NA

Section VI Handling and Storage

Engineering Controls	Ventilate
Leak or Spill Procedure	Sweep up into suitable container. Prevent entry into waterways.
Handling Procedures and Equipment	Avoid direct and prolonged contact with skin
Storage Requirements	Store in a cool, dry place

Section VII Exposure Controls/Personal Protection

Personal Protective Equipment	Respiratory:	No special protection is needed when using this product as directed.
	Eyes:	Dust mask could be worn if prolonged use of this product in confined areas is expected.
	Gloves:	No special protection is needed when using this product as directed.

Section IIX Physical and Chemical Properties

Physical State	Solid
Odor and Appearance	Brown to black blend of natural organic and mineral substances. Slightly earthy odor.

Odor Threshold	NA	Specific Gravity	1.5-2.1 for solid matrix, bulk density varies.	Evaporation Rate	ND
Vapor Pressure	1@3586 C	Vapor Density	ND	Density	ND
Boiling Point	NA	Freezing Point	NA	pH	7-9.5

Section IX Stability and Reactivity

Chemical Stability:	Stable	Incompatibility:	Strong acids, alkalis, and oxidizing agents.
Conditions of Reactivity:	NA	Hazardous Decomposition Products:	Strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc. may result in rapid combustion. Avoid contact with strong acids.

Section X Disposal Considerations

Disposal	Sweep, vacuum or shovel material into labeled container. If at all possible, reuse product. Keep out of any bodies of water.

Section XI Transport Information

Shipping Information	Not regulated

Section XII Other Information

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The information and recommendations are supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ORIN Technologies, LLC. or any of its agents be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information and recommendations. No representations or warranties, either expressed or implied, of merchantability, fitness, or a particular purpose or of any other nature are made here under with respect to information or the product to which information refers.

Preparation Information	Department	Technical
	Phone Number	608-838-6699
	Date	August 2015

SAFETY DATA SHEET
Anaerobic BioChem (ABC)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Anaerobic BioChem**
GENERAL USE: **Bioremediation of halogenated organics and metals**

MANUFACTURER:

Redox Tech, LLC
200 Quade Drive
Cary, NC 27513
919-678-0140

EMERGENCY TELEPHONE:

Within USA and Canada: 1-800-424-9300
+1 703-527-3887 (collect calls accepted)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Product is generally recognized as safe. May cause irritation exposure to eyes. Long term contact to skin may cause some drying and minor irritation.

3. COMPOSITION INFORMATION ON INGREDIENTS

Proprietary mixture of fatty acids, glycerol, lactates and dipotassium phosphate.

4. FIRST AID MEASURES

EYES: Immediately flush with water for up to 15 minutes. If irritation persists, seek medical attention.

SKIN: Rinse with water. Irritation is unlikely, but if irritation occurs or persists, seek medical attention.

INGESTION: Generally safe to ingest but not recommended.

INHALATION: No first aid required.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Deluge with water

FIRE/EXPLOSION HAZARDS: Product is combustible only at temperatures above 600C

FIRE FIGHTING PROCEDURES: Use flooding with plenty of water, carbon dioxide or other inert gasses. Wear full protective clothing and self-contained breathing apparatus. Deluging with water is the best method to control combustion of the product.

FLAMMABILITY LIMITS: non-combustible

SENSITIVITY TO IMPACT: non-sensitive

SENSITIVITY TO STATIC DISCHARGE: non-senstive

6. ACCIDENTAL RELEASE MEASURES

Confine and collect spill. Transfer to an approved DOT container and properly dispose. Do not dispose of or rinse material into sewer, stormwater or surface water. Discharge of product to surface water could result in depressed dissolved oxygen levels and subsequent biological impacts.

7. HANDLING AND STORAGE

HANDLING: Protective gloves and safety glasses are recommended.

STORAGE: Keep dry. Use first in, first out storage system. Keep container tightly closed when not in use. Avoid contamination of opened product. Avoid contact with reducing agents.

8. EXPOSURE CONTROLS – PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH	OSHA	Supplier
ABC	**NA**	**NA**	**NA**

ENGINEERING CONTROLS: None are required

PERSONAL PROTECTIVE EQUIPMENT

EYES and FACE: Safety glasses recommended
RESPIRATOR: none necessary
PROTECTIVE CLOTHING: None necessary
GLOVES: rubber, latex or neoprene recommended but not required

9. PHYSICAL AND CHEMICAL PROPERTIES

Odor:	none to mild pleasant organic odor
Appearance:	clear to light amber
Auto-ignition Temperature	Non-combustible
Boiling Point	>600 C
Melting Point	NA
Density	1.15 gram/cc
Solubility	infinite
pH	7-9

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Do not contact with strong oxidizers
STABILITY: product is stable
POLYMERIZATION: will not occur
INCOMPATIBLE MATERIALS: strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS:

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
A: General Product Information
Acute exposure may cause mild skin and eye irritation.
B: Component Analysis - LD50/LC50

No information available.

B: Component Analysis - TDLo/LDLo
TDLo (Oral-Man) none

Carcinogenicity
A: General Product Information
No information available.
B: Component Carcinogenicity
Product is not listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology
No information available.

Neurotoxicity
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Discharge to water may cause depressed dissolved oxygen and subsequent ecological stresses
Environmental Fate
No potential for food chain concentration

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Material is not considered hazardous, but consult with local, state and federal agencies prior to disposal to ensure all applicable laws are met.

14. TRANSPORT INFORMATION

NOTE: The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subjectto change with changes in package size. Consult shipperrequirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

US DOT Information
Shipping Name: Not Regulated
Hazard Class: Not Classified
UN/NA #: Not Classified
Packing Group:None
Required Label(s):None

50th Edition International Air Transport Association (IATA):
Not hazardous and not regulated

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

Material is not regulated under IMDG

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III

SECTION 311 No Hazard for Immediate health Hazard
SECTION 312 No Threshold Quanitity
SECTION 313 Not listed

CERCLA NOT REGULATED UNDER CERCLA

TSCA NOT REGULATED UNDER TSCA

CANADA (WHIMS): NOT REGULATED

16. OTHER INFORMATION

HMIS:

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	E

E: Safety Glasses, gloves

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Responsive partner.
Exceptional outcomes.

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