WENCK File #B6572-0001
May 2018

Voluntary Remediation Program
Sixth Progress Report

Roper Pump Company
HSI No. 10901
Commerce, Georgia

Prepared for:

Roper Pump Company

3475 Old Maysville Road
Commerce, Georgia
30529

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Prepared by:

WENCK
1080 Holcomb Bridge Road
Bldg 100, Suite 190
Roswell, Georgia 30076
Phone: 678-987
Fax: 678-987

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PG 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 or the 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."

Katie Ross, P.G.
Regional Resource Group Leader
Real Estate Resources

May 11, 2018

Registration No. 1776
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 Sixth VRP Progress Report provides a summary of activities conducted from November 2017 through April 2018 ("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-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; installation of a 60 mil HDPE vapor barrier beneath the office portion of the building expansion; and Bioavailable Absorbent Media ("BAM") injection. The BAM injection is further discussed in Section 2.1.

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, Roper conducted the following activities:

- Conducted the full-scale BAM groundwater injections (December 2017);
- Conducted full-scale post-injection monitoring (January through March 2018); and
- Surveyed horizontal and vertical locations of monitoring wells (March 2018).

These activities are further summarized below.

2.1 FULL SCALE GROUNDWATER INJECTIONS

From December 4 to December 13, 2017, Wenck Associates, Inc. ("Wenck"), along with ORIN Technologies and Geolab Drilling, mobilized to perform full scale groundwater BAM injections. The treatment included a combination of BAM and Anaerobic BioChem Carbon ("ABC"):

- 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. Select locations included 0.3% of zero valent iron ("ZVI").

- 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 full-scale remediation approach included a BAM injection that was conducted in December 2017 through a series of borings using direct push technology ("DPT"), spaced in a grid-like pattern in five areas of the Site: 1) the "alley"; 2) the building interior; 3) the loading dock; 4) near MW-23; and 5) the barrier wall. Wenck advanced a total of one-hundred and nine (109) borings at the Site, to the depth of approximately 20 to 50 feet. The treatment chemistry was injected into the rods to create minimal positive pressure before commencing injection into the surrounding formation. The rods were then raised through the vertical treatment zone while simultaneously injecting the treatment chemistry into the formation.

The 109 borings were completed as follows:

- Wenck advanced forty-four (44) direct push borings in the alley area at the Site. The borings were installed in a grid pattern evenly spaced throughout the alley. Two boring locations were moved next to monitoring wells MW-21 and MW-7 in order to add additional injection chemistry to these areas. In general, the injection borings were advanced to a total depth of approximately 50 feet and the treatment chemistry was injected from approximately 21 feet to 50 feet from the bottom up.

- Wenck advanced eight (8) direct push borings in the loading dock area at the Site. The borings were installed in the loading dock and in the area of MW-6 at the entrance to the alley. In general, the injection borings were advanced to a total depth of approximately 49 feet and the treatment chemistry was injected from approximately 21 feet to 49 feet from the bottom up.

- Wenck advanced ten (10) direct push borings inside the building in the area of MW-13. The borings were installed in a grid pattern evenly spaced throughout shelving units in the building. An additional three borings were added near MW-13 in order to add additional injection chemistry in the area. In general, the injection borings were advanced to a total depth of approximately 49 feet and the treatment chemistry was injected from approximately 21 feet to 49 feet from the bottom up.

- Wenck advanced six (6) direct push borings in the area upgradient of MW-23. The borings were installed in a grid pattern shaped like a triangle. Due to a gas line, one point of the triangle had to be moved east toward MW-23. In general, the injection borings were advanced to a total depth of approximately 49 feet and the treatment chemistry was injected from approximately 21 feet to 49 feet from the bottom up. Approximately 400 gallons of a 7.5% BAM solution was added to borings in this area.

- Wenck advanced forty-one (41) direct push borings to form a barrier wall east of the building along the northeastern property boundary. The borings were installed in two rows along the northeastern fence of the property. In general, the injection borings were advanced to a total depth of approximately 49 feet and the treatment chemistry was injected from approximately 21 feet to 49 feet from the bottom up.

A number of borings encountered short circuiting or intervals of no flow. If the injection chemistry was unable to be injected at the planned interval, the injection chemistry was either added to the adjoining boring or at the interval above or below the planned injection interval. **Figure 2** shows the locations of the injection locations in the alley, loading dock, and interior areas. **Figure 3** shows the locations of the injection points in the barrier wall and MW-23 areas.

The remedial injection treatment chemistry was prepared using specialized injection equipment. The treatment chemistry was mixed and temporarily staged prior to injection in 200-gallon tanks located inside an enclosed injection trailer. The tank was first filled with the proper amount of water to achieve the desired BAM concentration. Multiple tanks were mixed and used during the injection, which enabled work to proceed steadily and efficiently. The treatment chemistry was pumped into the formation using an air-driven, chemically resistant pump. Additional details about the injection can be found in **Appendix A**.

2.2 POST-INJECTION MONITORING AND GROUNDWATER SAMPLING

Wenck began post-injection monitoring events in January 2018. During the Reporting Period, Wenck conducted post-injection monitoring events in January, February, and March. Wenck collected water level measurements, post-injection field parameter readings, and groundwater samples for target VOC parameter analyses from five (5) select monitoring wells each month. Field parameters recorded included: pH, conductivity, oxidation reduction potential ("ORP"), temperature, and dissolved oxygen ("DO"). Water level measurements and post-injection field parameter readings were collected during each event from the following monitoring wells:

- January: MW-7, MW-13, MW-21, MW-22, and MW-23.
- February: MW-9S, MW-12, MW-13D, MW-15D, and MW-21D.
- March: MW-6DS, MW-9D, MW-12D, MW-13, and MW-23.

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 VOCs (EPA method 8260) analysis. The locations of the monitoring wells are shown on **Figure 4**. 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**. The results of the post-injection groundwater monitoring are discussed in Section 4.0.

The monthly post-injection monitoring events are planned to continue until June 2018. The results of the January through March post-injection monitoring events are discussed in Section 4.0. The April through June 2018 post-injection sampling events will be discussed in the next reporting period.

2.3 MONITORING WELL SURVEY

On March 7, 2018, Wenck along with Georgia Land Survey ("GLS") mobilized to survey the horizontal and vertical locations of the five vertical delineation monitoring wells (MW-12, MW-13, MW-21, MW-22, and MW-23) that were installed in October 2017. GLS also surveyed the performance well MW-21D and monitoring wells MW-2, and MW-6 while onsite. The updated survey data is shown in **Table 2.** A copy of GLS's survey report can be found in **Appendix C**.

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 during the last sitewide groundwater gauging event (October 2017) is presented on **Figure 5**. 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.

During the post-injection monitoring events, measured depth to water ranged from 17.23 to 23.38 feet below top of casing ("TOC"). The water table elevations ranged from 874.72 feet above mean sea level ("msl") to 878.44 feet msl. The observed groundwater conditions during this period are consistent with previous synoptic monitoring events. Groundwater gauging of all wells will be performed as part of the July 2018 monitoring event.

3.2 GROUNDWATER SAMPLING

Post-injection groundwater sampling from January to March 2018 included collection of samples from five (5) select wells each month. Thirteen (13) monitoring wells (MW-6DS, MW-7, MW-9S, MW-9D, MW-12, MW-12D, MW-13, MW-13D, MW-15D, MW-21, MW-21D, MW-22, and MW-23) have been sampled during this period with monitoring wells MW-13 and MW-23 being sampled twice.

The following field parameters were measured using direct reading instruments: DO, pH, conductivity ("SC"), water temperature, turbidity, and 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 (± 5%);
- Turbidity (<10 NTUs or stable); and
- DO (± 0.2mg/L or 10%, whichever was greater);

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 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 full-scale injection event was performed in December 2017, and post-injection monitoring was performed monthly between January and March 2018. Select groundwater wells in the injection areas were sampled in January through March 2018 to evaluate groundwater conditions in and immediately downgradient of the injection areas. The results of the January, February, and March post-injection groundwater sampling events are summarized below.

Groundwater samples were collected from thirteen (13) monitoring wells during the January through March groundwater sampling events. 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 risk reduction standard ("RRS"), including: 1,1,2,2-Tetrachloroethane ("1,1,2,2-TCA"), Cis-1,2-dichloroethene ("cis-DCE"), Tetrachloroethene ("PCE"), and Trichloroethene ("TCE"). Results are as follows:

- 1,1,2,2-Tetrachloroethane exceeded the RRS at MW-7 (13 µg/L).
- Cis-DCE exceeded the RRS at six (6) wells: MW-7 (900 µg/L), MW-12 (11,700 µg/L), MW-13 (2,000 µg/L (January) and 890 µg/L (March)), MW-21 (5,100 µg/L), MW-22 (1,600 µg/L), and MW-23 (650 µg/L (January) and 1,070 µg/L (March)).
- PCE exceeded the RRS at eight (8) wells: MW-7 (17,000 µg/L), MW-12 (8,050 µg/L), MW-13 (44,000 µg/L (January) and 31,400 µg/L (March)), MW-13D (592 µg/L), MW-15D (1,520 µg/L), MW-21 (2,400 µg/L), MW-22 (38,000 µg/L), and MW-23 (115 µg/L (March)).
- TCE exceeded the RRS at ten (10) wells: MW-6DS (34.1 µg/L), MW-7 (330 µg/L), MW-9D (13.7 µg/L), MW-12 (1,540 µg/L), MW-12D (27.3 µg/L), MW-13 (1,200 µg/L (January) and 626 µg/L (March)), MW-13D (890 µg/L), MW-15D (97 µg/L), MW-21 (1,100 µg/L), and MW-23 (200 µg/L (January) and 148 µg/L (March)).

Laboratory reports and supporting chain-of-custody documentation are included in **Appendix D**.

In comparison to pre-injection groundwater conditions in 2017, a decrease in parent product, PCE was observed in nine (9) of the thirteen (13) wells (MW-7, MW-9S, MW-12, MW-13, MW-13D, MW-21, MW-21D, MW-22, and MW-23) sampled during the post-injection groundwater monitoring. Additionally, a decrease in TCE was observed in twelve (12) of the thirteen (13) wells (MW-7, MW-9S, MW-9D, MW-12, MW-12D, MW-13, MW-13D, MW-15D, MW-21, MW-21D, MW-22, and MW-23) sampled during the post-injection groundwater monitoring. These results suggest the BAM injection is working to reduce PCE in the groundwater plume. This is further supported by an increase in cis-DCE in five (5) monitoring wells (MW-7, MW-12, MW-21, MW-22, and MW-23). Deep wells located below the targeted injection zone remained relatively stable following the BAM injection event (MW-6DS, MW-9D, MW-12D, and MW-15D). The following table summarizes post-injection information available to date:

Table 4-1. Post-Injection Analytical Trends

Well ID	Tetrachloroethene (PCE)			Trichloroethene (TCE)		
	Oct 2017	Post-Treatment	% Reduction	Oct 2017	Post-Treatment	% Reduction
MW-7	19,000	17,000	11%	600	330	45%
MW-9S	1,200	Non-detect	100%	260	Non-detect	100%
MW-12	64,000	8,050	87%	2,800	1,540	45%
MW-13	72,000	31,400	56%	2,200	626	72%
MW-13D	4,100	592	86%	1,000	890	11%
MW-21	39,000	2,400	94%	2,900	1,100	62%
MW-21D	1,000	7.1	99%	190	4.1	98%
MW-22	47,000	38,000	19%	790	Non-detect	100%
MW-23	5,500	115	98%	3,700	148	96%

The analytical results from the October 2017 and January through March post-injection monitoring are shown in **Table 4**. **Figure 6A** and **Figure 6B** show the October 2017 and January through March Post-injection monitoring results. Graphs showing the analytical trends for select groundwater wells are shown in **Figures 6C-6I**.

5.0 Conceptual Site Model

Roper previously developed a conceptual site model ("CSM") 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.

We anticipate updating the CSM following the July 2018 sitewide monitoring event. The following sections summarize the current 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. 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-TCA; cis-DCE; PCE, and 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 downgradient 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 5**, 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

The full-scale groundwater treatment plan included 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. Groundwater analytical results from the October 2017 and post-injection monitoring events are presented on **Figure 6A** and **Figure 6B**. 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 7A** through **10B**.

Groundwater sampling information indicates that concentrations of 1,1,2,2-TCA greater than the applicable delineation criteria and Type 4 RRS are confined to on-site wells in the center of the plume (MW-7, MW-13, and MW-22). 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 7A**.

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-7, MW-12, MW-13, MW-21, and MW-22 reported PCE at 17,000 ug/L, 8,050 ug/L, 31,400 ug/L, 2,400 ug/L, and 38,000 ug/L during post-injection monitoring. Downgradient of the center of the plume, PCE was reported at MW-23 at 115 ug/L. 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 8A and 9A**.

Concentrations of cis-DCE greater than the applicable delineation criteria and Type 4 risk RRS are primarily confined to on-site wells MW-7, MW-12, MW-13, MW-21, MW-22, and MW-23. 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 10A**.

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 11** presents a cross section location map. Groundwater concentration information and concentration results from the October 2017 sampling event are depicted on cross section **Figures 12 and 13**.

During the previous reporting period, significant efforts were made to evaluate the groundwater conditions of the plume. Specifically, samples collected during the pilot testing indicated that the majority of the impacted 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 downgradient portion of the plume.

Groundwater sampling performed in October 2017 indicated that the highest groundwater impacts were located within a vertical zone extending from approximately 30 to 45 feet bgs. PCE concentrations in wells from this vertical zone including MW-7, MW-12, MW-13, MW-21 and MW-22 were reported at 17,000 ug/L, 8,050 ug/L, 31,400 ug/L, 2,400 ug/L, and 38,000 ug/L, respectively, during the post-injection sampling events.

The October 2017 sampling also demonstrated that concentrations in the center of the plume decreased 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 during the post-injection monitoring events at 1.7 ug/L, 7.2 ug/L, 592 ug/L, and 7.1 ug/L, respectively.

6.0 Planned Activities and Schedule

As provided in **Table 5**, Activities planned for the next six-month reporting period (May 2018 through September 2018) include the following:

- Continue post-injection groundwater monitoring (May and June 2018);
- Evaluate treatment effectiveness;
- Complete groundwater sampling event of select wells (July 2018); and
- Update the CSM for the site.

The Seventh VRP Progress Report will be submitted by October 31, 2018.

Tables

TABLE 1
Monitoring Well Construction Details

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

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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	898.28	35 - 45	10
MW-12D	8/31/2015	898.27	81.5 - 86.5	5
MW-13	10/2/2017	898.49	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	898.67	30 - 40	10
MW-21D	4/17/2017	898.76	50 - 60	10
MW-22	10/4/2017	895.67	30 - 40	10
MW-23	10/4/2017	899.60	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: MP Date: 5/1/2018

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	898.37	9.2-24.2	20.16	878.21
	06/26/17	898.37	9.2-24.2	19.89	878.48
	07/18/17	898.37	9.2-24.2	19.57	878.80
	08/24/17	898.37	9.2-24.2	19.42	878.95
	10/12/17	898.37	9.2-24.2	19.54	878.83
MW-6D	05/25/17	898.25	33-43	20.14	878.11
	06/26/17	898.25	33-43	19.88	878.37
	07/18/17	898.25	33-43	19.55	878.70
	08/24/17	898.25	33-43	19.42	878.83
	10/12/17	898.25	33-43	19.56	878.69
MW-6DS	05/25/17	898.31	61-66	21.45	876.86
	06/26/17	898.31	61-66	20.23	878.08
	07/18/17	898.31	61-66	19.89	878.42
	08/24/17	898.31	61-66	19.73	878.58
	10/12/17	898.31	61-66	19.78	878.53
	03/28/18	898.31	61-66	20.64	877.67
MW-7	05/25/17	898.12	9.4-24.4	21.12	877.00
	06/26/17	898.12	9.4-24.4	20.85	877.27
	07/18/17	898.12	9.4-24.4	20.52	877.60
	08/24/17	898.12	9.4-24.4	20.31	877.81
	10/12/17	898.12	9.4-24.4	20.78	877.34
	01/19/18	898.12	9.4-24.4	20.86	877.26
MW-9S	05/25/17	898.31	16-26	20.96	877.35
	06/26/17	898.31	16-26	20.71	877.60
	07/18/17	898.31	16-26	20.39	877.92
	08/24/17	898.31	16-26	20.17	878.14
	10/12/17	898.31	16-26	20.24	878.07
	02/28/18	898.31	16-26	20.40	877.91
MW-9D	05/25/17	898.48	63.5-68.5	21.24	877.24
	06/26/17	898.48	63.5-68.5	20.99	877.49
	07/18/17	898.48	63.5-68.5	20.67	877.81
	08/24/17	898.48	63.5-68.5	20.46	878.02
	10/12/17	898.48	63.5-68.5	20.53	877.95
	03/28/18	898.48	63.5-68.5	20.29	878.19
MW-12	10/12/17	898.28	35-45	20.55	877.73
	02/28/18	898.28	35-45	21.00	877.28

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-12D	05/25/17	898.27	81.5-86.5	21.49	876.78
	06/26/17	898.27	81.5-86.5	21.17	877.10
	07/18/17	898.27	81.5-86.5	20.85	877.42
	08/24/17	898.27	81.5-86.5	20.63	877.64
	10/12/17	898.27	81.5-86.5	20.36	877.91
	03/28/18	898.27	81.5-86.5	20.53	877.74
MW-13	10/12/17	898.49	30-40	20.37	878.12
	01/19/18	898.49	30-40	20.82	877.67
	03/28/18	898.49	30-40	20.12	878.37
MW-13D	05/25/17	898.26	64-69	NM	---
	06/26/17	898.26	64-69	20.74	877.53
	07/18/17	898.26	64-69	NM	---
	10/12/17	898.26	64-69	20.34	877.92
	02/28/18	898.26	64-69	20.38	877.88
MW-15D	10/12/17	898.10	74-84	23.51	874.59
	02/28/18	898.10	74-84	23.38	874.72
MW-21	10/12/17	898.67	30-40	20.71	877.96
	01/19/18	898.67	30-40	21.14	877.53
MW-21D	05/25/17	898.76	50-60	21.69	877.07
	06/26/17	898.76	50-60	21.41	877.35
	07/18/17	898.76	50-60	21.33	877.43
	08/24/17	898.76	50-60	20.87	877.89
	10/12/17	898.76	50-60	20.97	877.79
	02/28/18	898.76	50-60	21.17	877.59
MW-22	10/12/17	895.67	30-40	16.85	878.82
	01/19/18	895.67	30-40	17.23	878.44
MW-23	10/12/17	899.60	40-50	23.37	876.23
	01/19/18	899.60	40-50	23.85	875.75
	03/28/18	899.60	40-50	23.16	876.44

Notes:
Elevations measured to an assumed datum of 1000.00 feet
TBD - To Be Determined in next report period
NM - Not Measured

Prepared by: SEF Date: 4/2/2018
Reviewed by: MCP Date: 5/1/2018

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 (uS/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
	3/28/2018	21.30	5.99	0.051	3.89	4.00
MW-7	9/4/2015	24.40	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
	1/19/2018	20.75	4.19	0.077	4.48	298.00
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
	2/28/2018	20.45	6.01	0.238	2.80	163.00
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
	3/28/2018	19.44	9.53	0.093	3.62	26.00

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 (uS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-12	10/13/2017	21.90	6.21	0.085	0.80	57.20
	2/28/2018	21.28	6.07	0.171	1.18	-62.00
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
	3/28/2018	20.08	9.07	0.077	1.31	61.80
MW-13	10/13/2017	20.60	5.18	0.055	1.38	189.90
	1/19/2018	24.22	4.73	0.073	1.08	170.00
	3/28/2018	19.89	4.72	0.070	0.81	106.70
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
	2/28/2018	20.83	5.73	0.065	3.99	225.00
MW-15D	10/12/2017	21.40	6.41	0.040	3.21	186.70
	2/28/2018	18.35	6.69	0.076	5.01	121.00
MW-21	10/13/2017	20.70	6.44	0.130	1.13	20.30
	1/19/2018	23.42	4.71	0.851	1.24	98.00
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
	2/28/2018	21.34	5.99	0.103	2.57	25.00
MW-22	10/13/2017	20.70	5.13	0.059	5.92	271.00
	1/19/2018	15.88	6.13	0.361	1.91	122.00
MW-23	10/12/2017	20.50	5.51	0.056	3.83	173.80
	1/19/2018	24.46	4.76	0.538	0.78	91.00
	3/28/2018	19.82	4.83	0.278	0.28	60.90

Prepared by: SEF Date: 4/2/2018
Reviewed by: MCP Date: 4/17/2018

TABLE 4
Summary of Groundwater Analytical Results
Volatile Organic Compounds

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

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
	11/7/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	9/2/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	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
	11/7/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	9/3/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	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**
	5/19/2014	<5	<5	<5	<5	7.1	<5	<5	<5	<5	**23**
	11/5/2014	<5	<5	<5	<5	<5	<5	**8.3**	<5	<5	**55**
	9/4/2015	<5	<5	<5	<5	<5	<5	**10**	<5	<5	**50**
	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**
	5/19/2014	<5	<5	<5	<5	38	<5	**24**	<5	<5	**11**
	11/5/2014	<5	<5	<5	<5	<5	10	**170**	<5	<5	**98**
	9/4/2015	<5	<5	<5	<5	<5	11	**130**	<5	<5	**98**
	3/4/2016	<5	<5	<5	<5	<5	6.7	**88.8**	<5	<5	**53.4**
	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
	11/6/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	9/2/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<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**
	11/5/2014	<5	<5	<5	<5	<5	**190**	**110**	<5	<5	**95**
	9/2/2015	<5	<5	<5	<5	<5	**110**	**120**	<5	<5	**40**
	3/3/2016	<5	<5	<5	<5	<5	**74.2**	**119**	<5	<5	**23**
	6/27/2017	<2	<2	<2	<5	<2	<70	**6.2**	<2	<2	**5.1**
	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**
	11/6/2014	<5	<5	<5	<5	<5	<5	**17**	<5	<5	**29**
	9/2/2015	<5	<5	<5	<5	<5	<5	**18**	<5	<5	**30**
	3/4/2016	<5	<5	<5	<5	<5	22.7	**93.4**	<5	<5	**133**
	6/27/2017	<2	<2	<2	<5	<2	<70	**19.0**	<2	<2	**22**
	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**
	11/6/2014	<5	<5	<5	<5	<5	<5	**14**	<5	<5	**110**
	9/3/2015	<5	<5	<5	<5	<5	20	**110**	<5	<5	**210**
	3/3/2016	<5	<5	<5	<5	<5	<5	**5.9**	<5	<5	**32.8**
	10/12/2017	<2	<2	<2	<5	<2	<70	**73.0**	<2	<2	**24**
	3/28/2018	<1	<1	<1	<1	<1	37.9	4.5	<1	<1	**34.1**
MW-7	5/1/2009	NA	NA	NA	NA	NA	NA	**1900**	NA	NA	**240**
	2/24/2014	**3.8**	<1	<1	<1	<1	25	**2400**	<1	<1	**170**
	11/6/2014	**9.2**	<5	<5	<5	<5	27	**14000**	<5	<5	**180**
	9/4/2015	<500	<500	<500	<500	<500	<500	**16000**	<500	<500	<500
	6/27/2017	**16**	<2	2.6	<5	4	**370.0**	**13000**	<2	2	**490**
	10/12/2017	**14**	<2	3	<5	4	**240.0**	**19000**	<2	<2	**600**
	1/19/2018	**13**	<2	3.6	<5	3.5	**900**	**17000**	<2	<2	**330**

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

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-8	11/7/2014	<5	<5	<5	<5	<5	<5	**70**	<5	<5	**12**
	9/3/2015	<5	<5	<5	<5	<5	<5	**70**	<5	<5	**9.6**
	3/4/2016	<5	<5	<5	<5	<5	<5	**46**	<5	<5	**7.1**
MW-9S	11/7/2014	<5	<5	<5	<5	<5	**240**	**1600**	<5	<5	**600**
	9/2/2015	<5	**10**	<5	<5	<5	**260**	**490**	<5	<5	**540**
	6/27/2017	<2	<2	<2	<5	<2	**250**	**140**	<2	<2	**240**
	10/12/2017	<2	<2	<2	<5	<2	**240**	**1200**	<2	<2	**260**
	2/28/2018	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9D	11/6/2014	<5	<5	<5	<5	16	<5	<5	<5	<5	**7.8**
	9/2/2015	<5	<5	<5	<5	<5	<5	**7.1**	<5	<5	**31**
	3/2/2016	<5	<5	<5	<5	<5	<5	<5	<5	<5	**13.9**
	10/12/2017	<2	<2	<2	<5	<2	<70	<5	<2	<2	**18**
	3/28/2018	<1	<1	<1	<1	<1	<1	1.7	<1	<1	**13.7**
MW-10	11/7/2014	<5	<5	<5	<5	<5	<5	<5	<5	<5	**6.1**
	9/3/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	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**
	9/4/2015	<5	<5	<5	**43**	<5	<5	**97**	<5	<5	**55**
	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**
	2/28/2018	<1	<1	**67.3**	<1	<1	**11,700**	**8050**	3.3	**129**	**1540**
MW-12D	3/3/2016	<5	<5	<5	<5	<5	<5	**35.8**	<5	<5	**140**
	10/12/2017	<2	<2	<2	<5	<2	<70	**8.8**	<2	<2	**31**
	3/28/2018	<1	<1	<1	<1	<1	<1	**7.2**	<1	<1	**27.3**
MW-13	10/12/2017	**36**	<2	**30**	<5	16	**1600**	**72000**	130	15	**2200**
	1/19/2018	**30**	<2	**15**	<5	11	**2000**	**44000**	110	8.8	**1200**
	3/28/2018	**14.4**	<1	**10.4**	<1	5.3	**869**	**31400**	51.6	<1	**626**
MW-13D	9/3/2015	<5	<5	<5	<5	<5	5.5	**140**	<5	<5	**770**
	3/3/2016	<5	<5	<5	<5	<5	13.2	**320**	<5	<5	**1200**
	6/27/2017	<2	<2	<2	<5	<2	<70	**390**	<2	<2	**880**
	10/12/2017	<2	<2	<2	<5	<2	<70	**4100**	<2	<2	**1000**
	2/28/2018	<1	<1	<1	<1	<1	28.3	**592**	<1	<1	**890**
MW-14	9/3/2015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	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**
	10/12/2017	<2	<2	<2	<5	<2	<70	**1300**	<2	<2	**110**
	2/28/2018	<1	<1	<1	<1	<1	7.1	**1520**	<1	<1	**97**
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**
	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
	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**
	1/19/2018	<2	<2	**16**	<5	<2	**5100**	**2400**	8.2	9.0	**1100**
MW-21D	4/18/2017	<2	<2	<2	<5	<2	<5	**140**	<2	<2	**62**
	6/27/2017	<2	<2	<2	<5	<2	<70	**220**	<2	<2	**90**
	10/12/2017	<2	<2	<2	<5	<2	<70	**1000**	<2	<2	**190**
	2/28/2018	<1	<1	<1	<1	<1	68.0	**7.1**	<1	<1	4.1

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

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-22	10/12/2017	**24**	<2	**14**	<5	14	**680**	**47000**	37.0	9.8	**790**
	1/19/2018	**19**	<2	**7.2**	<5	7.3	**1600**	**38000**	26	4.8	<1000
MW-23	10/12/2017	<2	<2	<2	<5	5.8	**700**	**5500**	2.5	<2	**3700**
	1/19/2018	<2	<2	<2	<5	<2	**650**	**42**	<2	<2	**200**
	3/28/2018	<1	<1	3.5	<1	<1	**1070**	**115**	<1	<1	**148**
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: 4/10/2018
Reviewed by: MCP Date: 4/17/2018

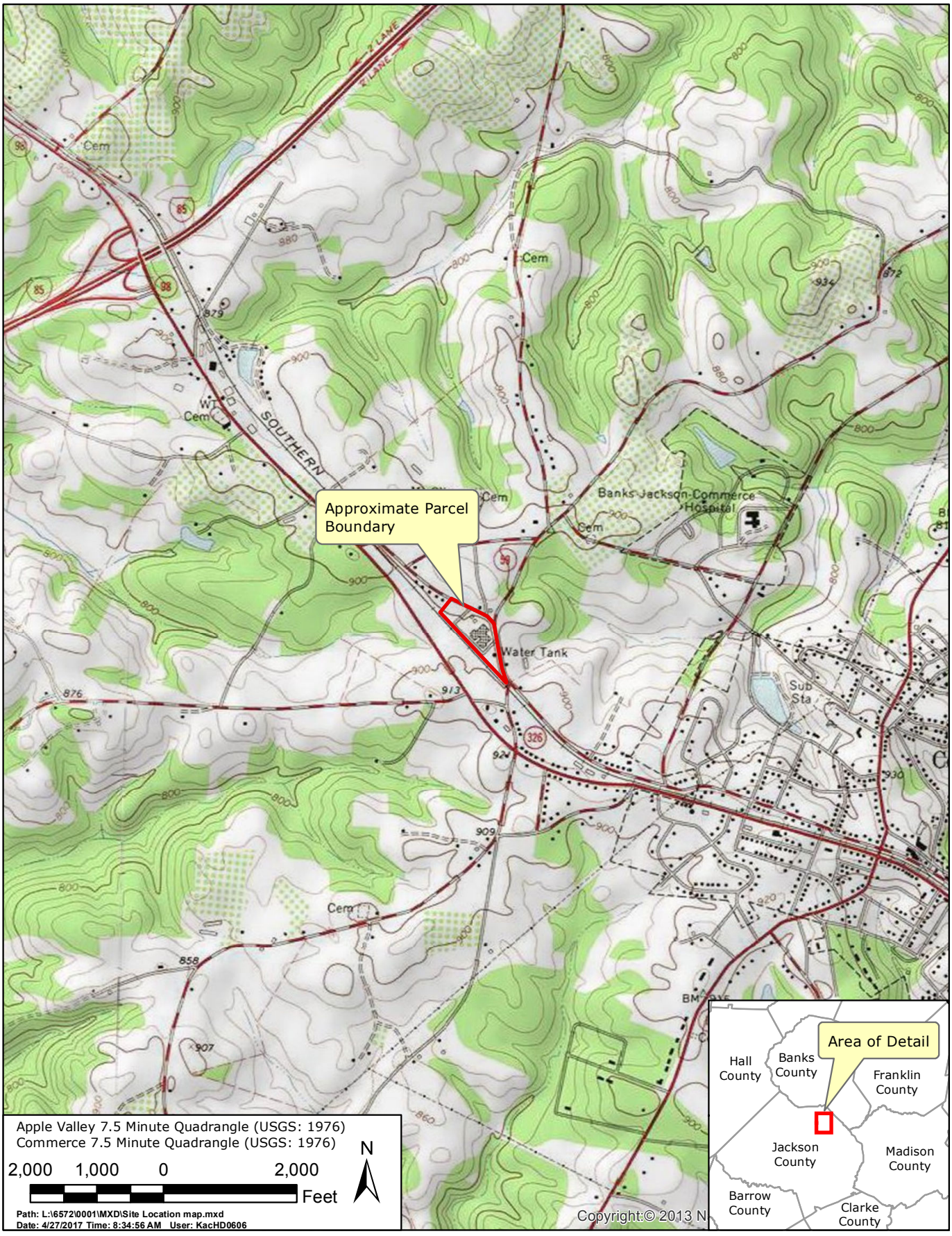
TABLE 5
Projected VRP Schedule

Responsive partner.
Exceptional outcomes.

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

Date	Activity
May 2018	May Post-Injection Monitoring
June 2018	June Post-Injection Monitoring
July 2018	Full Groundwater Sampling Event
September 2018	Submit Seventh 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
- Injection Point
- Approximate Parcel Boundary

N

0 25 50 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
ALLEY FULL-SCALE
INJECTION POINT LOCATIONS

DWN BY	CHK'D	APP'D	DWG DATE
SEF	AJH	AJH	1/22/2018

SCALE AS SHOWN

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

Date/Time: 1/29/2018 - 5:24:35 PM

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Date/Time: 1/29/2018 5:50:02 PM

MW-10

MW-8

I-62 I-64 I-66 I-68 I-70 I-72 I-74 I-76 I-78 I-80 I-82
I-63 I-65 I-67 I-69 I-71 I-73 I-75 I-77 I-79 I-81 I-83 I-84 I-85 I-86 I-87 I-88 I-89 I-90 I-91 I-92 I-93 I-94 I-95 I-96 I-97 I-98 I-99 I-100 I-101 I-102

I-47

MW-23

I-46

I-49

I-50 I-48 I-45

MW-4

MW-15

MW-12
MW-12D

MW-7

Legend

- Monitoring Wells
- Injection Point
- Approximate Parcel Boundary

N

0 25 50 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
BARRIER WALL FULL-SCALE INJECTION POINT LOCATIONS

DWN BY	CHK'D	APP'D	DWG DATE
SEF	AJH	AJH	1/22/2018

SCALE AS SHOWN

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

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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.
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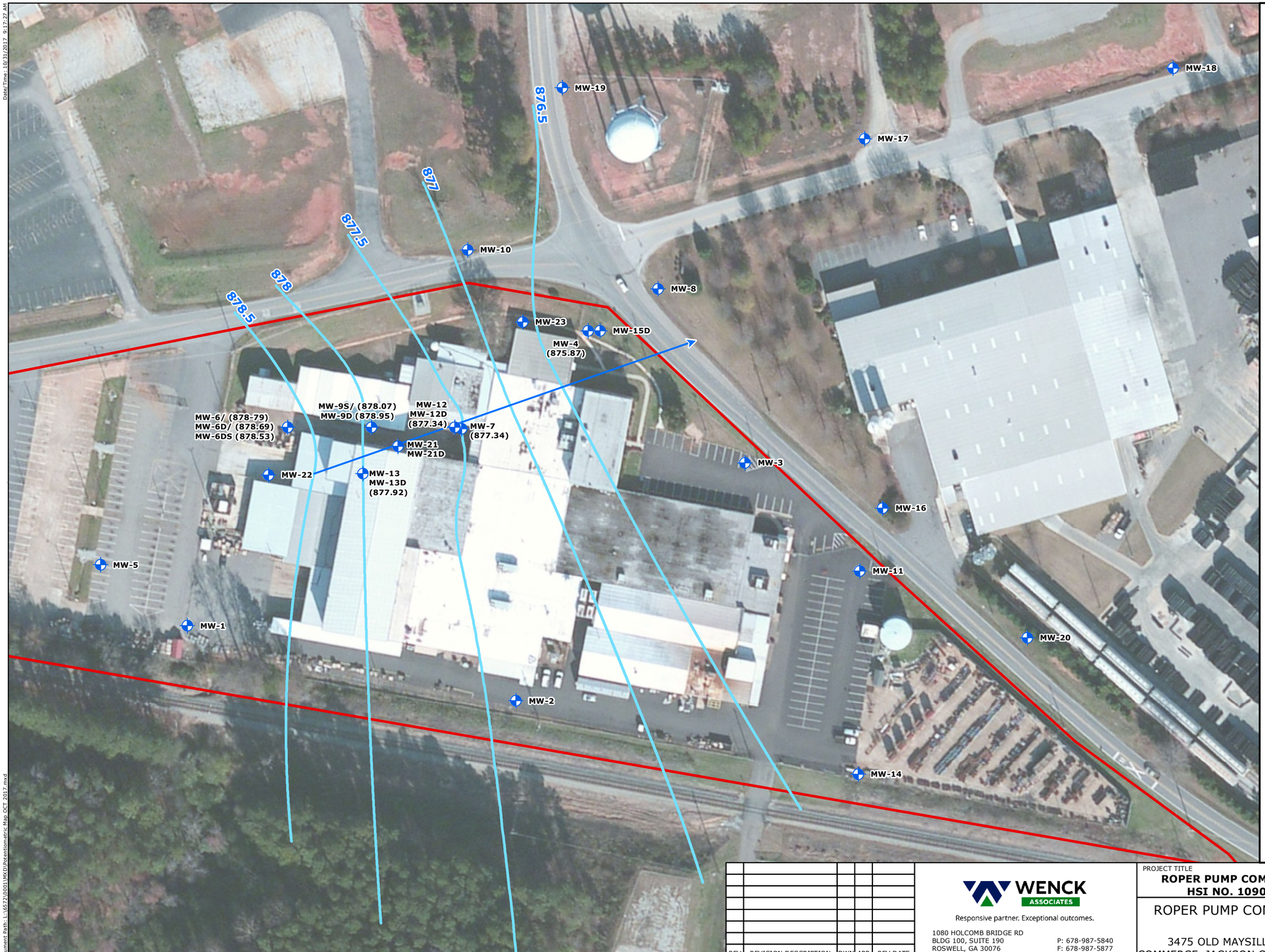

Legend

- 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.
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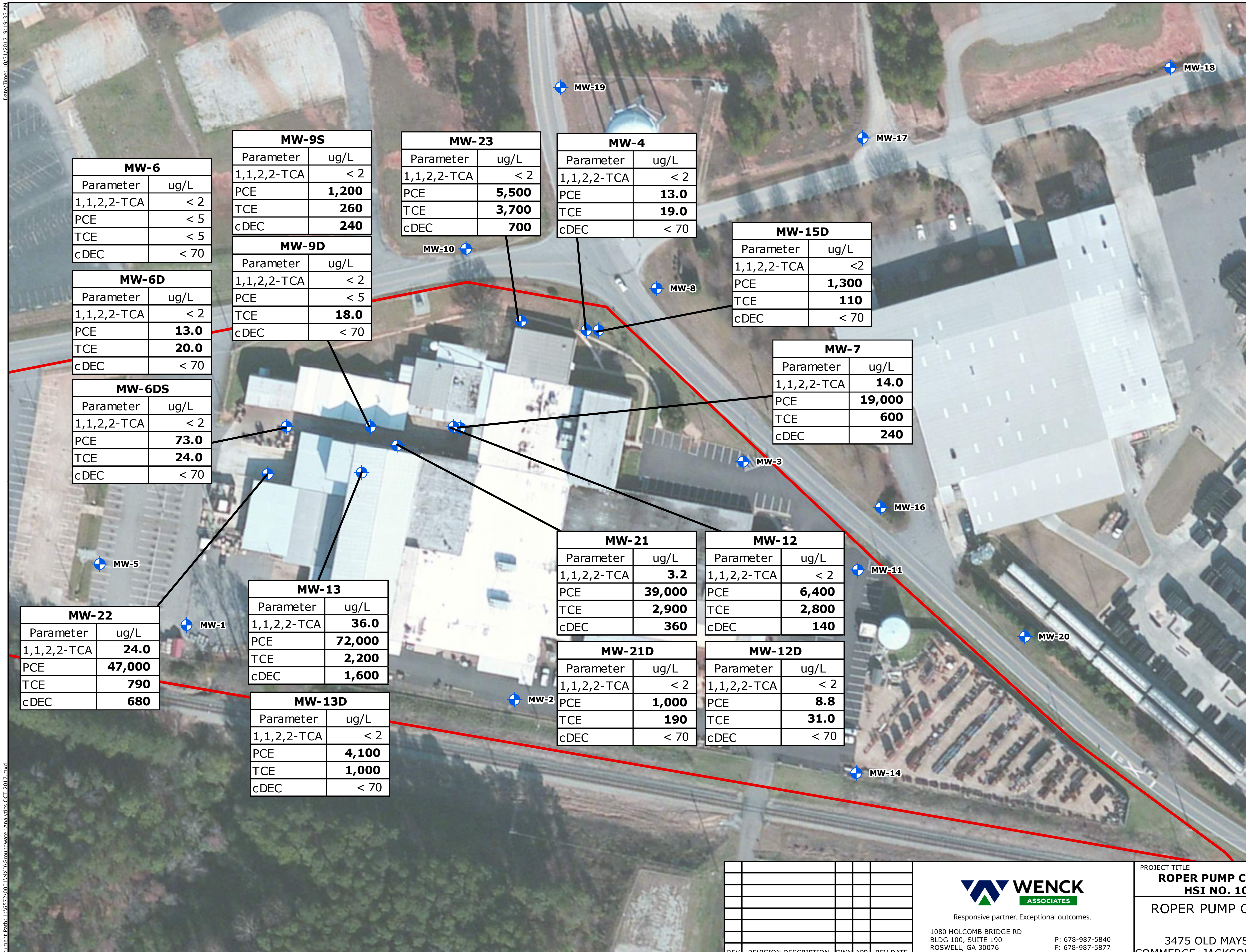

MW-6	
Parameter	ug/L
1,1,2,2-TCA	< 2
PCE	< 5
TCE	< 5
cDEC	< 70

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

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

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

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

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

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 10/24/2017
HDK	AJH	AJH	SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
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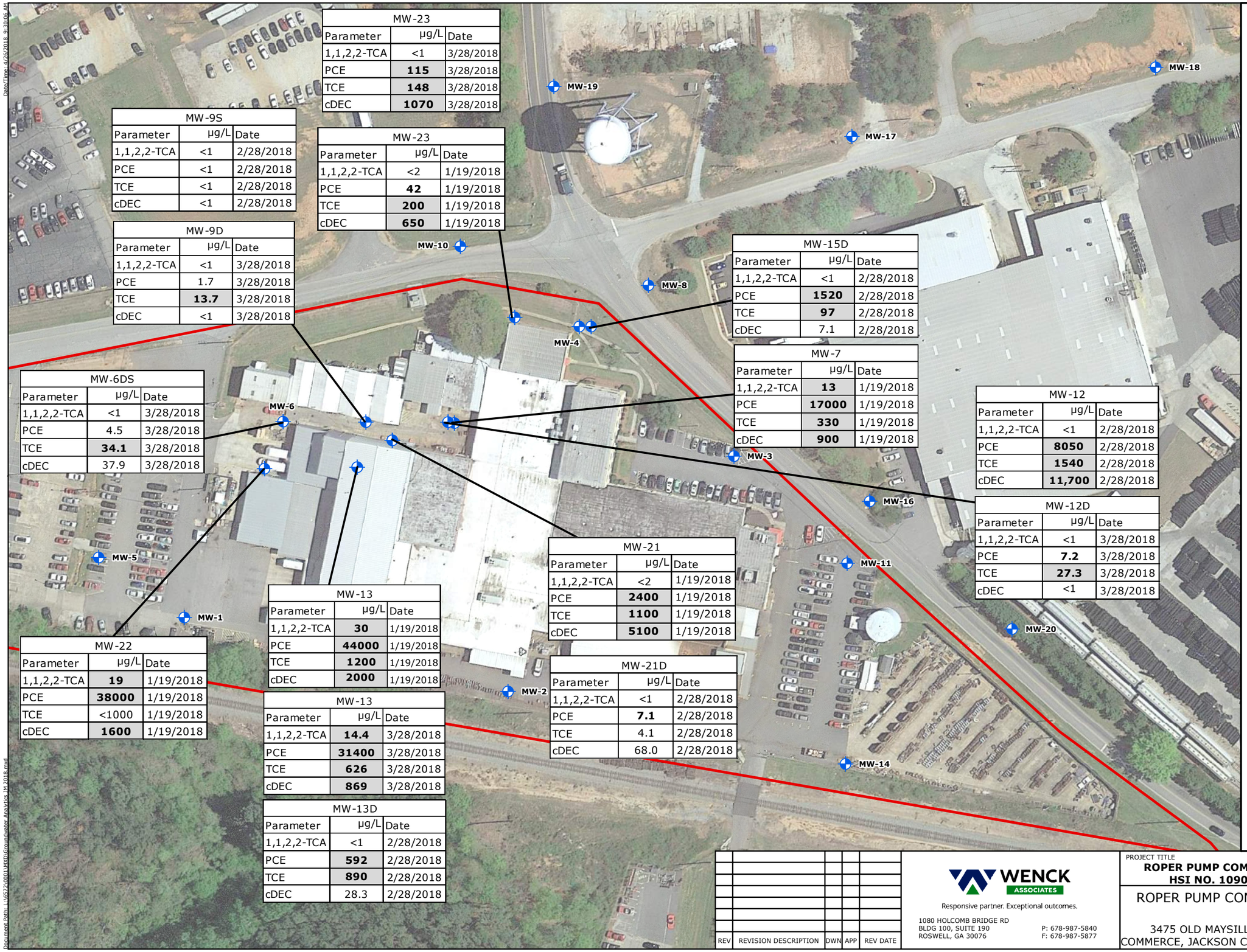


MW-23		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	3/28/2018
PCE	**115**	3/28/2018
TCE	**148**	3/28/2018
cDEC	**1070**	3/28/2018

MW-9S		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	2/28/2018
PCE	<1	2/28/2018
TCE	<1	2/28/2018
cDEC	<1	2/28/2018

MW-23		
Parameter	µg/L	Date
1,1,2,2-TCA	<2	1/19/2018
PCE	**42**	1/19/2018
TCE	**200**	1/19/2018
cDEC	**650**	1/19/2018

MW-9D		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	3/28/2018
PCE	1.7	3/28/2018
TCE	**13.7**	3/28/2018
cDEC	<1	3/28/2018

MW-15D		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	2/28/2018
PCE	**1520**	2/28/2018
TCE	**97**	2/28/2018
cDEC	7.1	2/28/2018

MW-7		
Parameter	µg/L	Date
1,1,2,2-TCA	**13**	1/19/2018
PCE	**17000**	1/19/2018
TCE	**330**	1/19/2018
cDEC	**900**	1/19/2018

MW-6DS		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	3/28/2018
PCE	4.5	3/28/2018
TCE	**34.1**	3/28/2018
cDEC	37.9	3/28/2018

MW-12		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	2/28/2018
PCE	**8050**	2/28/2018
TCE	**1540**	2/28/2018
cDEC	**11,700**	2/28/2018

MW-12D		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	3/28/2018
PCE	**7.2**	3/28/2018
TCE	**27.3**	3/28/2018
cDEC	<1	3/28/2018

MW-21		
Parameter	µg/L	Date
1,1,2,2-TCA	<2	1/19/2018
PCE	**2400**	1/19/2018
TCE	**1100**	1/19/2018
cDEC	**5100**	1/19/2018

MW-22		
Parameter	µg/L	Date
1,1,2,2-TCA	**19**	1/19/2018
PCE	**38000**	1/19/2018
TCE	<1000	1/19/2018
cDEC	**1600**	1/19/2018

MW-13		
Parameter	µg/L	Date
1,1,2,2-TCA	**30**	1/19/2018
PCE	**44000**	1/19/2018
TCE	**1200**	1/19/2018
cDEC	**2000**	1/19/2018

MW-21D		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	2/28/2018
PCE	**7.1**	2/28/2018
TCE	4.1	2/28/2018
cDEC	68.0	2/28/2018

MW-13		
Parameter	µg/L	Date
1,1,2,2-TCA	**14.4**	3/28/2018
PCE	**31400**	3/28/2018
TCE	**626**	3/28/2018
cDEC	**869**	3/28/2018

MW-13D		
Parameter	µg/L	Date
1,1,2,2-TCA	<1	2/28/2018
PCE	**592**	2/28/2018
TCE	**890**	2/28/2018
cDEC	28.3	2/28/2018

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 JANUARY-MARCH 2018

DWN BY	CHK'D	APP'D	DWG DATE
HDK	AJH	AJH	04/26/2018

SCALE: AS SHOWN

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

Figure 6C: Analytical Trends at Well MW-6DS
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

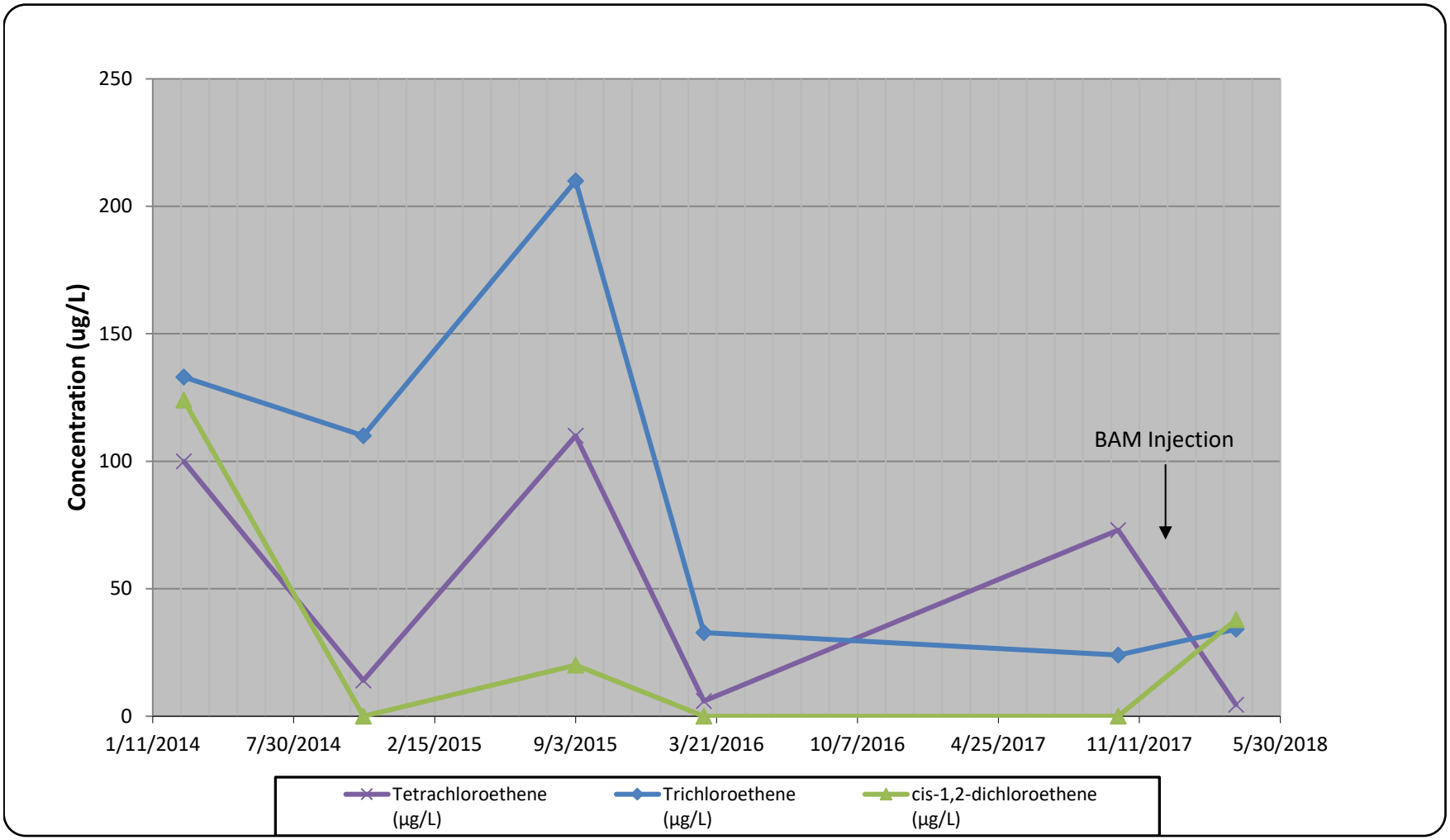


Figure 6D: Analytical Trends at Well MW-9S
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

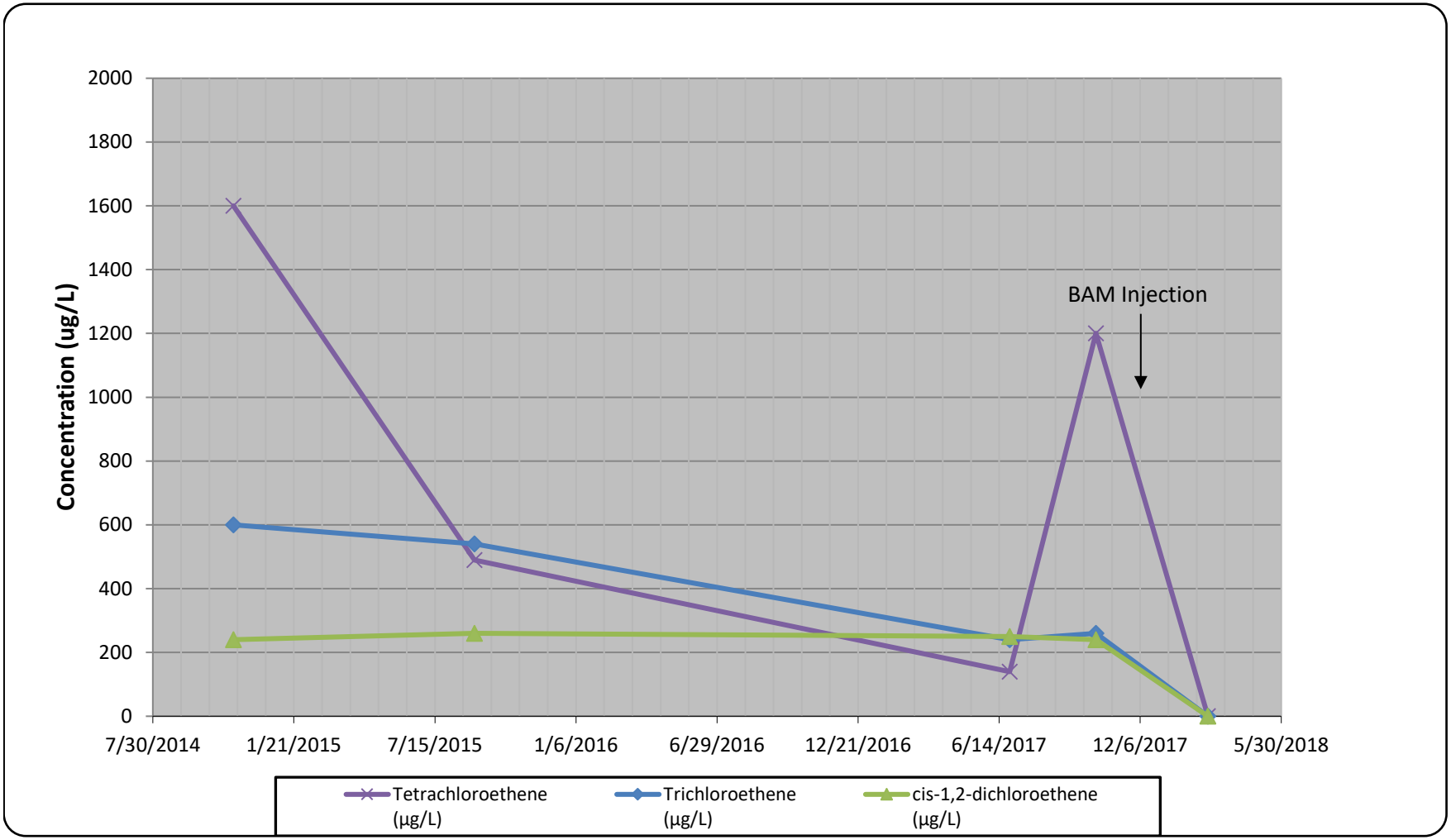


Figure 6E: Analytical Trends at Well MW-12
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

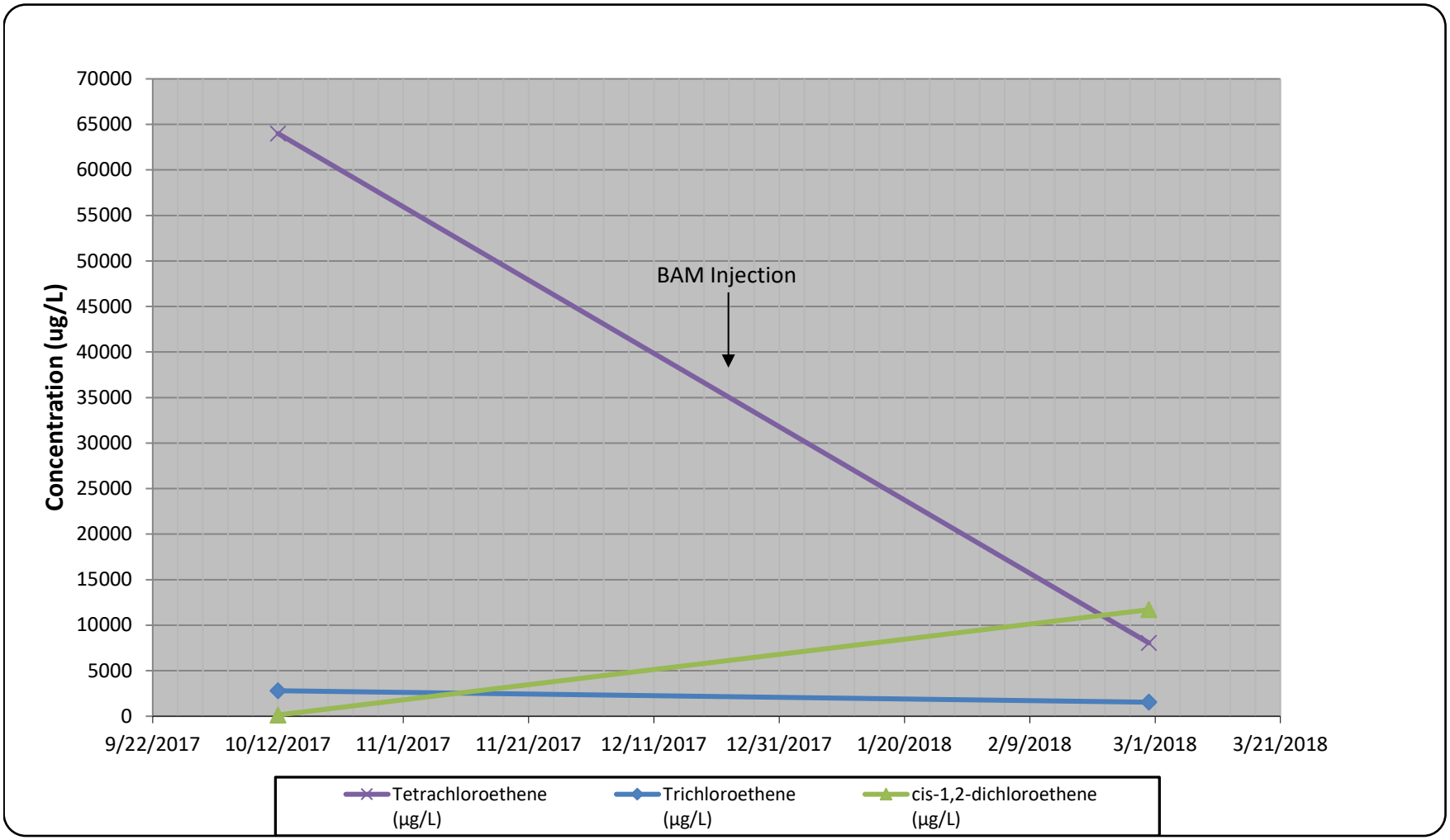


Figure 6F: Analytical Trends at Well MW-13
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

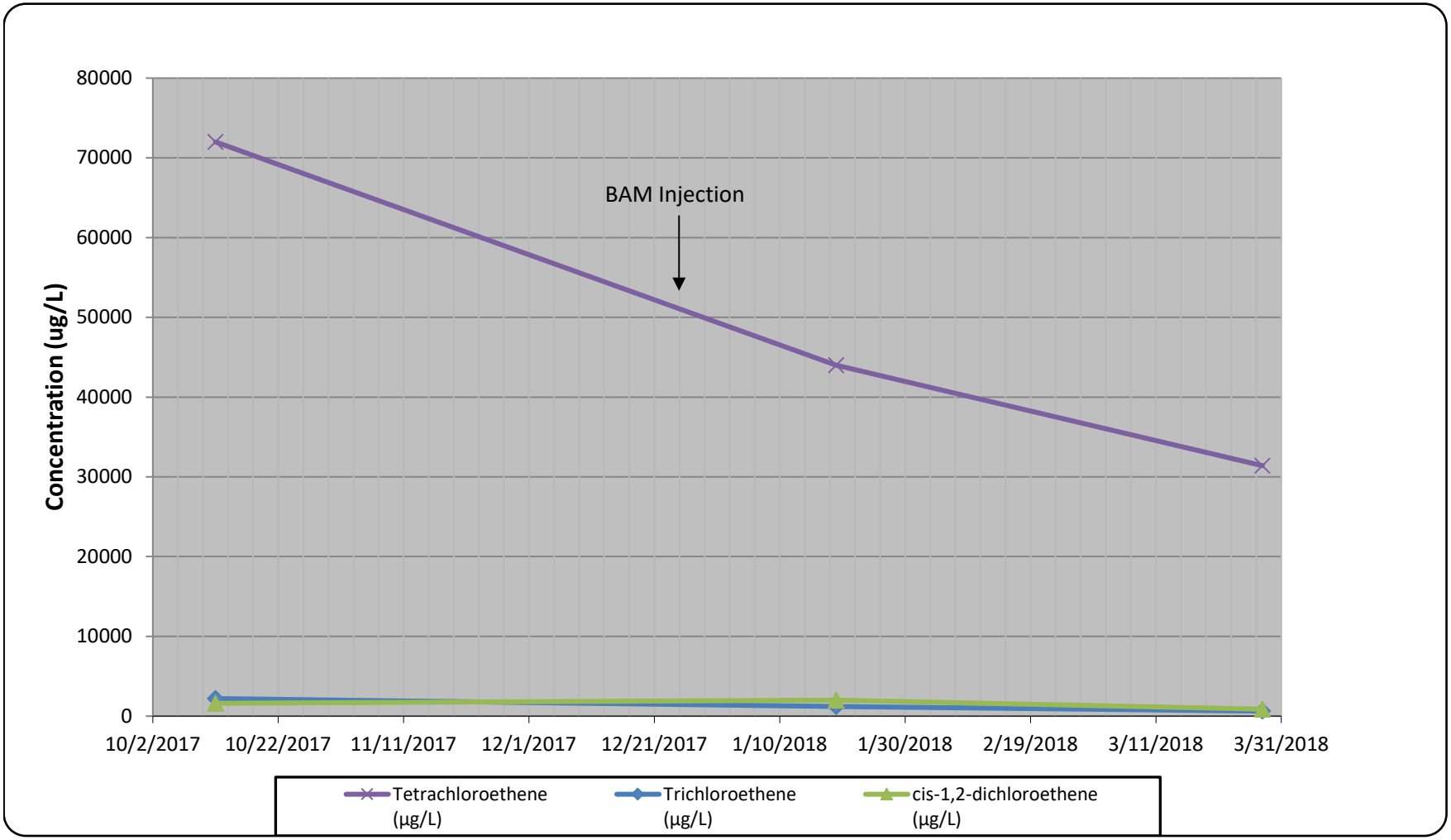


Figure 6G: Analytical Trends at Well MW-21
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

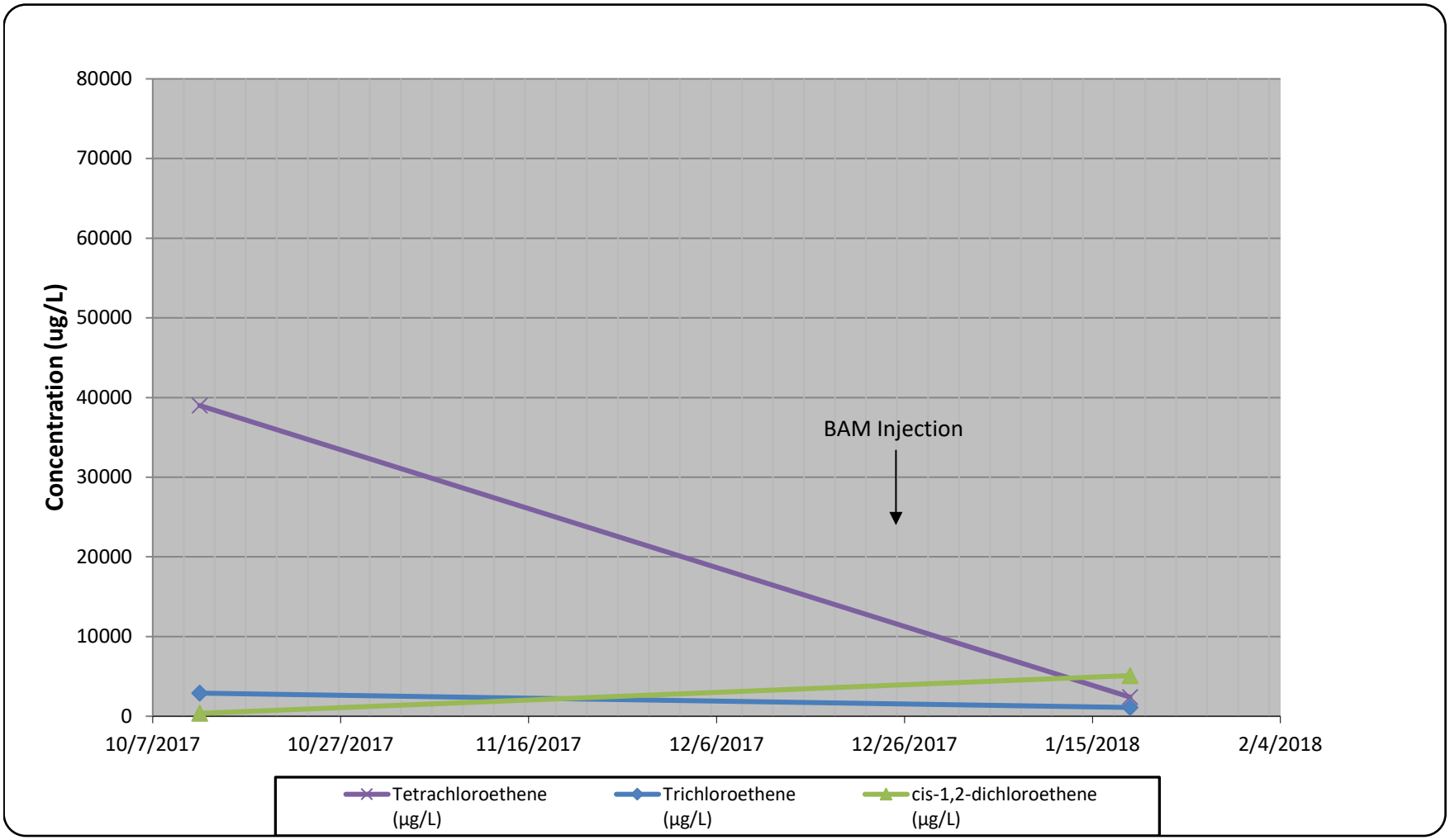


Figure 6H: Groundwater Quality at Well MW-21D
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901

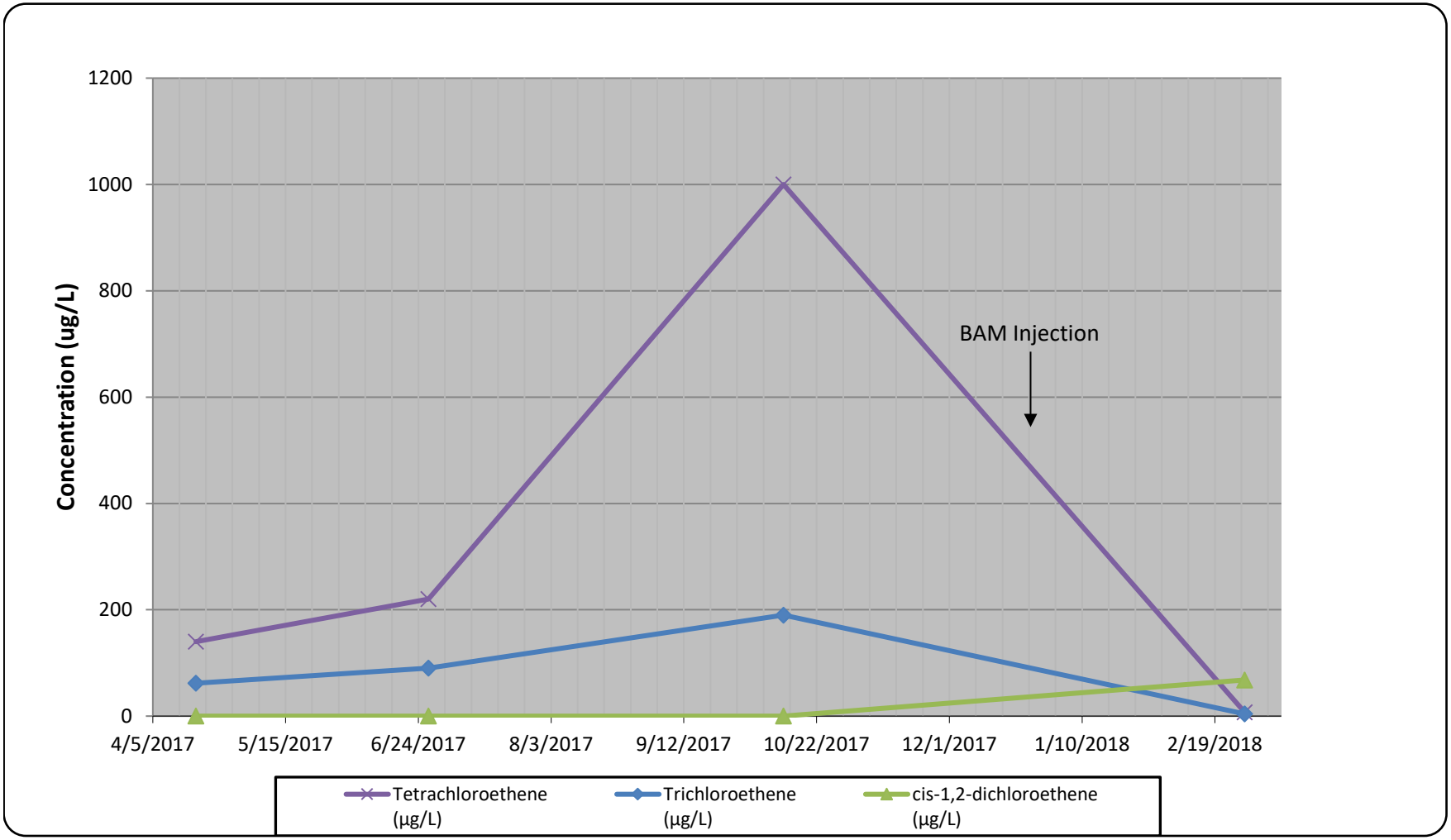
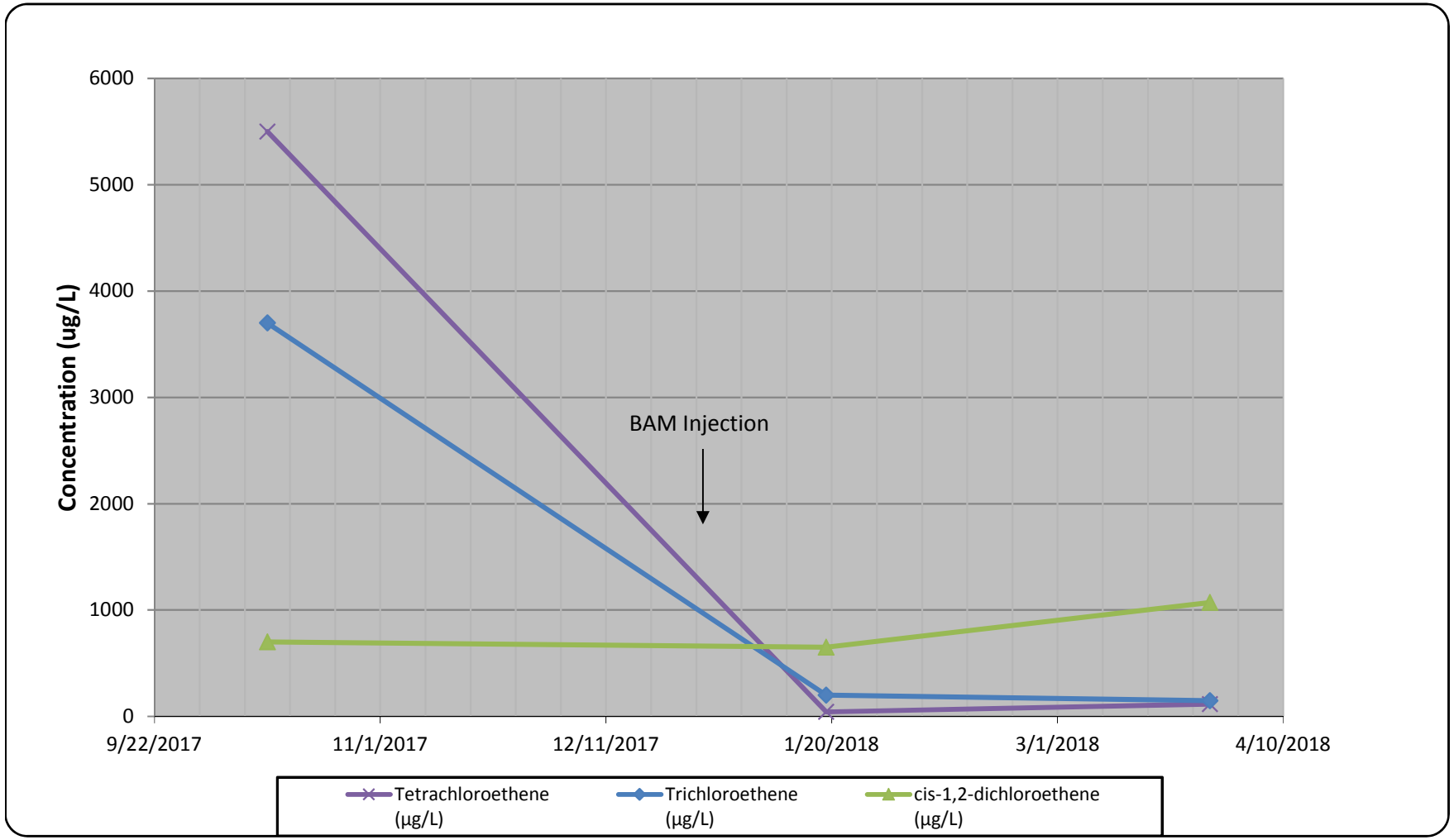


Figure 6I: Groundwater Quality at Well MW-23
Roper Pump Company
3475 Old Maysville Road
Commerce, Jackson County, Georgia
HSI Site No. 10901



Date/Time: 4/23/2018 9:14:25 AM

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

- 0 - 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 (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	7A	0

Document Path: L:\6572\0001\MXD\1_1 2 2 TCA_OCT 2017.mxd

Monitoring Wells (Shallow)

Approximate Parcel Boundary

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

- 0 - 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 20 40

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
(JAN. - MAR. 2018)

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	7B	0

Date/Time: 4/24/2018 2:40:51 PM

Document Path: I:\6572\0001\MXD\1 1 2 2 TCA JanMar 2018.mxd

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

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
(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	8A	0

Date/Time: 4/25/2018 12:53:07 PM

MW-19
NS

MW-18
NS

MW-17
NS

MW-10
NS

MW-8
NS

MW-23
115

MW-4
NS

MW-9S
<1

MW-12
8050

MW-6
NS

MW-7
17,000

MW-21
2400

MW-22
38,000

MW-13
31,400

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

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

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
(January-March 2018)

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	8B	0

Document Path: I:\6572\0001\MXD\UCF_JM 2018.mxd

Date/Time: 5/9/2018 12:02:50 PM

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)

Monitoring

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

Document Path: L:\6572\0001\MXD\TCE OCT 2017 Shallow.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
TCE ISOCONCENTRATION 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	9A	0

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
(January-March 2018)

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	9B	0

Date/Time: 5/9/2018 10:37:27 AM

Document Path: L:\6572\0001\MXD\TCE March 2018 Shallow.mxd

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
(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	10A	0

Monitoring

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
(January-March 2018)

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	10B	0

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

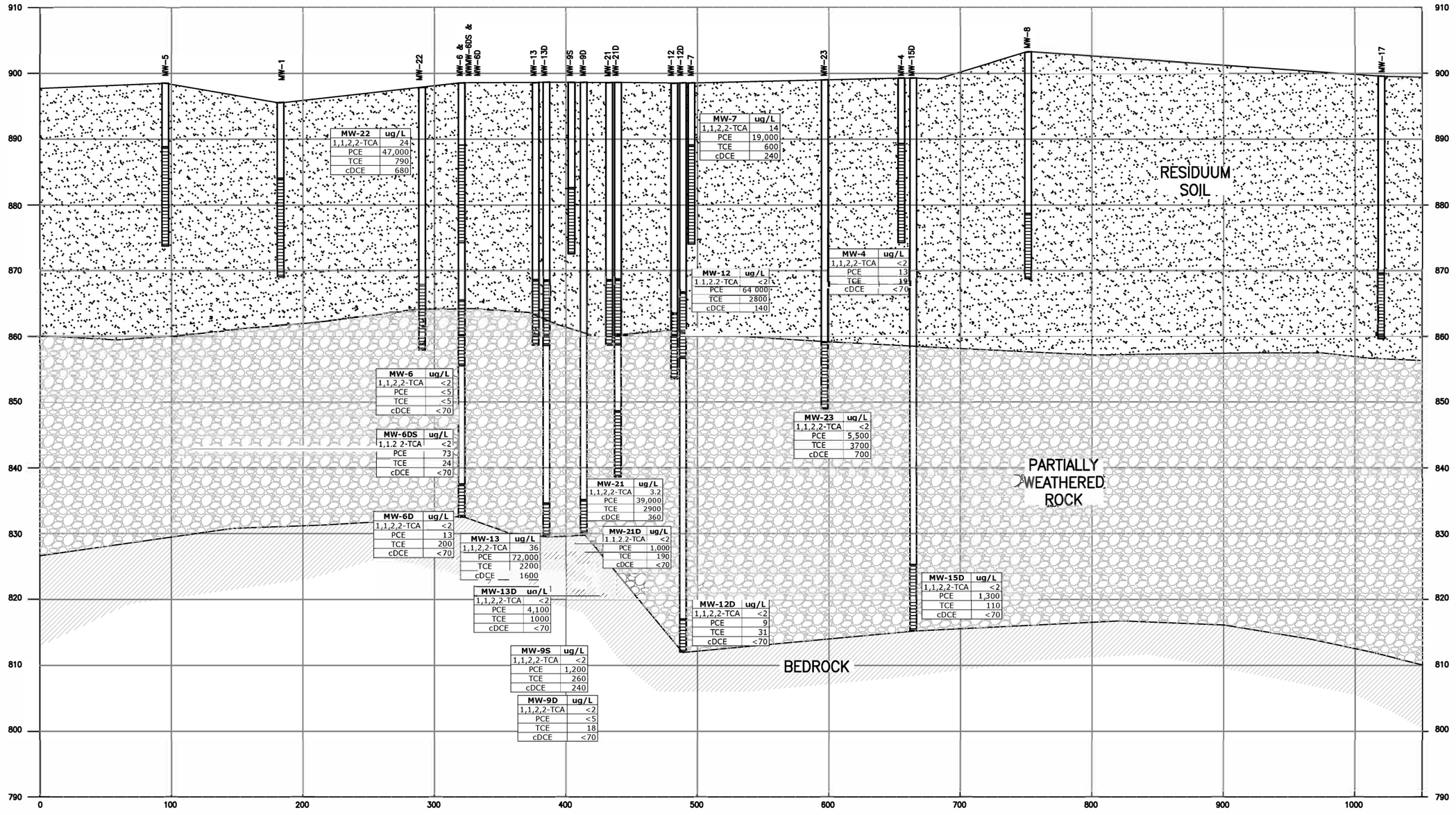
SCALE AS SHOWN

PROJECT NO.	FIGURE NO.	REV NO.
6572-0001	11	0

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

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

A (WEST) — A' (EAST)



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

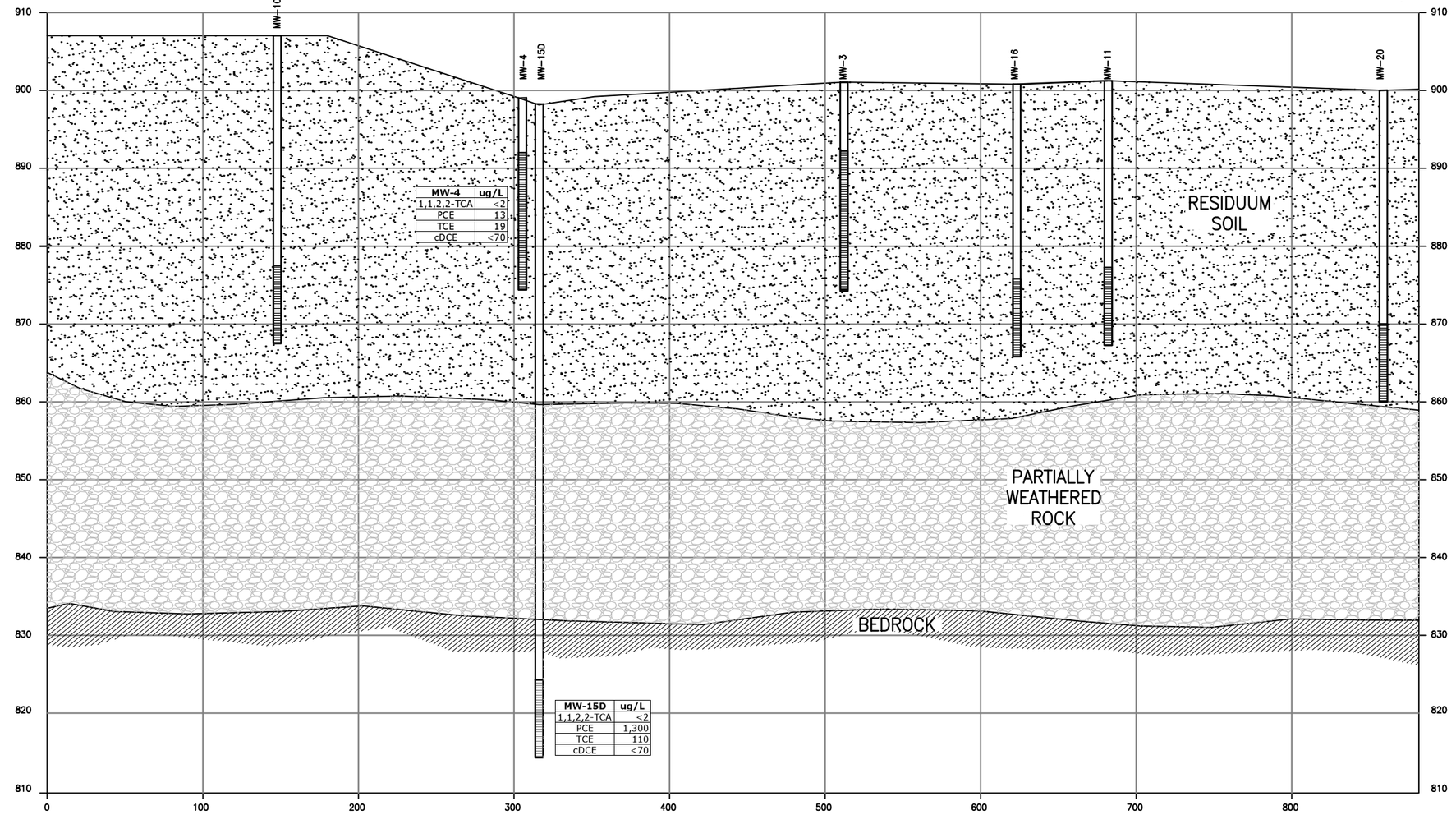
SHEET TITLE
CROSS SECTION A–A'

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

SCALE AS SHOWN

PROJECT NO.	SHEET NO.	REV NO.
6572–0001	FIGURE 12	

B (NORTH) B' (SOUTH)



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	APRIL 2018

SCALE AS SHOWN

PROJECT NO.	SHEET NO.	REV NO.
6572-0001	FIGURE 13	

Appendix A

Full-Scale Treatment Information

Wenck Associates, Inc.

Roper Pump - Commerce, GA

Injection Summary Table 1

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-1	12/4/17	10:56		54-44	6%/0%/0%	4	96	160	No flow until 44' bgs
				44-41	6%/0%/0%	4	96	55	
				41-38	6%/0%/0%	4	80	40	
				38-35	6%/0%/0%	4	60	40	
				35-32	6%/0%/0%	4	60	40	
				32-29	6%/0%/0%	4	60	40	
				29-26	6%/0%/0%	4	60	40	
			13:15	26-25	6%/0%/0%	4	60	35	**450 Gallons**
IP-24	12/4/17	11:45	11:55	49-25	0%/0%/0%	0	100	0	Rods clogged
IP-10	12/4/17	12:25		49-40	6%/3.0%/0.3%	6	88	160	No flow until 40' bgs
				40-38	6%/3.0%/0.3%	6	60	55	
				38-36	6%/3.0%/0.3%	6	60	40	
				36-34	6%/3.0%/0.3%	6	60	40	
				34-32	6%/3.0%/0.3%	6	60	40	
				32-30	6%/3.0%/0.3%	6	60	30	
				30-28	6%/3.0%/0.3%	6	60	30	
				28-27	6%/3.0%/0.3%	6	60	30	
			13:46	27-25	6%/3.0%/0.3%	6	60	25	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-17	12/4/17	13:30		54-42	6%/0%/0%	4	86	200	No flow until 42' bgs
				42-40	6%/0%/0%	4	86	0	
				40-38	6%/0%/0%	4	86	50	
				38-36	6%/0%/0%	4	86	0	
				36-34	6%/0%/0%	4	86	50	
				34-32	6%/0%/0%	4	86	50	
				32-30	6%/0%/0%	4	88	25	
				30-28	6%/0%/0%	4	86	25	
				28-26	6%/0%/0%	4	82	25	
			15:35	26-25	6%/0%/0%	4	65	25	**450 Gallons**
IP-23	12/4/17	14:21		54-52	6%/3.0%/0.3%	7	60	60	
				52-50	6%/3.0%/0.3%	7	60	60	Make up volume for IP-24
				50-48	6%/3.0%/0.3%	7	60	60	
				48-46	6%/3.0%/0.3%	7	60	60	
				46-44	6%/3.0%/0.3%	7	60	60	
				44-42	6%/3.0%/0.3%	7	60	60	
				42-40	6%/3.0%/0.3%	7	62	60	
				40-38	6%/3.0%/0.3%	7	78	60	
				38-36	6%/3.0%/0.3%	7	62	60	
				36-34	6%/3.0%/0.3%	7	80	60	
				34-32	6%/3.0%/0.3%	7	80	75	
				32-30	6%/3.0%/0.3%	7	78	75	
				30-28	6%/3.0%/0.3%	7	66	75	
			16:52	28-25	6%/3.0%/0.3%	7	62	75	**900 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-3	12/4/17	15:40		54-50	6%/0%/0%	6	92	60	No flow until 50' bgs
				50-48	6%/0%/0%	6	88	31	
				48-46	6%/0%/0%	6	92	31	
				46-44	6%/0%/0%	6	82	31	
				44-42	6%/0%/0%	6	74	31	
				42-40	6%/0%/0%	6	72	31	
				40-38	6%/0%/0%	6	66	35	
				38-36	6%/0%/0%	6	64	35	
				36-34	6%/0%/0%	6	60	35	
				34-32	6%/0%/0%	6	60	35	
				32-28	6%/0%/0%	6	60	0	Leak through rod's threads
			17:06	28-25	6%/0%/0%	6	52	95	**450 Gallons**
IP-4	12/5/17	7:52		54-52	6%/0%/0%	6	100	30	
				52-50	6%/0%/0%	6	96	30	
				50-48	6%/0%/0%	6	98	30	
				48-46	6%/0%/0%	6	78	30	
				46-44	6%/0%/0%	6	70	30	
				44-42	6%/0%/0%	6	68	30	
				42-40	6%/0%/0%	6	68	30	
				40-38	6%/0%/0%	6	66	30	
				38-36	6%/0%/0%	6	64	30	
				36-34	6%/0%/0%	6	68	30	
				34-32	6%/0%/0%	6	66	30	
				32-30	6%/0%/0%	6	64	30	
				30-28	6%/0%/0%	6	64	30	
			9:25	28-25	6%/0%/0%	6	58	60	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-9	12/5/17	7:52		54-52	6%/3.0%/0.3%	6	96	30	
				52-50	6%/3.0%/0.3%	6	96	30	
				50-38	6%/3.0%/0.3%	6	84	80	No flow 50 to 40' bgs
				38-36	6%/3.0%/0.3%	6	90	130	
				36-34	6%/3.0%/0.3%	6	80	30	
				34-32	6%/3.0%/0.3%	6	78	30	
				32-30	6%/3.0%/0.3%	6	54	30	
				30-28	6%/3.0%/0.3%	6	70	30	
				28-26	6%/3.0%/0.3%	6	70	30	
			9:25	26-25	6%/3.0%/0.3%	6	58	30	**450 Gallons**
IP-19	12/5/17	8:56		54-50	6%/0%/0.3%	7	92	60	No flow until 50' bgs
				50-48	6%/0%/0.3%	7	82	30	
				48-46	6%/0%/0.3%	7	78	30	
				46-44	6%/0%/0.3%	7	70	30	
				44-42	6%/0%/0.3%	7	68	30	
				42-40	6%/0%/0.3%	7	56	30	
				40-38	6%/0%/0.3%	7	50	30	
				38-36	6%/0%/0.3%	7	50	30	
				36-34	6%/0%/0.3%	7	52	30	
				34-32	6%/0%/0.3%	7	52	30	
				32-30	6%/0%/0.3%	7	52	30	
				30-28	6%/0%/0.3%	7	48	30	
				28-26	6%/0%/0.3%	7	46	30	
			10:07	26-25	6%/0%/0.3%	7	42	30	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-32	12/5/17	9:34		54-52	6%/3.0%/0.3%	8	68	30	
				52-50	6%/3.0%/0.3%	8	46	30	
				50-48	6%/3.0%/0.3%	8	56	30	
				48-46	6%/3.0%/0.3%	8	52	30	
				46-44	6%/3.0%/0.3%	8	44	30	
				44-42	6%/3.0%/0.3%	8	68	30	
				42-40	6%/3.0%/0.3%	8	62	30	
				40-38	6%/3.0%/0.3%	8	62	30	
				38-36	6%/3.0%/0.3%	8	60	30	
				36-34	6%/3.0%/0.3%	8	68	30	
				34-32	6%/3.0%/0.3%	8	68	30	
				32-30	6%/3.0%/0.3%	8	68	30	
				30-28	6%/3.0%/0.3%	8	68	30	
				28-26	6%/3.0%/0.3%	8	62	30	
			10:28	26-25	6%/3.0%/0.3%	8	60	30	**450 Gallons**
IP-16	12/5/17	10:35		48-46	6%/0%/0%	6		120	Refusal at 48' bgs
				46-44	6%/0%/0%	6		30	Now flow until 46' bgs
				44-42	6%/0%/0%	6		30	
				42-40	6%/0%/0%	6		30	
				40-38	6%/0%/0%	6		30	
				38-36	6%/0%/0%	6		30	
				36-34	6%/0%/0%	6		30	
				34-32	6%/0%/0%	6		30	
				32-30	6%/0%/0%	6		30	
				30-28	6%/0%/0%	6		30	
			11:52	28-25	6%/0%/0%	6		60	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-38	12/5/17	11:37		54-48	6%/3.0%/0.3%	5	98	10	No flow until 48' bgs
				48-46	6%/3.0%/0.3%	5	90	110	
				46-44	6%/3.0%/0.3%	5	86	30	
				44-42	6%/3.0%/0.3%	5	78	30	
				42-40	6%/3.0%/0.3%	5	72	30	
				40-38	6%/3.0%/0.3%	5	50	30	
				38-36	6%/3.0%/0.3%	5	68	30	
				36-34	6%/3.0%/0.3%	5	68	30	
				34-32	6%/3.0%/0.3%	5	70	30	
				32-30	6%/3.0%/0.3%	5	62	30	
				30-28	6%/3.0%/0.3%	5	62	30	
				28-26	6%/3.0%/0.3%	5	62	30	
			13:18	26-25	6%/3.0%/0.3%	5	66	30	**450 Gallons**
IP-2	12/5/17	12:08		54-44	6%/0%/0.3%	8		100	No flow until 44' bgs
				44-42	6%/0%/0.3%	8		30	
				42-40	6%/0%/0.3%	8		30	
				40-38	6%/0%/0.3%	8		30	
				38-36	6%/0%/0.3%	8		30	
				36-34	6%/0%/0.3%	8		30	
				34-32	6%/0%/0.3%	8		30	
				32-30	6%/0%/0.3%	8		30	
				30-28	6%/0%/0.3%	8		30	
				28-26	6%/0%/0.3%	8		30	
			13:10	26-25	6%/0%/0.3%	8		30	**400 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-33	12/5/17	13:51		53-49	6%/3.0%/0.3%	8	94	60	
				49-47	6%/3.0%/0.3%	8	50	30	
				47-45	6%/3.0%/0.3%	8	60	30	
				45-43	6%/3.0%/0.3%	8	50	30	
				43-41	6%/3.0%/0.3%	8	50	30	
				41-39	6%/3.0%/0.3%	8	50	30	
				39-37	6%/3.0%/0.3%	8	50	30	
				37-35	6%/3.0%/0.3%	8	40	30	
				35-33	6%/3.0%/0.3%	8	40	30	
				33-31	6%/3.0%/0.3%	8	40	30	
				31-29	6%/3.0%/0.3%	8	40	30	
				29-27	6%/3.0%/0.3%	8	38	30	
			14:53	27-25	6%/3.0%/0.3%	8	42	30	**450 Gallons**
IP-18	12/5/17	13:45		49-45	6%/0%/0.3%	5	94	70	Now flow until 45' bgs
				45-43	6%/0%/0.3%	5	88	35	Make up volume for IP-2
				43-41	6%/0%/0.3%	5	88	35	
				41-39	6%/0%/0.3%	5	88	35	
				39-37	6%/0%/0.3%	5	80	35	
				37-35	6%/0%/0.3%	5	80	35	
				35-33	6%/0%/0.3%	5	80	35	
				33-31	6%/0%/0.3%	5	80	35	
				31-29	6%/0%/0.3%	5	78	35	
				29-27	6%/0%/0.3%	5	76	35	
				27-25	6%/0%/0.3%	5	70	35	
			15:24	25-21	6%/0%/0.3%	5	66	80	**500 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-39	12/5/17	15:20		53-47	6%/3.0%/0.3%	5	90	25	
				47-45	6%/3.0%/0.3%	5	90	50	
				45-43	6%/3.0%/0.3%	5	90	65	
				43-41	6%/3.0%/0.3%	5	90	40	
				41-39	6%/3.0%/0.3%	5	88	30	
				39-37	6%/3.0%/0.3%	5	88	30	
				37-35	6%/3.0%/0.3%	5	70	30	
				35-33	6%/3.0%/0.3%	5	72	30	
				33-31	6%/3.0%/0.3%	5	72	30	
				31-29	6%/3.0%/0.3%	5	68	30	
				29-27	6%/3.0%/0.3%	5	66	30	
				27-25	6%/3.0%/0.3%	5	64	30	
			17:11	25-23	6%/3.0%/0.3%	5	60	30	**450 Gallons**
IP-5	12/5/17	15:37		49-45	6%/3.0%/0.3%	8		60	
				45-43	6%/3.0%/0.3%	8		30	
				43-41	6%/3.0%/0.3%	8		30	
				41-39	6%/3.0%/0.3%	8		30	
				39-37	6%/3.0%/0.3%	8		30	
				37-35	6%/3.0%/0.3%	8		30	
				35-33	6%/3.0%/0.3%	8		30	
				33-31	6%/3.0%/0.3%	8		30	
				31-29	6%/3.0%/0.3%	8		30	
				29-27	6%/3.0%/0.3%	8		30	
				27-25	6%/3.0%/0.3%	8		30	
			16:44	25-21	6%/3.0%/0.3%	8		90	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-20	12/5/17	16:52		49-45	6%/0%/0%	8	74	60	
				45-43	6%/0%/0%	8	70	30	
				43-41	6%/0%/0%	8	80	30	
				41-39	6%/0%/0%	8	82	30	
				39-37	6%/0%/0%	8	80	30	
				37-35	6%/0%/0%	8	90	30	
				35-33	6%/0%/0%	8	78	30	
				33-31	6%/0%/0%	8	76	30	
				31-29	6%/0%/0%	8	74	30	
				29-27	6%/0%/0%	8	76	30	
				27-25	6%/0%/0%	8	72	30	
			17:44	25-21	6%/0%/0%	8	72	90	**450 Gallons**
IP-25	12/6/17	7:30		49-47	6%/3.0%/0.3%	7	88	30	
				47-45	6%/3.0%/0.3%	7	92	30	
				45-43	6%/3.0%/0.3%	7	98	30	
				43-41	6%/3.0%/0.3%	7	84	30	
				41-39	6%/3.0%/0.3%	7	80	30	
				39-37	6%/3.0%/0.3%	7	82	30	
				37-35	6%/3.0%/0.3%	7	82	30	
				35-33	6%/3.0%/0.3%	7	70	30	
				33-31	6%/3.0%/0.3%	7	74	30	
				31-29	6%/3.0%/0.3%	7	74	30	
				29-27	6%/3.0%/0.3%	7	68	30	
				27-25	6%/3.0%/0.3%	7	66	30	
			8:44	25-21	6%/3.0%/0.3%	7	68	90	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-6	12/6/17	7:38		49-47	6%/3.0%/0.3%	8	92	30	
				47-45	6%/3.0%/0.3%	8	70	30	
				45-43	6%/3.0%/0.3%	8	74	30	
				43-41	6%/3.0%/0.3%	8	84	30	
				41-39	6%/3.0%/0.3%	8	82	30	
				39-37	6%/3.0%/0.3%	8	78	30	
				37-35	6%/3.0%/0.3%	8	62	30	
				35-33	6%/3.0%/0.3%	8	54	30	
				33-31	6%/3.0%/0.3%	8	68	30	
				31-29	6%/3.0%/0.3%	8	58	30	
				29-27	6%/3.0%/0.3%	8	58	30	
				27-25	6%/3.0%/0.3%	8	58	30	
			8:43	25-21	6%/3.0%/0.3%	8	50	90	**450 Gallons**
IP-40	12/6/17	9:20		49-42	6%/3.0%/0.3%	6	92	105	
				42-40	6%/3.0%/0.3%	6	86	30	
				40-38	6%/3.0%/0.3%	6	84	30	
				38-36	6%/3.0%/0.3%	6	82	30	
				36-34	6%/3.0%/0.3%	6	78	30	
				34-32	6%/3.0%/0.3%	6	76	30	
				32-30	6%/3.0%/0.3%	6	76	30	
				30-28	6%/3.0%/0.3%	6	74	30	
				28-26	6%/3.0%/0.3%	6	72	30	
				26-25	6%/3.0%/0.3%	6	72	30	
				25-23	6%/3.0%/0.3%	6	78	30	
			10:53	23-21	6%/3.0%/0.3%	6	82	45	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-21	12/6/17	9:26		49-45	6%/0%/0%	6	92	60	
				45-43	6%/0%/0%	6	52	30	
				43-41	6%/0%/0%	6	50	30	
				41-39	6%/0%/0%	6	50	30	
				39-37	6%/0%/0%	6	50	30	
				37-35	6%/0%/0%	6	56	30	
				35-33	6%/0%/0%	6	68	30	
				33-31	6%/0%/0%	6	64	30	
				31-29	6%/0%/0%	6	62	30	
				29-27	6%/0%/0%	6	60	30	
				27-25	6%/0%/0%	6	58	30	
				25-23	6%/0%/0%	6	56	30	
			11:01	23-21	6%/0%/0%	6	58	60	**450 Gallons**
IP-31	12/6/17	11:20		49-47	6%/3.0%/0.3%	4	100	30	
				47-45	6%/3.0%/0.3%	4	94	30	
				45-39	6%/3.0%/0.3%	4	92	90	No flow 45' to 41' bgs
				39-37	6%/3.0%/0.3%	4	86	30	
				37-35	6%/3.0%/0.3%	4	82	30	
				35-33	6%/3.0%/0.3%	4	76	30	
				33-31	6%/3.0%/0.3%	4	78	30	
				31-29	6%/3.0%/0.3%	4	70	30	
				29-27	6%/3.0%/0.3%	4	68	30	
				27-25	6%/3.0%/0.3%	4	60	30	
				25-23	6%/3.0%/0.3%	4	62	30	
			13:34	23-21	6%/3.0%/0.3%	4	30	60	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-8	12/6/17	11:44		49-47	6%/3.0%/0.3%	7	64	30	
				47-45	6%/3.0%/0.3%	7	70	30	
				45-43	6%/3.0%/0.3%	7	72	30	
				43-41	6%/3.0%/0.3%	7	70	30	
				41-39	6%/3.0%/0.3%	7	84	30	
				39-37	6%/3.0%/0.3%	7	72	30	
				37-35	6%/3.0%/0.3%	7	74	30	
				35-33	6%/3.0%/0.3%	7	72	30	
				33-31	6%/3.0%/0.3%	7	70	30	
				31-29	6%/3.0%/0.3%	7	62	30	
				29-27	6%/3.0%/0.3%	7	68	30	
				27-25	6%/3.0%/0.3%	7	66	30	
			12:59	25-21	6%/3.0%/0.3%	7	66	90	**450 Gallons**
IP-22	12/6/17	13:19		49-45	6%/3.0%/0.3%	5	90	90	
				45-43	6%/3.0%/0.3%	5	88	30	
				43-41	6%/3.0%/0.3%	5	72	30	
				41-39	6%/3.0%/0.3%	5	62	30	
				39-37	6%/3.0%/0.3%	5	60	30	
				37-35	6%/3.0%/0.3%	5	60	30	
				35-33	6%/3.0%/0.3%	5	60	30	Connected with MW-21D
				33-31	6%/3.0%/0.3%	5	60	30	
				31-29	6%/3.0%/0.3%	5	48	30	
				29-27	6%/3.0%/0.3%	5	56	30	
				27-25	6%/3.0%/0.3%	5	64	30	
			15:03	25-21	6%/3.0%/0.3%	5	62	60	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-11	12/6/17	13:43		49-45	6%/3.0%/0.3%	6	78	60	
				45-43	6%/3.0%/0.3%	6	90	30	
				43-41	6%/3.0%/0.3%	6	82	30	
				41-39	6%/3.0%/0.3%	6	90	30	
				39-37	6%/3.0%/0.3%	6	88	30	
				37-35	6%/3.0%/0.3%	6	88	30	
				35-33	6%/3.0%/0.3%	6	86	30	
				33-31	6%/3.0%/0.3%	6	84	30	
				31-29	6%/3.0%/0.3%	6	80	30	
				29-27	6%/3.0%/0.3%	6	80	30	
				27-25	6%/3.0%/0.3%	6	78	30	
			15:22	25-21	6%/3.0%/0.3%	6	76	90	**450 Gallons**
IP-7	12/6/17	15:13		49-47	6%/3.0%/0.3%	6	96	30	
				47-43	6%/3.0%/0.3%	6	64	90	No flow 47' to 45' bgs
				43-41	6%/3.0%/0.3%	6	66	30	
				41-39	6%/3.0%/0.3%	6	70	30	
				39-37	6%/3.0%/0.3%	6	76	30	Mounding in MW-21
				37-35	6%/3.0%/0.3%	6	72	30	
				35-33	6%/3.0%/0.3%	6	60	30	
				33-31	6%/3.0%/0.3%	6	68	30	
				31-29	6%/3.0%/0.3%	6	77	30	
				29-27	6%/3.0%/0.3%	6	60	30	
				27-25	6%/3.0%/0.3%	6	66	30	
				25-23	6%/3.0%/0.3%	6	60	30	
			16:32	23-21	6%/3.0%/0.3%	6	64	30	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-26	12/6/17	15:51		49-45	6%/0%/0%	7	86	60	
				45-43	6%/0%/0%	7	76	30	
				43-41	6%/0%/0%	7	70	30	
				41-39	6%/0%/0%	7	70	30	
				39-37	6%/0%/0%	7	70	30	
				37-35	6%/0%/0%	7	72	30	
				35-33	6%/0%/0%	7	72	30	
				33-31	6%/0%/0%	7	70	30	
				31-29	6%/0%/0%	7	70	30	
				29-27	6%/0%/0%	7	66	30	
				27-25	6%/0%/0%	7	68	30	
				25-23	6%/0%/0%	7	68	30	
			17:05	23-21	6%/0%/0%	7	68	60	**450 Gallons**
IP-49	12/7/17	7:55		49-47	6%/3.0%/0.3%	6	98	15	
				47-43	6%/3.0%/0.3%	6	88	15	
				43-39	6%/3.0%/0.3%	6	94	30	
				39-37	6%/3.0%/0.3%	6	78	120	
				37-35	6%/3.0%/0.3%	6	76	30	
				35-33	6%/3.0%/0.3%	6	66	30	
				33-31	6%/3.0%/0.3%	6	58	30	
				31-29	6%/3.0%/0.3%	6	52	30	
				29-27	6%/3.0%/0.3%	6	54	30	
				27-25	6%/3.0%/0.3%	6	58	30	
				25-23	6%/3.0%/0.3%	6	60	30	
			9:25	23-21	6%/3.0%/0.3%	6	62	60	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-50	12/7/17	9:33		49-43	6%/0%/0%	5	98	90	
				43-41	6%/0%/0%	5	58	30	
				41-39	6%/0%/0%	5	76	30	
				39-37	6%/0%/0%	5	70	30	
				37-35	6%/0%/0%	5	76	30	
				35-33	6%/0%/0%	5	56	30	
				33-31	6%/0%/0%	5	60	30	
				31-29	6%/0%/0%	5	64	30	
				29-27	6%/0%/0%	5	64	30	
				27-25	6%/0%/0%	5	58	30	
				25-23	6%/0%/0%	5	58	30	
			11:13	23-21	6%/0%/0%	5	52	60	**450 Gallons**
IP-41	12/7/17	7:39		49-45	6%/3.0%/0.3%	6	86	60	
				45-43	6%/3.0%/0.3%	6	86	30	
				43-41	6%/3.0%/0.3%	6	84	30	
				41-39	6%/3.0%/0.3%	6	82	30	
				39-37	6%/3.0%/0.3%	6	78	30	
				37-35	6%/3.0%/0.3%	6	78	30	
				35-33	6%/3.0%/0.3%	6	74	30	
				33-31	6%/3.0%/0.3%	6	62	30	
				31-29	6%/3.0%/0.3%	6	60	30	
				29-27	6%/3.0%/0.3%	6	60	30	
				27-25	6%/3.0%/0.3%	6	74	30	
				25-23	6%/3.0%/0.3%	6	78	30	
			10:13	23-21	6%/3.0%/0.3%	6	70	60	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-42	12/7/17	9:00		49-45	6%/0%/0.3%	7	80	60	
				45-43	6%/0%/0.3%	7	78	30	
				43-41	6%/0%/0.3%	7	74	30	
				41-39	6%/0%/0.3%	7	80	30	
				39-37	6%/0%/0.3%	7	80	30	
				37-35	6%/0%/0.3%	7	78	30	
				35-33	6%/0%/0.3%	7	76	30	
				33-31	6%/0%/0.3%	7	80	30	
				31-29	6%/0%/0.3%	7	82	30	
				29-27	6%/0%/0.3%	7	80	30	
				27-25	6%/0%/0.3%	7	80	30	
				25-23	6%/0%/0.3%	7	76	30	
			10:13	23-21	6%/0%/0.3%	7	74	60	**450 Gallons**
IP-34	12/7/17	10:38		49-45	6%/0%/0.3%	8		60	No flow until 45' bgs
				45-43	6%/0%/0.3%	8		30	
				43-41	6%/0%/0.3%	8		30	
				41-39	6%/0%/0.3%	8		30	
				39-37	6%/0%/0.3%	8		30	
				37-35	6%/0%/0.3%	8		30	
				35-33	6%/0%/0.3%	8		30	
				33-31	6%/0%/0.3%	8		30	
				31-29	6%/0%/0.3%	8		30	
				29-27	6%/0%/0.3%	8		30	
				27-25	6%/0%/0.3%	8		30	
			11:34	25-21	6%/0%/0.3%	8		90	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-35	12/7/17	11:52		49-45	6.75%/0%/0%	5	84	56	No flow until 45' bgs
				45-43	6.75%/0%/0%	5	82	28	Daylight through crack in asphalt
				43-41	6.75%/0%/0%	5	82	28	
			12:37	41-39	6.75%/0%/0%	5	80	23	**135 Gallons**
IP-36	12/7/17	13:10		49-37	6.75%/0%/0%	6	88	173	No flow until 37' bgs
				37-35	6.75%/0%/0%	6	84	100	
				35-33	6.75%/0%/0%	6	84	56	Make up volume for IP-35
				33-31	6.75%/0%/0%	6	88	56	
				31-29	6.75%/0%/0%	6	84	56	
				29-27	6.75%/0%/0%	6	76	56	
				27-25	6.75%/0%/0%	6	76	56	
				25-23	6.75%/0%/0%	6	74	56	
			15:13	23-21	6.75%/0%/0%	6	70	56	**665 Gallons**
IP-46A	12/7/17	11:26		49-45	6.75%/3.0%/0.3%	1	96	15	Clogged injection screen
			12:53	45-39	6.75%/3.0%/0.3%	0	96	0	**15 Gallons**
IP-45	12/7/17	13:06		37-35	6.75%/3.0%/0.3%	6	80	180	
				35-33	6.75%/3.0%/0.3%	6	76	30	
				33-31	6.75%/3.0%/0.3%	6	78	30	Daylight up borehole
			14:07	31-29	6.75%/3.0%/0.3%	6	62	60	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-46B	12/7/17	14:49		49-45	6.75%/0%/0%	7	84	60	
				45-43	6.75%/0%/0%	7	74	30	
				43-41	6.75%/0%/0%	7	62	30	
				41-39	6.75%/0%/0%	7	60	30	
				39-37	6.75%/0%/0%	7	58	30	
				37-35	6.75%/0%/0%	7	60	30	
				35-33	6.75%/0%/0%	7	60	30	
				33-31	6.75%/0%/0%	7	62	30	
				31-29	6.75%/0%/0%	7	60	30	
				29-27	6.75%/0%/0%	7	60	30	
				27-25	6.75%/0%/0%	7	68	30	
			15:50	25-21	6.75%/0%/0%	7	68	40	**400 Gallons**
IP-44	12/7/17	15:23		49-43	6.75%/0%/0.3%	5	90	84	
				43-41	6.75%/0%/0.3%	5	88	28	
				41-39	6.75%/0%/0.3%	5	80	28	
				39-37	6.75%/0%/0.3%	5	78	28	
				37-35	6.75%/0%/0.3%	5	76	28	
				35-33	6.75%/0%/0.3%	5	76	28	
				33-31	6.75%/0%/0.3%	5	76	28	
				31-29	6.75%/0%/0.3%	5	74	28	
				29-27	6.75%/0%/0.3%	5	74	28	
				27-25	6.75%/0%/0.3%	5	70	28	
				25-23	6.75%/0%/0.3%	5	70	28	
			17:07	23-21	6.75%/0%/0.3%	5	70	36	**400 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-48	12/7/17	16:00		49-45	6.75%/0%/0%	6	94	50	No flow until 45' bgs
				45-43	6.75%/0%/0%	6	92	45	
				43-41	6.75%/0%/0%	6	72	45	Make up for IP-46
				41-39	6.75%/0%/0%	6	58	35	
				39-37	6.75%/0%/0%	6	56	35	
				37-35	6.75%/0%/0%	6	54	35	
				35-33	6.75%/0%/0%	6	56	35	
				33-31	6.75%/0%/0%	6	68	35	
				31-29	6.75%/0%/0%	6	68	35	
				29-27	6.75%/0%/0%	6	60	35	
				27-25	6.75%/0%/0%	6	54	35	
				25-23	6.75%/0%/0%	6	60	60	
			17:51	23-21	6.75%/0%/0%	6	60	60	**540 Gallons**
IP-43	12/8/17	7:50		49-45	6.75%/0%/0%	9	90	56	
				45-43	6.75%/0%/0%	9	78	28	
				43-41	6.75%/0%/0%	9	78	28	
				41-39	6.75%/0%/0%	9	78	28	
				39-37	6.75%/0%/0%	9	76	28	
				37-35	6.75%/0%/0%	9	76	28	
				35-33	6.75%/0%/0%	9	74	28	
				33-31	6.75%/0%/0%	9	74	28	
				31-29	6.75%/0%/0%	9	76	28	
				29-27	6.75%/0%/0%	9	76	28	
				27-25	6.75%/0%/0%	9	74	28	
				25-23	6.75%/0%/0%	9	76	28	
			8:43	23-21	6.75%/0%/0%	9	78	36	**400 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-37	12/8/17	8:53		49-45	6.75%/0%/0%	5	80	56	
				45-43	6.75%/0%/0%	5	78	28	
				43-41	6.75%/0%/0%	5	78	28	
				41-39	6.75%/0%/0%	5	82	28	
				39-37	6.75%/0%/0%	5	80	28	
				37-35	6.75%/0%/0%	5	80	28	
				35-33	6.75%/0%/0%	5	80	28	
				33-31	6.75%/0%/0%	5	76	28	
				31-29	6.75%/0%/0%	5	76	28	
				29-27	6.75%/0%/0%	5	78	28	
				27-25	6.75%/0%/0%	5	78	28	
				25-23	6.75%/0%/0%	5	74	28	
			10:37	23-21	6.75%/0%/0%	5	80	36	**400 Gallons**
IP-67	12/8/17	8:09		49-47	6.75%/3.0%/0.3%	2	76	10	No flow 47' to 41' bgs
			8:43	47-39		2	76	40	**50 Gallons**
IP-65	12/8/17	9:14		44-36	9.0%/3.0%/0.3%	5		150	No flow until 36' bgs
				36-34	9.0%/3.0%/0.3%	5		30	
				34-32	9.0%/3.0%/0.3%	5		30	Make up for IP-67
				32-30	9.0%/3.0%/0.3%	5		30	
				30-28	9.0%/3.0%/0.3%	5		30	
				28-26	9.0%/3.0%/0.3%	5		30	
				26-24	9.0%/3.0%/0.3%	5		30	
				24-22	9.0%/3.0%/0.3%	5		30	
			10:50	22-21	9.0%/3.0%/0.3%	5		90	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-75	12/8/17	11:10		49-47	9.0%/3.0%/0.3%	2	86	40	Daylight old borehole
			11:40	47-45	9.0%/3.0%/0.3%	0	0	0	**40 Gallons**
IP-63	12/8/17	12:18		49-47	9.0%/3.0%/0.3%	5	100	0	
			13:23	47-35	9.0%/3.0%/0.3%	5	82	250	**250 Gallons**
IP-30	12/8/17	11:15		49-45	9.0%/0%/0%	7	80	42	No flow until 45' bgs
				45-43	9.0%/0%/0%	7	80	21	
				43-41	9.0%/0%/0%	7	80	21	
				41-39	9.0%/0%/0%	7	82	21	
				39-37	9.0%/0%/0%	7	76	21	
				37-35	9.0%/0%/0%	7	76	21	
				35-33	9.0%/0%/0%	7	76	21	
				33-31	9.0%/0%/0%	7	76	21	
				31-29	9.0%/0%/0%	7	76	21	
				29-27	9.0%/0%/0%	7	74	21	
				27-25	9.0%/0%/0%	7	74	21	
				25-23	9.0%/0%/0%	7	74	21	
			12:07	23-21	9.0%/0%/0%	7	74	27	**300 Gallons**
IP-MW7	12/8/17	12:31		25-23	9.0%/0%/0%	8	90	60	Extra point near MW-7
				23-21	9.0%/0%/0%	8	80	100	
				21-19	9.0%/0%/0%	8	76	70	
				19-17	9.0%/0%/0%	8	76	110	
			13:35	17-15	9.0%/0%/0%	8	76	110	**450 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-14	12/11/17	9:31		49-45	9.0%/0%/0%	6	90	42	
				45-43	9.0%/0%/0%	6	88	21	
				43-41	9.0%/0%/0%	6	88	21	
				41-39	9.0%/0%/0%	6	80	21	
				39-37	9.0%/0%/0%	6	80	21	
				37-35	9.0%/0%/0%	6	80	21	
				35-33	9.0%/0%/0%	6	78	21	
				33-31	9.0%/0%/0%	6	78	21	
				31-29	9.0%/0%/0%	6	76	21	
				29-27	9.0%/0%/0%	6	76	21	
				27-25	9.0%/0%/0%	6	76	21	
				25-23	9.0%/0%/0%	6	76	21	
			10:34	23-21	9.0%/0%/0%	6	78	27	**300 Gallons**
IP-108	12/11/17	9:51		49-47	9.0%/0%/0%	6	64	21	
				47-43	9.0%/0%/0%	6	78	42	
				43-41	9.0%/0%/0%	6	84	21	
				41-39	9.0%/0%/0%	6	78	21	
				39-37	9.0%/0%/0%	6	64	21	
				37-35	9.0%/0%/0%	6	66	21	
				35-33	9.0%/0%/0%	6	70	21	
				33-31	9.0%/0%/0%	6	66	21	
				31-29	9.0%/0%/0%	6	58	21	
				29-27	9.0%/0%/0%	6	72	21	
				27-25	9.0%/0%/0%	6	74	21	
				25-23	9.0%/0%/0%	6	68	21	
			10:58	23-21	9.0%/0%/0%	6	66	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-27	12/11/17	10:45		49-43	9.0%/0%/0%	5	90	63	No flow until 43' bgs
				43-41	9.0%/0%/0%	5	88	21	
				41-39	9.0%/0%/0%	5	82	21	
				39-37	9.0%/0%/0%	5	76	21	
				37-35	9.0%/0%/0%	5	76	21	
				35-33	9.0%/0%/0%	5	70	21	
				33-31	9.0%/0%/0%	5	68	21	
				31-29	9.0%/0%/0%	5	68	21	
				29-27	9.0%/0%/0%	5	66	21	
				27-25	9.0%/0%/0%	5	66	21	
				25-23	9.0%/0%/0%	5	66	21	
			11:54	23-21	9.0%/0%/0%	5	64	27	**300 Gallons**
IP-112	12/11/17	11:37		49-47	9.0%/0%/0%	6	86	21	
				47-45	9.0%/0%/0%	6	82	21	
				45-43	9.0%/0%/0%	6	68	21	
				43-41	9.0%/0%/0%	6	68	21	
				41-39	9.0%/0%/0%	6	64	21	
				39-37	9.0%/0%/0%	6	80	21	
				37-35	9.0%/0%/0%	6	76	21	
				35-33	9.0%/0%/0%	6	78	21	
				33-31	9.0%/0%/0%	6	76	21	
				31-29	9.0%/0%/0%	6	74	21	
				29-27	9.0%/0%/0%	6	76	21	
				27-25	9.0%/0%/0%	6	70	21	
				25-23	9.0%/0%/0%	6	70	21	
			12:32	23-21	9.0%/0%/0%	6	70	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-29	12/11/17	12:09		49-45	9.0%/0%/0%	6	86	42	No flow until 45' bgs
				45-43	9.0%/0%/0%	6	84	21	
				43-41	9.0%/0%/0%	6	84	21	
				41-39	9.0%/0%/0%	6	82	21	
				39-37	9.0%/0%/0%	6	82	21	
				37-35	9.0%/0%/0%	6	78	21	
				35-33	9.0%/0%/0%	6	78	21	
				33-31	9.0%/0%/0%	6	76	21	
				31-29	9.0%/0%/0%	6	76	21	
				29-27	9.0%/0%/0%	6	76	21	
				27-25	9.0%/0%/0%	6	76	21	
				25-23	9.0%/0%/0%	6	74	21	
			13:06	23-21	9.0%/0%/0%	6	70	27	**300 Gallons**
IP-107	12/11/17	13:32		49-47	9.0%/3.0%/0.3%	6	88	16	
				47-39	9.0%/3.0%/0.3%	6	84	74	
				39-37	9.0%/3.0%/0.3%	6	84	21	
				37-35	9.0%/3.0%/0.3%	6	80	42	
				35-33	9.0%/3.0%/0.3%	6	76	21	
				33-31	9.0%/3.0%/0.3%	6	80	21	
				31-29	9.0%/3.0%/0.3%	6	78	21	
				29-27	9.0%/3.0%/0.3%	6	76	21	
				27-25	9.0%/3.0%/0.3%	6	76	21	
				25-23	9.0%/3.0%/0.3%	6	76	21	
			14:39	23-21	9.0%/3.0%/0.3%	6	74	21	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-13	12/11/17	13:30		49-43	9.0%/0%/0%	4	94	63	No flow until 43' bgs
				43-41	9.0%/0%/0%	4	94	21	
				41-39	9.0%/0%/0%	4	92	21	
				39-37	9.0%/0%/0%	4	92	21	
				37-35	9.0%/0%/0%	4	90	21	
				35-33	9.0%/0%/0%	4	90	21	
				33-31	9.0%/0%/0%	4	90	21	Screen broke off rod
			14:37	31-29	9.0%/0%/0%	4	90	15	**204 Gallons**
IP-111	12/11/17	15:15		44	9.0%/3.0%/0.3%	6	78	63	Refusal at 44' bgs
				44-42	9.0%/3.0%/0.3%	6	76	21	
				42-40	9.0%/3.0%/0.3%	6	78	21	
				40-38	9.0%/3.0%/0.3%	6	76	21	
				38-36	9.0%/3.0%/0.3%	6	74	21	
				36-34	9.0%/3.0%/0.3%	6	76	21	
				34-32	9.0%/3.0%/0.3%	6	74	21	
				32-30	9.0%/3.0%/0.3%	6	72	21	
				30-28	9.0%/3.0%/0.3%	6	66	21	
				28-26	9.0%/3.0%/0.3%	6	68	21	
				26-25	9.0%/3.0%/0.3%	6	64	21	
				25-23	9.0%/3.0%/0.3%	6	78	21	
			16:07	23-21	9.0%/3.0%/0.3%	6	72	21	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-15	12/11/17	14:58		49-41	9.0%/0%/0%	6	90	84	No flow until 41' bgs
				41-39	9.0%/0%/0%	6	90	21	
				39-37	9.0%/0%/0%	6	90	21	
				37-35	9.0%/0%/0%	6	90	21	
				35-33	9.0%/0%/0%	6	90	21	
				33-31	9.0%/0%/0%	6	90	21	
				31-29	9.0%/0%/0%	6	90	42	Make up volume for IP-13
				29-27	9.0%/0%/0%	6	86	42	
				27-25	9.0%/0%/0%	6	86	42	
				25-23	9.0%/0%/0%	6	84	42	
			16:20	23-21	9.0%/0%/0%	6	82	43	**400 Gallons**
IP-28	12/11/17	16:32		49-43	9.0%/0%/0%	6		63	No flow until 43' bgs
				43-41	9.0%/0%/0%	6		21	
				41-39	9.0%/0%/0%	6		21	
				39-37	9.0%/0%/0%	6		21	
				37-35	9.0%/0%/0%	6		21	
				35-33	9.0%/0%/0%	6		21	
				33-31	9.0%/0%/0%	6		21	
				31-29	9.0%/0%/0%	6		21	
				29-27	9.0%/0%/0%	6		21	
				27-25	9.0%/0%/0%	6		21	
				25-23	9.0%/0%/0%	6		21	
			17:37	23-21	9.0%/0%/0%	6		27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-MW22	12/11/17	16:35		39-37	9.0%/0%/0%	6	68	25	
				37-35	9.0%/0%/0%	6	66	75	
				35-33	9.0%/0%/0%	6	76	30	
			17:15	33-31	9.0%/0%/0%	6	68	70	**200 Gallons**
IP-59	12/11/17	20:15		49-47	9.0%/0%/0.8%	7	70	21	
				47-45	9.0%/0%/0.8%	7	68	21	
				45-43	9.0%/0%/0.8%	7	68	21	
				43-41	9.0%/0%/0.8%	7	68	21	
				41-39	9.0%/0%/0.8%	7	66	21	
				39-37	9.0%/0%/0.8%	7	70	21	
				37-35	9.0%/0%/0.8%	7	70	21	
				35-33	9.0%/0%/0.8%	7	72	21	
				33-31	9.0%/0%/0.8%	7	62	21	
				31-29	9.0%/0%/0.8%	7	60	21	
				29-27	9.0%/0%/0.8%	7	68	21	
				27-25	9.0%/0%/0.8%	7	64	21	
				25-23	9.0%/0%/0.8%	7	64	21	
			21:05	23-21	9.0%/0%/0.8%	7	62	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-57	12/11/17	20:20		49-47	9.0%/0%/0.8%	4		21	
				47-45	9.0%/0%/0.8%	4		21	
				45-43	9.0%/0%/0.8%	4		22	
				43-41	9.0%/0%/0.8%	4		22	
				41-39	9.0%/0%/0.8%	4		22	
				39-37	9.0%/0%/0.8%	4		22	
				37-35	9.0%/0%/0.8%	4		22	
				35-33	9.0%/0%/0.8%	4		21	
				33-31	9.0%/0%/0.8%	4		21	
				31-29	9.0%/0%/0.8%	4		21	
				29-27	9.0%/0%/0.8%	4		21	**Screen clogged**
			21:30	27-25	9.0%/0%/0.8%	4		21	**257 Gallons**
IP-51	12/11/17	21:45		49-47	9.0%/0%/0.8%	6	84	24	
				47-45	9.0%/0%/0.8%	6	80	24	
				45-43	9.0%/0%/0.8%	6	68	24	
				43-41	9.0%/0%/0.8%	6	68	24	
				41-39	9.0%/0%/0.8%	6	68	24	
				39-37	9.0%/0%/0.8%	6	64	24	
				37-35	9.0%/0%/0.8%	6	68	24	
				35-33	9.0%/0%/0.8%	6	70	24	
				33-31	9.0%/0%/0.8%	6	66	22	
				31-29	9.0%/0%/0.8%	6	66	22	
				29-27	9.0%/0%/0.8%	6	66	22	
				27-25	9.0%/0%/0.8%	6	66	22	
				25-23	9.0%/0%/0.8%	6	68	20	
			22:55	23-21	9.0%/0%/0.8%	6	68	20	**320 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-52	21/11/17	22:05		49-47	9.0%/10.0%/0.8%	6	76	43	
				47-45	9.0%/10.0%/0.8%	6	64	43	
				45-43	9.0%/10.0%/0.8%	6	66	43	
				43-41	9.0%/10.0%/0.8%	6	62	43	
				41-39	9.0%/10.0%/0.8%	6	66	43	
				39-37	9.0%/10.0%/0.8%	6	68	43	
				37-35	9.0%/10.0%/0.8%	6	68	43	
				35-33	9.0%/10.0%/0.8%	6	60	43	
				33-31	9.0%/10.0%/0.8%	6	48	43	
				31-29	9.0%/10.0%/0.8%	6	42	43	
				29-27	9.0%/10.0%/0.8%	6	40	43	
				27-25	9.0%/10.0%/0.8%	6	40	43	
				25-23	9.0%/10.0%/0.8%	6	42	43	
			23:55	23-21	9.0%/10.0%/0.8%	6	44	41	**600 Gallons**
IP-61	12/12/17	0:45		49-39	9.0%/0%/0.8%	3	100	40	Clogged screen
				39-37	9.0%/0%/0.8%	3	90	40	
				37-35	9.0%/0%/0.8%	3	95	40	
				35-33	9.0%/0%/0.8%	3	90	30	
				33-31	9.0%/0%/0.8%	3	80	30	
				31-29	9.0%/0%/0.8%	3	75	30	
			2:30	29-27	9.0%/0%/0.8%	3	75	10	Compressor broke down
	12/12/17	19:00		27-25	9.0%/0%/0.8%	3	80	20	
				25-23	9.0%/0%/0.8%	3	78	20	
			19:30	23-21	9.0%/0%/0.8%	3	60	20	**280 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-55	12/12/17	1:05		49-47	9.0%/10.0%/0.8%	6	60	43	
				47-45	9.0%/10.0%/0.8%	6	54	43	
				45-43	9.0%/10.0%/0.8%	6	50	43	
				43-41	9.0%/10.0%/0.8%	6	48	43	
				41-39	9.0%/10.0%/0.8%	6	52	43	
				39-37	9.0%/10.0%/0.8%	6	50	43	
				37-35	9.0%/10.0%/0.8%	6	46	43	
				35-33	9.0%/10.0%/0.8%	6	42	43	
				33-31	9.0%/10.0%/0.8%	6	36	43	
				31-29	9.0%/10.0%/0.8%	6	36	43	
			2:30	29-27	9.0%/10.0%/0.8%	6	60	43	Compressor broke down
	12/12/17	19:00		27-25	9.0%/10.0%/0.8%	6	52	43	
				25-23	9.0%/10.0%/0.8%	6	48	42	
			19:25	23-21	9.0%/10.0%/0.8%	6	42	42	**600 Gallons**
IP-12	12/12/17	8:30		49-45	9.0%/0%/0%	6	88	42	
				45-43	9.0%/0%/0%	6	86	21	
				43-41	9.0%/0%/0%	6	84	21	
				41-39	9.0%/0%/0%	6	84	21	
				39-37	9.0%/0%/0%	6	82	21	
				37-35	9.0%/0%/0%	6	80	21	
				35-33	9.0%/0%/0%	6	80	21	
				33-31	9.0%/0%/0%	6	80	21	
				31-29	9.0%/0%/0%	6	78	21	
				29-27	9.0%/0%/0%	6	78	21	
				27-25	9.0%/0%/0%	6	78	21	
			9:30	25-21	9.0%/0%/0%	6	76	48	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-106	12/12/17	8:57		49-47	9.0%/3.0%/0.3%	7	80	42	
				47-45	9.0%/3.0%/0.3%	7	66	42	
				45-43	9.0%/3.0%/0.3%	7	62	42	
				43-41	9.0%/3.0%/0.3%	7	66	42	
				41-39	9.0%/3.0%/0.3%	7	62	42	
				39-37	9.0%/3.0%/0.3%	7	62	42	
				37-35	9.0%/3.0%/0.3%	7	60	42	
				35-33	9.0%/3.0%/0.3%	7	58	42	
				33-31	9.0%/3.0%/0.3%	7	58	42	
				31-29	9.0%/3.0%/0.3%	7	66	42	
				29-27	9.0%/3.0%/0.3%	7	66	42	
				27-25	9.0%/3.0%/0.3%	7	60	42	
				25-23	9.0%/3.0%/0.3%	7	60	42	
			10:43	23-21	9.0%/3.0%/0.3%	7	60	54	**600 Gallons**
IP-MW21	12/12/17	10:01		40-37	9.0%/0%/0%	6	88	70	
				37-35	9.0%/0%/0%	6	88	70	
				35-33	9.0%/0%/0%	6	88	100	
			11:03	33-31	9.0%/0%/0%	6	88	60	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-110	12/12/17	11:02		49-45	9.0%/3.0%/0.3%	5	88	84	
				45-43	9.0%/3.0%/0.3%	5	84	42	
				43-41	9.0%/3.0%/0.3%	5	70	42	
				41-39	9.0%/3.0%/0.3%	5	80	120	
				39-37	9.0%/3.0%/0.3%	5	80	35	
				37-35	9.0%/3.0%/0.3%	5	84	35	
				35-33	9.0%/3.0%/0.3%	5	86	35	
				33-31	9.0%/3.0%/0.3%	5	88	35	
				31-29	9.0%/3.0%/0.3%	5	86	35	
				29-27	9.0%/3.0%/0.3%	5	70	35	
				27-25	9.0%/3.0%/0.3%	5	72	35	
				25-23	9.0%/3.0%/0.3%	5	76	35	
			13:40	23-21	9.0%/3.0%/0.3%	5	78	32	**600 Gallons**
IP-71	12/12/17	12:55		49-45	9.0%/0%/0%	4	96	42	
				45-43	9.0%/0%/0%	4	94	21	
				43-41	9.0%/0%/0%	4	96	21	
				41-39	9.0%/0%/0%	4	90	21	
				39-37	9.0%/0%/0%	4	88	21	
				37-35	9.0%/0%/0%	4	88	21	
				35-33	9.0%/0%/0%	4	86	21	
				33-31	9.0%/0%/0%	4	86	21	
				31-29	9.0%/0%/0%	4	86	21	
				29-27	9.0%/0%/0%	4	84	21	
				27-25	9.0%/0%/0%	4	84	21	
				25-23	9.0%/0%/0%	4	84	21	
			14:52	23-21	9.0%/0%/0%	4	84	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-105	12/12/17	14:34		49-47	9.0%/0%/0%	5	76	21	
				47-45	9.0%/0%/0%	5	72	21	
				45-43	9.0%/0%/0%				
				43-41	9.0%/0%/0%	5	72	21	
				41-39	9.0%/0%/0%	5	74	21	
				39-37	9.0%/0%/0%	5	70	21	
				37-35	9.0%/0%/0%	5	70	21	
				35-33	9.0%/0%/0%	5	68	21	
				33-31	9.0%/0%/0%	5	66	21	
				31-29	9.0%/0%/0%	5	66	21	
				29-27	9.0%/0%/0%	5	74	21	
				27-25	9.0%/0%/0%	5	68	21	
				25-23	9.0%/0%/0%	5	70	21	
			15:43	23-21	9.0%/0%/0%	5	68	27	**300 Gallons**
IP-69	12/12/17	15:29		49-47	9.0%/0%/0%	3	88	21	
				47-45	9.0%/0%/0%	3	90	21	
				45-43	9.0%/0%/0%	3	90	21	
				43-41	9.0%/0%/0%	3	98	21	
				41-39	9.0%/0%/0%	3	92	21	
				39-29	9.0%/0%/0%	3	84	105	No flow 39' to 31' bgs
				29-27	9.0%/0%/0%	3	84	21	
				27-25	9.0%/0%/0%	3	84	21	
				25-23	9.0%/0%/0%	3	82	21	
			17:57	23-21	9.0%/0%/0%	3	82	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-109	12/12/17	16:25		49-47	9.0%/0%/0%	4	90	21	
				47-45	9.0%/0%/0%	4	90	21	
				45-43	9.0%/0%/0%	4	88	21	
				43-41	9.0%/0%/0%	4	90	21	
				41-39	9.0%/0%/0%	4	90	21	
				39-37	9.0%/0%/0%	4	86	21	
				37-35	9.0%/0%/0%	4	84	21	
			17:59	35-33	9.0%/0%/0%	4	94	153	**300 Gallons**
IP-58	12/12/17	19:55		49-47	9.0%/0%/0.8%	6	80	21	
				47-45	9.0%/0%/0.8%	6	68	21	
				45-43	9.0%/0%/0.8%	6	60	21	
				43-41	9.0%/0%/0.8%	6	58	21	
				41-39	9.0%/0%/0.8%	6	76	21	
				39-37	9.0%/0%/0.8%	6	72	21	
				37-35	9.0%/0%/0.8%	6	70	21	
				35-33	9.0%/0%/0.8%	6	68	21	
				33-31	9.0%/0%/0.8%	6	64	21	
				31-29	9.0%/0%/0.8%	6	74	21	
				29-27	9.0%/0%/0.8%	6	72	21	
				27-25	9.0%/0%/0.8%	6	82	21	
				25-23	9.0%/0%/0.8%	6	84	21	
			20:55	23-21	9.0%/0%/0.8%	6	78	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-60	12/12/17	19:50		49-47	9.0%/0%/0.8%	7	76	21	
				47-45	9.0%/0%/0.8%	7	78	21	
				45-43	9.0%/0%/0.8%	7	72	21	
				43-41	9.0%/0%/0.8%	7	66	21	
				41-39	9.0%/0%/0.8%	7	64	21	
				39-37	9.0%/0%/0.8%	7	62	21	
				37-35	9.0%/0%/0.8%	7	62	21	
				35-33	9.0%/0%/0.8%	7	68	21	
				33-31	9.0%/0%/0.8%	7	66	21	
				31-29	9.0%/0%/0.8%	7	64	21	
				29-27	9.0%/0%/0.8%	7	60	21	
				27-25	9.0%/0%/0.8%	7	58	21	
				25-23	9.0%/0%/0.8%	7	58	21	
			20:40	23-21	9.0%/0%/0.8%	7	58	27	**300 Gallons**
IP-53	12/12/17	21:10		49-47	9.0%/0%/0.8%	8	50	21	
				47-45	9.0%/0%/0.8%	8	56	21	
				45-43	9.0%/0%/0.8%	8	62	21	
				43-41	9.0%/0%/0.8%	8	56	21	
				41-39	9.0%/0%/0.8%	8	56	21	
				39-37	9.0%/0%/0.8%	8	50	21	
				37-35	9.0%/0%/0.8%	8	60	21	
				35-33	9.0%/0%/0.8%	8	52	42	
				33-31	9.0%/0%/0.8%	8	58	42	
				31-29	9.0%/0%/0.8%	8	58	42	
			21:50	29-27	9.0%/0%/0.8%	8	58	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-54	12/12/17	21:20		49-47	9.0%/0%/0.8%	6	84	21	
				47-45	9.0%/0%/0.8%	6	78	21	
				45-43	9.0%/0%/0.8%	6	66	21	
				43-41	9.0%/0%/0.8%	6	72	21	
				41-39	9.0%/0%/0.8%	6	68	21	
				39-37	9.0%/0%/0.8%	6	62	21	
				37-35	9.0%/0%/0.8%	6	60	21	
				35-33	9.0%/0%/0.8%	6	62	21	
				33-31	9.0%/0%/0.8%	6	66	21	
				31-29	9.0%/0%/0.8%	6	68	21	
				29-27	9.0%/0%/0.8%	6	70	21	
				27-25	9.0%/0%/0.8%	6	70	21	
				25-23	9.0%/0%/0.8%	6	72	21	
			22:20	23-21	9.0%/0%/0.8%	6	74	27	**300 Gallons**
IP-73	12/13/17	8:09		49-43	9.0%/0%/0%	4	90	63	No flow until 43' bgs
				43-37	9.0%/0%/0%	4	90	63	No flow 41' to 39' bgs
				37-35	9.0%/0%/0%	4	90	21	
				35-33	9.0%/0%/0%	4	90	21	
				33-31	9.0%/0%/0%	4	56	21	
				31-29	9.0%/0%/0%	4	56	21	
				29-27	9.0%/0%/0%	4	52	21	
				27-25	9.0%/0%/0%	4	52	21	
				25-23	9.0%/0%/0%	4	50	21	
			9:47	23-21	9.0%/0%/0%	4	50	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-81	12/13/17	8:08		49-47	9.0%/0%/0%	4	90	21	
				47-45	9.0%/0%/0%	4	88	21	
				45-43	9.0%/0%/0%	4	88	21	
				43-41	9.0%/0%/0%	4	76	21	
			8:42	41-39	9.0%/0%/0%	4	76	6	Bottom out rod clogged
		8:52		39-29	9.0%/0%/0%	7	66	120	Switched to side injection rod
				29-27	9.0%/0%/0%	7	40	21	
				27-25	9.0%/0%/0%	7	58	21	
				25-23	9.0%/0%/0%	7	60	21	
			9:25	23-21	9.0%/0%/0%	7	60	27	**300 Gallons**
IP-62	12/13/17	9:45	10:40	49-21	9.0%/3.0%/0.3%	0	100	**0**	Clogged rods
IP-74	12/13/17	9:58		49-43	9.0%/3.0%/0.3%	6	94	63	No flow until 43' bgs
				43-41	9.0%/3.0%/0.3%	6	92	21	
				41-39	9.0%/3.0%/0.3%	6	92	21	
				39-37	9.0%/3.0%/0.3%	6	90	21	
				37-35	9.0%/3.0%/0.3%	6	98	21	
				35-29	9.0%/3.0%/0.3%	6	98	63	No flow 33' to 31' bgs
				29-27	9.0%/3.0%/0.3%	6	90	21	
				27-25	9.0%/3.0%/0.3%	6	80	21	
				25-23	9.0%/3.0%/0.3%	6	80	21	
			10:52	23-21	9.0%/3.0%/0.3%	6	80	27	**300 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-66	12/13/17	11:11		49-41	9.0%/3.0%/0.3%	6	90	25	No flow until 41' bgs
				41-39	9.0%/3.0%/0.3%	6	84	80	
				39-37	9.0%/3.0%/0.3%	6	82	21	
				37-35	9.0%/3.0%/0.3%	6	66	21	
				35-33	9.0%/3.0%/0.3%	6	60	21	
				33-31	9.0%/3.0%/0.3%	6	62	21	
				31-29	9.0%/3.0%/0.3%	6	60	21	
				29-27	9.0%/3.0%/0.3%	6	64	21	
				27-25	9.0%/3.0%/0.3%	6	62	21	
				25-23	9.0%/3.0%/0.3%	6	58	21	
			12:07	23-21	9.0%/3.0%/0.3%	6	58	27	**300 Gallons**
IP-78	12/13/17	11:16		49-37	9.0%/3.0%/0.3%	5	90	126	No flow until 37' bgs
				37-35	9.0%/3.0%/0.3%	5	90	21	
				35-33	9.0%/3.0%/0.3%	5	84	21	
				33-31	9.0%/3.0%/0.3%	5	84	21	
				31-29	9.0%/3.0%/0.3%	5	82	21	
				29-27	9.0%/3.0%/0.3%	5	80	21	
				27-25	9.0%/3.0%/0.3%	5	80	21	
				25-23	9.0%/3.0%/0.3%	5	82	21	
			12:29	23-21	9.0%/3.0%/0.3%	5	80	27	**300 Gallons**
IP-64	12/13/17	12:35		49-47	13.5%/3.0%/0.3%	2	76	30	
				47-45	13.5%/3.0%/0.3%	2	98	0	No flow
				45-43	13.5%/3.0%/0.3%	2	98	0	No flow
				43-41	13.5%/3.0%/0.3%	2	98	0	Daylight up borehole
			13:21	41-39	13.5%/3.0%/0.3%	2	78	20	**50 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-72	12/13/17	12:43		49-43	13.5%/3.0%/0.3%	3	90	42	No flow until 43' bgs
				43-41	13.5%/3.0%/0.3%	3	90	14	
				41-35	13.5%/3.0%/0.3%	3	90	0	No flow
			13:15	35-33	13.5%/3.0%/0.3%	3	90	10	**66 Gallons**
IP-47	12/13/17	13:29		49-47	13.5%/0%/0%	3	70	10	Connected with MW-23
			14:29	33-31	13.5%/0%/0%	3	70	140	**150 Gallons**
IP-76	12/13/17	13:37		49-29	13.5%/3.0%/0.3%	2	98	0	No flow until 27' bgs
			14:40	29-27	13.5%/3.0%/0.3%	2	78	50	**50 Gallons**
IP-68	12/13/17	14:55		49-27	13.5%/3.0%/0.3%	5	84	50	
				27-25	13.5%/3.0%/0.3%	5	84	66	
				25-23	13.5%/3.0%/0.3%	5	64	66	Make up volume for IP-64
			16:00	23-21	13.5%/3.0%/0.3%	5	64	68	**250 Gallons**
IP-83	12/13/17	15:15		30-28	13.5%/0%/0%	5		20	No flow until 28' bgs
				28-26	13.5%/0%/0%	5		20	
				26-24	13.5%/0%/0%	5		20	Connected with MW-4
				24-22	13.5%/0%/0%	5		20	
				22-20	13.5%/0%/0%	5		50	Make up volume for IP-72
				20-18	13.5%/0%/0%	5		50	& IP-76
				18-16	13.5%/0%/0%	5		100	
			16:45	16-14	13.5%/0%/0%	5		100	**380 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-70	12/13/17	16:35		49-37	13.5%/3.0%/0.3%	4	100	10	No flow until 37' bgs
			17:30	29-27	13.5%/3.0%/0.3%	4	76	190	**200 Gallons**
IP-88	12/13/17	17:00		49-35	13.5%/3.0%/0.3%	6	100	0	No flow until 35' bgs
				35-33	13.5%/3.0%/0.3%	6	88	112	
				33-31	13.5%/3.0%/0.3%	6	88	48	Now flow 29' to 27' bgs
			17:45	27-25	13.5%/3.0%/0.3%	6	88	40	**200 Gallons**
IP-84	12/14/17	7:55		49-43	13.5%/0%/0%	4	94	42	No flow until 43' bgs
				43-29	13.5%/0%/0%	4	78	100	No flow 41' to 31' bgs
			9:12	29-25	13.5%/0%/0%	4	78	58	**200 Gallons**
IP-87	12/14/17	9:21		49-47	13.5%/3.0%/0.3%	3	72	50	Make up volume for IP-72
			11:35	47-31	13.5%/3.0%/0.3%	3	72	180	**230 Gallons**
IP-91	12/14/17	11:55		49-47	13.5%/3.0%/0.3%	6	68	0	Make up volume for IP-76
			12:47	47-29	13.5%/3.0%/0.3%	6	68	280	**280 Gallons**
IP-92	12/14/17	13:01		49-41	13.5%/3.0%/0.3%	6	90	35	No flow until 41' bgs
			13:46	41-27	13.5%/3.0%/0.3%	6	60	165	**200 Gallons**
IP-80	12/14/17	8:09		49-45	13.5%/3.0%/0.3%	3	78	50	No flow until 45' bgs
				39-37	13.5%/3.0%/0.3%	3	80	10	
				37-29	13.5%/3.0%/0.3%	3	80	80	No flow 37' to 31' bgs
				29-27	13.5%/3.0%/0.3%	3	78	40	
			9:55	27-25	13.5%/3.0%/0.3%	3	76	35	**215 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-77	12/14/17	10:15		29-27	13.5%/3.0%/0.3%	6	88	200	Make up volume
			12:12	27-25	13.5%/0%/0%	6	74	400	**600 Gallons**
IP-79	12/14/17	12:27		49-47	13.5%/0%/0%	5	88	20	
				47-34	13.5%/0%/0%	5	92	20	No flow 47 to 35' bgs
				34-31	13.5%/0%/0%	5	86	130	Make up volume
			14:04	25-23	13.5%/0%/0%	5	76	230	**400 Gallons**
IP-85	12/14/17	14:50		49-34	13.5%/0%/0%	1	98	20	Daylight up borehole
			16:00	27-25	13.5%/0%/0%	1	92	25	**45 Gallons**
IP-86	12/14/17	16:05		49-47	13.5%/0%/0%	4	94	20	
				33-31	13.5%/0%/0%	4	90	80	
				29-27	13.5%/0%/0%	4	86	100	Make up volume for IP-85
			17:44	27-25	13.5%/0%/0%	4	80	155	**355 Gallons**
IP-94	12/14/17	13:58	14:46	49-39	13.5%/3.0%/0.3%	6	56	200	**200 Gallons**
IP-96	12/14/17	15:05		49-39	13.5%/3.0%/0.3%	6	70	100	No flow until 39' bgs
				39-33	13.5%/3.0%/0.3%	6	70	50	
			15:43	33-25	13.5%/3.0%/0.3%	6	70	50	**200 Gallons**
IP-100	12/14/17	15:47		49-44	13.5%/3.0%/0.3%	4	58	100	No flow until 44' bgs
			16:46	44-39	13.5%/3.0%/0.3%	4	58	100	**200 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-97	12/14/17	16:56		49-44	13.5%/3.0%/0.3%	6	78	100	No flow until 44' bgs
				44-34	13.5%/3.0%/0.3%	6	72	50	No flow 44' to 36' bgs
			17:37	34-24	13.5%/3.0%/0.3%	6	60	50	**200 Gallons**
IP-98	12/15/17	7:51		45-30	13.5%/3.0%/0.3%	5	88	100	Refusal at 45' bgs
				30-25	13.5%/3.0%/0.3%	5	80	50	No flow until 30' bgs
			8:41	25-21	13.5%/3.0%/0.3%	5	80	50	**200 Gallons**
IP-102	12/15/17	8:55		49-47	13.5%/3.0%/0.3%	3	32	55	
				47-35	13.5%/3.0%/0.3%	3	80	38	Daylight up borehole
			9:47	35-25	13.5%/3.0%/0.3%	3	80	8	**101 Gallons**
IP-89	12/15/17	8:30		49-31	13.5%/3.0%/0.3%	5	98	15	No flow until 31' bgs
			10:16	31-25	13.5%/3.0%/0.3%	5	66	385	**400 Gallons**
IP-99	12/15/17	9:56		49-44	13.5%/3.0%/0.3%	3	86	100	Daylight up adjacent hole
			11:08	44-31	13.5%/3.0%/0.3%	0	66	0	**100 Gallons**
IP-90	12/15/17	10:30	11:38	49-33	13.5%/3.0%/0.3%	4	92	200	**200 Gallons**
IP-101	12/15/17	11:49		49-44	13.5%/0%/0%	8	90	100	
				44-37	13.5%/0%/0%	8	90	50	Make up volume for IP-99 and IP-102
				37-31	13.5%/0%/0%	8	80	50	
				31-27	13.5%/0%/0%	8	72	100	
			12:48	27-21	13.5%/0%/0%	8	74	100	**400 Gallons**

Injection Summary Table 1 Cont.

Injection Point	Date	Time On	Time Off	Injection Depth	BAM/ABC/ ZVI Concentration	Flow Rate (gpm)	Injection Pressure (psi)	Gallons Injected	Comments
IP-95	12/15/17	11:40		29-27	13.5%/0%/0%	4	90	60	Make up volume
			13:52	23-21	13.5%/0%/0%	4	60	340	**400 Gallons**
IP-93	12/15/17	12:56		49-39	13.5%/0%/0%	0	100	0	Daylight up borehole
			13:30	39-29	13.5%/0%/0%	5	68	130	**130 Gallons**
IP-82	12/14/17			49-21	13.5%/3.0%/0.3%	0	100	0	Screen broke off
								37,508	**Total Gallons**

Appendix B

Field Sampling Forms

WENCK

Responsive partner. Exceptional outcomes.

GROUNDWATER SAMPLING LOG

Project: Ropes Pump	Project Number: 6572-0091-06	
Location: Commerce, GA	Well ID: MW-7	
Date: 1/19/18	Start Time at Well: 10:00	End Time at Well: 12:00
Sampler: SEF	Weather: Clear 30's	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 9.4 (ft) to 24.4 (ft)		Initial Depth to Water (ft): 20.86
Total Well Depth (ft): 24.42	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 0.58	3 Well Vol. (gal): 1.74
			Total Vol. Purged (gal): 5.5L

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): ~22.5	Final Depth of Tubing (ft): ~22.5	Total Purge Time: 1 hr	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

1018

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)
1023	0.5L	20.89	15.45	6.79	0.119	3.74	305	turbid/no	180
1028	1.0L	20.92	15.87	6.07	0.109	4.05	219	" "	203
1033	1.5L	20.95	16.39	5.54	0.104	4.17	130	" "	220
1038	2.0L	20.95	17.08	5.06	0.097	4.18	55.7	" "	239
1043	2.5L	20.95	17.73	4.71	0.087	4.10	32.7	clr/no	256
1048	3.0L	20.95	18.38	4.48	0.081	3.93	41.0		274
1053	3.5L	20.95	18.85	4.38	0.079	3.74	0.00		285
1105	4.0L	20.90	19.60	4.36	0.080	4.19	73.1	slt turbid/no	284
1110	4.5L	20.93	20.64	4.29	0.078	4.54	57.4		287
1115	5.0L	20.93	20.71	4.24	0.078	4.49	0.00	clr/no	294
1120	5.5L	20.93	20.75	4.19	0.077	4.48	20.6	" "	296

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): SEF		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 1123	Time Sampling Completed: 1128
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-7	1123	3	40mL	HCL	VOC	G

Notes: Stop purge 1153-1105

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GROUNDWATER SAMPLING LOG

Responsive partner. Exceptional outcomes.

Project: Roper	Project Number: B6572-0001	
Location: Commerce, GA	Well ID: MW-23	
Date: 1-19-18	Start Time at Well: 1050	End Time at Well: 1140
Sampler: M. Padgett	Weather: Sunny, 50°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 40 (ft) to 50 (ft)		Initial Depth to Water (ft): 23.85 Ft
Total Well Depth (ft): 46.7'	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 0.367	3 Well Vol. (gal): 1.1 gallons
			Total Vol. Purged (gal): 5.0 gallons

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): 43'	Final Depth of Tubing (ft): 43'	Total Purge Time: 50 MINS	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 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)
1115	2.5	23.96	24.30	4.75	0.570	1.06	24.1	none	95
1120	3.0	23.97	24.32	4.73	0.557	0.90	22.4	none	94
1125	3.5	23.97	24.39	4.74	0.540	0.88	19.2	none	93
1130	4.0	23.97	24.42	4.75	0.530	0.81	18.3	none	92
1135	4.5	23.97	24.46	4.76	0.538	0.78	18.3	none	91
1140	5.0	—	—	— 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): Mark Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1140	Time Sampling Completed: 1143
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-23	1140	3	40 ml	HCl	8260 - VOCs	G

Notes:
Clear / slight odor

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GROUNDWATER SAMPLING LOG

Responsive partner. Exceptional outcomes.

Project: Roper	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-21	
Date: 1-19-18	Start Time at Well: 1210	End Time at Well: 1305
Sampler: M. Padgett	Weather: Sunny, 50°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 30 (ft) to 40 (ft)		Initial Depth to Water (ft): 21.14 ft
Total Well Depth (ft): 39.91	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 1.61	3 Well Vol. (gal): 4.84
			Total Vol. Purged (gal): 5.0 gallons

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:	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 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)
1240	3.0	21.39	22.72	4.72	0.860	1.31	21.4	Slight odor	97
1245	3.5	21.40	23.14	4.72	0.856	1.29	18.2	Slight odor	97
1250	4.0	21.41	23.37	4.71	0.855	1.27	16.6	Slight odor	98
1255	4.5	21.41	23.42	4.71	0.851	1.24	13.4	Slight odor	98
1300	5.0	21.40	23.45	———	———	Sample	———	———	———
VS (MP)									

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): Mark Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1300	Time Sampling Completed: 1305
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-21	1300	3	40 ml	HCl	8260 - VOCs	G

Notes: Clear / slight odor

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GROUNDWATER SAMPLING LOG

Responsive partner. Exceptional outcomes.

Project: Roper Pump	Project Number: 6572-0001-Ole		
Location: Commerce, GA	Well ID: MW-22		
Date: 11/9/16	Start Time at Well: 1220	End Time at Well: 1400	
Sampler: STULLER	Weather: Clear 40's	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 30 (ft) to 40 (ft)		Initial Depth to Water (ft): 17.23
Total Well Depth (ft): 40	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 3.71	3 Well Vol. (gal): 11.13
			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): ~35	Final Depth of Tubing (ft): ~35	Total Purge Time: 40 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

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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)
1255	0.5L	17.97	12.91	5.28	0.361	5.62	14.3	dc/no	142
1300	1.0L	17.80	13.55	5.59	0.378	4.13	11.5	" "	135
1305	1.5L	17.77	14.69	5.98	0.379	2.55	11.6	" "	129
1310	2.0L	17.77	15.06	6.07	0.371	2.28	8.15	" "	122
1315	2.5L	17.77	15.39	6.10	0.367	2.11	8.98	" "	122
1318	3.0L	17.80	15.61	6.12	0.363	2.01	7.27	" "	122
1323	3.5L	17.82	15.88	6.13	0.361	1.91	5.64	" "	122
1326			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):		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 1326	Time Sampling Completed: 1331
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-22	1326	3	40ml	HCL	VOC	G

Notes:

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GROUNDWATER SAMPLING LOG

Responsive partner. Exceptional outcomes.

Project: Roper	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-13	
Date: 1-19-18	Start Time at Well: 1310	End Time at Well: 1405
Sampler: M. Padgett	Weather: Sunny, 50°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 30 (ft) to 40 (ft)		Initial Depth to Water (ft): 20.82
Total Well Depth (ft): 39.45'	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 1.54	3 Well Vol. (gal): 4.62
			Total Vol. Purged (gal): 5.0 gallons

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: 50 MINS	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): ~~Low Flow-Low Stress~~ Micro-purge	Meter(s) used (circle one): YSI 556 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)
1340	3.0	20.95	23.74	4.73	0.071	1.15	2.02	none	157
1345	3.5	20.95	23.92	4.71	0.071	1.15	1.18	none	162
1350	4.0	20.95	24.13	4.71	0.072	1.11	0.96	none	167
1355	4.5	20.96	24.22	4.73	0.073	1.08	0.72	none	170
1400	5.0	—	—	—	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): Mark Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1400	Time Sampling Completed: 1405
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-13	1400	3	40 ml	HCl	8260 - VOCs	G

Notes:
Clear / no odor

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Ropes Pump		Project Number: 6572-0001	
Location: Commerce, GA		Well ID: MW-21D	
Date: 2/28/18	Start Time at Well: 10:30		End Time at Well: 1200
Sampler: SFiles	Weather: Rain		Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 50 (ft) to 60 (ft)		Initial Depth to Water (ft): 21.17
Total Well Depth (ft): 59.72	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 6.28	3 Well Vol. (gal): 18.84
			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): 55	Final Depth of Tubing (ft): 55	Total Purge Time: 42 min	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)_____
Initial Purge Rate (gpm): 0.1L	Final Purge Rate (gpm): 0.1L	Purge Method (circle one): Low Flow-Low Stress Micro-purge	Meter(s) used (circle one): YSI 556 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)
11:00	0.6L	21.34	16.42	6.77	0.114	3.76	3.81	clr/no	57
11:05	1.0L	21.34	16.45	6.09	0.108	3.2	3.66	clr/no	46
11:10	1.5L	21.34	16.48	6.06	0.111	3.00	2.68	" "	40
11:15	2.0L	21.34	16.53	6.00	0.108	2.86	2.45	" "	37
11:20	2.5L	21.34	16.61	6.00	0.105	2.65	2.45	" "	33
11:25	3.0L	21.34	16.65	5.96	0.103	2.60	2.18	" "	29
11:30	3.6L	21.34	16.65	5.99	0.103	2.57	1.92	" "	25
11:35	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):		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 11:35	Time Sampling Completed: 11:42
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-21D	1135	3	40 mL	HCl	VOC	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Roper	Project Number: 6572-000		
Location: Commerce, GA	Well ID: MW-15D		
Date: 2/26/18	Start Time at Well: 1100	End Time at Well: 1200	
Sampler: M. Padgett	Weather: rain, 50°F	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 75 (ft) to 85 (ft)		Initial Depth to Water (ft): 23.38
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): 4.5 5.0

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: 30 min	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump Peristaltic Pump Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): Low Flow-Low Stress Micro-purge	Meter(s) used (circle one): YSI 556 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)
1130	3.0	25.06	18.11	6.68	0.081	5.33	1.30	Clear	108
1135	3.5	25.22	18.14	6.68	0.078	5.19	1.74	Clear	110
1140	4.0	25.31	18.19	6.68	0.076	4.87	2.17	Clear	116
1145	4.5	25.45	18.35	6.69	0.076	5.01	2.57	Clear	121
1150	5.0								

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): Mark Padgett		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 1155	Time Sampling Completed: 1200
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-15D		3	40 ml	HCl	8260	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Roos Pump	Project Number: 6572-0001		
Location: Commerce, GA	Well ID: ~~95~~ MW-9S		
Date: 2/26/18	Start Time at Well: 11:59	End Time at Well: 1322	
Sampler: SFuller	Weather: Rain	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 16 (ft) to 26 (ft)		Initial Depth to Water (ft): 20.40
Total Well Depth (ft): 25.16	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 0.77	3 Well Vol. (gal): 2.31
			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): 23	Final Depth of Tubing (ft): 23	Total Purge Time: 37 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

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)
1225	0.5L	20.44	13.79	6.20	0.253	5.28	12.6	clr/no	156
1230	1.0L	20.44	14.65	6.09	0.251	4.14	7.52	" "	165
1235	1.5L	20.44	14.94	6.13	0.246	3.51	4.05	" "	161
1240	2.0L	20.45	15.20	6.07	0.242	3.00	2.03	" "	162
1245	2.5L	20.45	15.53	6.04	0.239	2.82	0.83	" "	161
1250	3.0L	20.45	15.45	6.01	0.239	2.80	0.75	" "	163
1255	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: 1255	Time Sampling Completed: 1302
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-9S	1255	3	40mL	HCl	VOC	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Roper	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-12	
Date: 2/25/14	Start Time at Well: 1245	End Time at Well: 1335
Sampler: M. Padgett	Weather: rain, 50°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 35 (ft) to 45 (ft)		Initial Depth to Water (ft): 21.00
Total Well Depth (ft): 45	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 3.9	3 Well Vol. (gal): 11.7
			Total Vol. Purged (gal): 4.0

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	Final Depth of Tubing (ft): 40	Total Purge Time: 40	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): YSI 556 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)
1305	2.0	21.23	18.34	5.93	0.199	1.08	2.57	Clear	-52
1310	2.5	21.21	18.34	5.96	0.188	1.17	2.57	Clear	-53
1315	3.0	21.24	18.24	6.01	0.179	1.19	2.57	Clear	-57
1320	3.5	21.26	18.22	6.02	0.172	1.21	2.51	clear	-56
1325	4.0	21.28	18.23	6.07	0.171	1.18	2.57	clear	-62

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): M. Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1330	Time Sampling Completed: 1335
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-12	1330	3	40 ml	HCl	8260	G

Notes:

WENCK ASSOCIATES

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GROUNDWATER SAMPLING LOG

Project: Ropes Pump	Project Number: 6572-0001		
Location: Commerce, GA	Well ID: MW-13D		
Date: 2/28/18	Start Time at Well: 1340	End Time at Well: 1500	
Sampler: SFuller	Weather: Rain	Comments:	

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 64 (ft) to 69 (ft)		Initial Depth to Water (ft): 20.38
Total Well Depth (ft): 69	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 7.92	3 Well Vol. (gal): 23.76
			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): 66.5	Final Depth of Tubing (ft): 66.5	Total Purge Time: 30 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): 0.1 L/m	Purge Method (circle one): Low Flow-Low Stress ~~Micro-purge~~	Meter(s) used (circle one): YSI 556 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)
1415	0.5L	20.88	14.46	6.84	0.063	6.09	2.20	ds/no	216
1420	1.0L	20.92	16.12	5.89	0.064	4.64	1.00	" "	230
1425	1.5L	20.82	16.92	5.80	0.064	4.19	0.78	" "	226
1430	2.0L	20.82	17.14	5.76	0.065	4.10	1.08	" "	226
1435	2.5L	20.83	17.38	5.73	0.065	3.99	0.91	" "	225
1440	3	a	MR	P	t	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: 1440	Time Sampling Completed: 1445
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-13D	1440	3	40ml	HCl	VOC	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Roper	Project Number: B6472-0001	
Location: Commerce, GA	Well ID: MW-12D	
Date: 3/28/18	Start Time at Well: 1055	End Time at Well: 1135
Sampler: M. Padgett	Weather: Sunny, 60°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 81.5 (ft) to 86.5 (ft)		Initial Depth to Water (ft): 20.53'
Total Well Depth (ft): 86.5'	Well Capacity (gallons per foot): 0.16	1 Well Volume (gallons): 13.84 3 Eq. vol = 1.76	3 Well Vol. (gal): 41.5 gallons Total Vol. Purged (gal): 3.0 gallons

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: 30 mins	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): MP ~~0.1~~ 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): (YSI 556) Lamotte 2020 Horiba U53

Reading Time	Total Volume Purged (gal)	Depth to Water (ft)	Temperature (°C)	Ph SU	Conductivity ~~MS~~ (µS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Color/ Odor	ORP (mV)
1110	1.5	21.08	20.16	9.04	0.078	4.47	6.85	Clear	66.7
1115	2.0	21.12	20.10	9.05	0.077	1.62	5.78	Clear	60.4
1120	2.5	21.15	20.09	9.05	0.077	1.73	5.33	Clear	64.7
1125	3.0	21.17	20.08	9.07	0.077	1.71	5.55	Clear	61.8

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): M. Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1130	Time Sampling Completed: 1135
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-12D	1130	3	40 ml	HCl	8260 - VOCs	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-9D	
Date: 3/28/18	Start Time at Well: ~~10:10~~ 10:30	End Time at Well: 12:15
Sampler: SEF	Weather: Ind. Clouds	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 63.5 (ft) to 68.5 (ft)		Initial Depth to Water (ft): 20.29
Total Well Depth (ft): 67.60	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 7.71	3 Well Vol. (gal): 23.13
			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): 66	Final Depth of Tubing (ft): 66	Total Purge Time: 40 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

1130

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)
1135	0.5L	21.20	19.33	9.58	0.128	3.10	5.53	clr/no	54.5
1140	1.0L	20.15	19.40	9.38	0.114	3.18	5.48	" "	50.8
1145	1.5L	21.20	19.48	9.41	0.103	3.62	4.80	" "	42.4
1150	2.0L	21.20	19.44	9.43	0.098	3.65	6.31	" "	35.6
1155	2.5L	21.23	19.47	9.49	0.093	3.67	4.96	" "	29.4
1200	3.0L	21.23	19.44	9.53	0.093	3.62	3.90	" "	26.0
1205	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): SEF		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling Initiated: 1205	Time Sampling Completed: 1210
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-9D	1205	3	40ml	HCL	VOC/ 8260	G

Notes:

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GROUNDWATER SAMPLING LOG

Project: Roper Pump	Project Number: 6572-0001	
Location: Commerce, GA	Well ID: MW-6DS	
Date: 3/28/18	Start Time at Well: 12:15	End Time at Well: 1420
Sampler: SEF	Weather: Int. Clouds 60's	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2	Well Screen Depth Interval: 61 (ft) to 66 (ft)		Initial Depth to Water (ft): 20.64
Total Well Depth (ft): 66.45	Well Capacity (gallons per foot): 0.163	1 Well Volume (gallons): 7.47	3 Well Vol. (gal): 22.41
			Total Vol. Purged (gal): 5.6L

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): 63.5	Final Depth of Tubing (ft): 63.5	Total Purge Time: 70 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

1300

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)
1305	0.5L	21.05	21.29	6.31	0.104	1.17	3.29	cl/no	-22.3
1310	1.0L	21.30	21.10	6.24	0.101	0.60	6.02	" "	-37.4
1315	1.5L	21.46	21.25	6.22	0.095	0.62	8.37	" "	-38.1
1320	2.0L	20.88	22.12	6.21	0.091	2.19	32.0	" "	-37.1
1325	2.5L	20.97	21.32	6.11	0.070	2.52	33.0	" "	-22.1
1330	3.0L	21.12	21.01	6.01	0.060	3.62	25.4	" "	-2.3
1340	3.5L	21.15	21.04	6.02	0.60	3.53	16.0	" "	-2.6
1345	4.0L	21.15	21.00	5.97	0.057	3.66	10.4	" "	1.8
1350	4.5L	21.24	20.85	5.96	0.055	3.85	8.35	" "	2.8
1355	5.0L	21.35	21.24	5.99	0.053	3.86	7.31	" "	2.7
1400	5.6L	21.40	21.30	5.99	0.051	3.89	5.23	" "	4.0

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): SEF		Collection Method (circle one): Bailer Straw method Vacuum Jug Other			Time Sampling initiated: 1405	Time Sampling Completed: 1410
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-6DS		3	40ml	HCl	VOC/8260	G

Notes:
1316-1319 stop purge to reconnect tubing, resume purging @1320
1330-1332 Stop purge to clean out flow through cell and probe to see if elevated turbidity will go down.

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GROUNDWATER SAMPLING LOG

Project: Roper	Project Number: B6472-0001	
Location: Commerce, GA	Well ID: MW-23	
Date: 3/28/18	Start Time at Well: 1155	End Time at Well: 1240
Sampler: M. Padgett	Weather: Sunny, 65°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 40 (ft) to 50 (ft)		Initial Depth to Water (ft): 23.16
Total Well Depth (ft): 40'	Well Capacity (gallons per foot): 0.16	1 Well Volume (gallons): 6.4 3 Eq. vol = 1.23	3 Well Vol. (gal): 19.2 gallons
			Total Vol. Purged (gal): 3.5 gallons

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: 35 mins	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): (YSI 556) 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)
1205	1.0	23.37	19.77	4.64	302	1.44	13.0	clear	81.1
1210	1.5	23.39	19.67	4.68	303	1.26	8.73	clear	77.3
1215	2.0	23.41	19.86	4.71	307	0.55	7.03	clear	70.1
1220	2.5	23.42	19.79	4.79	286	0.34	7.14	clear	64.5
1225	3.0	23.43	19.84	4.82	274	0.29	5.59	clear	62.5
1230	3.5	23.44	19.82	4.83	278	0.28	6.51	clear	60.9

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): M. Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1235	Time Sampling Completed: 1240
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-23	1235	3	40 ml	HCl	VOCs - 8260	G

Notes:

WENCK

Responsive partner. Exceptional outcomes.

GROUNDWATER SAMPLING LOG

Project: Roper	Project Number: B6472-0001	
Location: Commerce, GA	Well ID: MW-13	
Date: 3/28/18	Start Time at Well: 1300	End Time at Well: 1340
Sampler: M. Padgett	Weather: Sunny, 70°F	Comments:

WELL CHARACTERISTICS

Well Diameter (in): 2"	Well Screen Depth Interval: 30 (ft) to 40 (ft)		Initial Depth to Water (ft): 20.12
Total Well Depth (ft): 40'	Well Capacity (gallons per foot): 0.16	1 Well Volume (gallons): 6.4 gal 3 Eq. vol = 1.17	3 Well Vol. (gal): 19.2 gallons Total Vol. Purged (gal): 3.0 gallons

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:	Purge Equipment (circle one): Bailer Bladder Pump Electric Submersible Pump (Peristaltic Pump) Other (specify)_____
Initial Purge Rate (gpm): 0.1	Final Purge Rate (gpm): 0.1	Purge Method (circle one): (Low Flow-Low Stress) Micro-purge	Meter(s) used (circle one): (YSI 556) 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)
1310	1.0	20.31	19.88	4.55	65	1.60	34.3	Cloudy	115.1
1315	1.5	20.27	19.90	4.67	66	1.25	16.8	Clear	111.8
1320	2.0	20.28	19.89	4.70	68	1.09	8.55	Clear	110.0
1325	2.5	20.28	19.88	4.72	78	0.88	5.73	Clear	107.7
1330	3.0	20.27	19.89	4.72	70	0.81	4.53	Clear	106.7

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): M. Padgett		Collection Method (circle one): Bailer (Straw method) Vacuum Jug Other			Time Sampling Initiated: 1335	Time Sampling Completed: 1340
Sample ID	Sample Time	Number of Containers	Volume	Preservative	Analysis/ EPA Method	Sample Type (G - Grab, C - Composite, Other (specify))
MW-13	1335	3	40 ml	HCl	VOCs-8260	G

Notes:

Appendix C

GLS Survey Report

Monitoring Well Survey

TAN

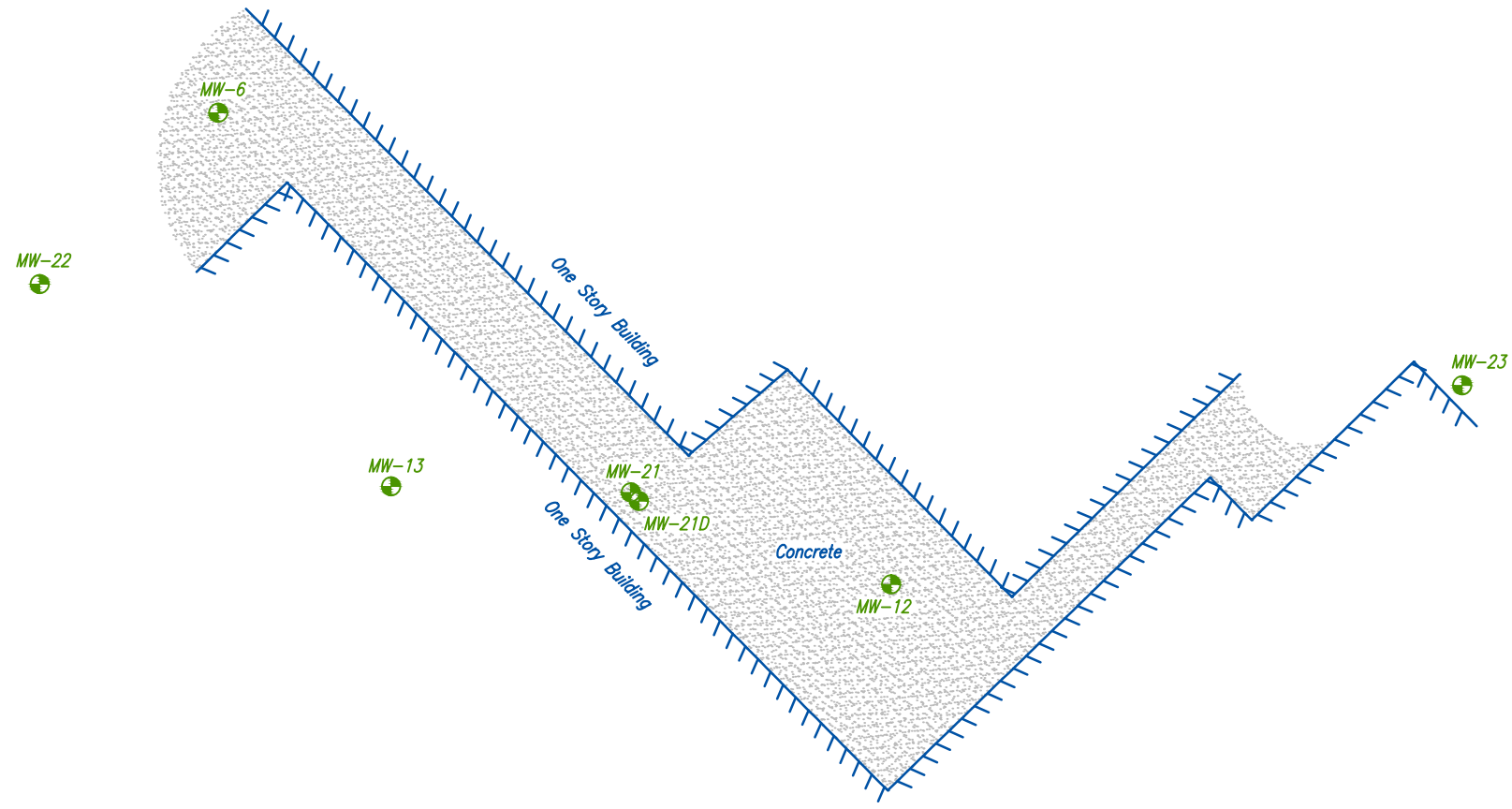
4° 35'

Magnetic North

4° 35'

Declination

Grid North
GA West Zone
Reading Held



Monitoring Well (MW)

Monitoring Well #	Northing(Y)	Easting(X)	Top of Casing Elevation	Grade Elevation
MW-2	1533718.416	2503310.499	896.67'	897.07'
MW-6	1534097.779	2503278.363	898.37'	898.65'
MW-12	1533992.857	2503428.110	898.28'	898.52'
MW-13	1534014.679	2503316.828	898.49'	898.79'
MW-21	1534013.344	2503370.165	898.67'	898.96'
MW-21D	1534011.402	2503371.980	898.76'	899.01'
MW-22	1534059.670	2503238.676	895.67'	895.94
MW-23	1534037.168	2503555.159	899.60'	899.89'

40' 0' 40' 80'

GEORGIA REGISTERED No. 3028 PROFESSIONAL LAND SURVEYOR JOSH L. LEWIS, IV

Josh L. Lewis IV, RLS 3028

Signature:

SURVEY NOTES

1. Equipment used; Leica 1200 robotic total station and Allegro MX data collector.
2. Software used: Carlson Survey 2013 and Carlson Survce.
3. Elevations are based on N.A.V.D. 88 datum.
4. Limited improvements shown.

CLOSURE STATEMENT

The field data used to compile this plat was gathered by radial survey measurements and has a positional tolerance of 0.1 feet.

MW-2

This plat is a retracement of an existing parcel or parcels of land and does not subdivide or create a new parcel or make any changes to any real property boundaries. The recording information of the documents, maps, plats, or other instruments which created the parcel or parcels are stated hereon. RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. Furthermore, the undersigned land surveyor certifies that this plat complies with the minimum technical standards for property surveys in Georgia as set forth in the rules and regulations of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in O.C.G.A. Section 15-6-67.

155 CLIFTWOOD DRIVE – ATLANTA, GEORGIA 30328 – TELEPHONE: (404) 255-4671 – FAX: (404) 255-6607 – WWW.GEORGIALANDSURVEYING.COM

JOB NUMBER 198671

DRAWING NUMBER F35-117

MONITORING WELL SURVEY PLAT FOR: 3475 Maysville Road, Commerce Georgia 30529

DATE: 2/15/18 | SCALE: 40'

WENCK ASSOCIATES, INC.

LAND LOT: GMD 255 DISTRICT SECTION Jackson COUNTY, GA

LOT: BLOCK: UNIT: PHASE:

SUBDIVISION:

PLAT BOOK , PAGE | DRAFTER: BMS | REVISION DATE:

DEED BOOK , PAGE | PARTY CHIEF: JJ | FIELD DATE: 3/7/18 | SHEET 1 OF 1

Appendix D

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: ABA0542
January 26, 2018
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

January 26, 2018

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-7	ABA0542-01	Ground Water	01/19/18 11:23	01/19/18 15:15
MW-23	ABA0542-02	Ground Water	01/19/18 11:40	01/19/18 15:15
MW-21	ABA0542-03	Ground Water	01/19/18 13:00	01/19/18 15:15
MW-22	ABA0542-04	Ground Water	01/19/18 13:26	01/19/18 15:15
MW-13	ABA0542-05	Ground Water	01/19/18 14:00	01/19/18 15:15
Trip Blank	ABA0542-06	Water	01/19/18 00:00	01/19/18 15:15

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

January 26, 2018

Report No.: ABA0542
Client ID: MW-7
Date/Time Sampled: 01/19/2018 11:23:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-01
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Chloroform	0.0035	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1-Dichloroethene	0.0036	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
cis-1,2-Dichloroethene	0.90	0.40	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 2:59	8010572	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	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

January 26, 2018

Report No.: ABA0542
Client ID: MW-7
Date/Time Sampled: 01/19/2018 11:23:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-01
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1,1,2-Tetrachloroethane	0.029	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1,2,2-Tetrachloroethane	0.013	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Tetrachloroethene	17	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 2:59	8010572	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Trichloroethene	0.33	0.20	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 2:59	8010572	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

January 26, 2018

Report No.: ABA0542
Client ID: MW-7
Date/Time Sampled: 01/19/2018 11:23:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-01
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 2:33	8010572	LIH
Surrogate: Dibromofluoromethane	*98 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:33*	*8010572*	
Surrogate: Dibromofluoromethane	*92 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:59*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*94 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:59*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*98 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:33*	*8010572*	
Surrogate: Toluene-d8	*100 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:59*	*8010572*	
Surrogate: Toluene-d8	*98 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:33*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:59*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*111 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 2:33*	*8010572*	

PACE ANALYTICAL SERVICES, LLC.

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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

January 26, 2018

Report No.: ABA0542
Client ID: MW-23
Date/Time Sampled: 01/19/2018 11:40:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-02
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
cis-1,2-Dichloroethene	0.65	0.40	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 3:50	8010572	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH

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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542
Client ID: MW-23
Date/Time Sampled: 01/19/2018 11:40:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-02
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methylene Chloride	0.0088	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methyl Ethyl Ketone (2-Butanone)	0.15	0.10	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Tetrachloroethene	0.042	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Trichloroethene	0.20	0.20	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 3:50	8010572	LIH

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

January 26, 2018

Report No.: ABA0542
Client ID: MW-23
Date/Time Sampled: 01/19/2018 11:40:00AM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-02
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 3:24	8010572	LIH
Surrogate: Dibromofluoromethane	*95 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:24*	*8010572*	
Surrogate: Dibromofluoromethane	*94 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:50*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*99 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:50*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*98 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:24*	*8010572*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:50*	*8010572*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:24*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:50*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 3:24*	*8010572*	

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WENCK Associates
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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542
Client ID: MW-21
Date/Time Sampled: 01/19/2018 1:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-03
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1-Dichloroethene	0.016	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
cis-1,2-Dichloroethene	5.1	4.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 4:41	8010572	LIH
trans-1,2-Dichloroethene	0.0090	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	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

January 26, 2018

Report No.: ABA0542
Client ID: MW-21
Date/Time Sampled: 01/19/2018 1:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-03
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methylene Chloride	0.041	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Tetrachloroethene	2.4	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 4:41	8010572	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Toluene	0.0082	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Trichloroethene	1.1	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 4:41	8010572	LIH

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

January 26, 2018

Report No.: ABA0542
Client ID: MW-21
Date/Time Sampled: 01/19/2018 1:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-03
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 4:15	8010572	LIH
Surrogate: Dibromofluoromethane	*96 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:15*	*8010572*	
Surrogate: Dibromofluoromethane	*92 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:41*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*99 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:41*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*96 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:15*	*8010572*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:41*	*8010572*	
Surrogate: Toluene-d8	*100 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:15*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:41*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 4:15*	*8010572*	

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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542
Client ID: MW-22
Date/Time Sampled: 01/19/2018 1:26:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-04
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Chloroform	0.0073	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1-Dichloroethene	0.0072	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
cis-1,2-Dichloroethene	1.6	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 5:31	8010572	LIH
trans-1,2-Dichloroethene	0.0048	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH

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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542
Client ID: MW-22
Date/Time Sampled: 01/19/2018 1:26:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-04
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1,1,2-Tetrachloroethane	0.086	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1,2,2-Tetrachloroethane	0.019	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Tetrachloroethene	38	5.0	mg/L	EPA 8260B		1000	1/24/18 16:00	1/25/18 0:42	8010572	LIH
Tetrahydrofuran	0.060	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Toluene	0.026	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Trichloroethene	ND	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 5:31	8010572	LIH

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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542
Client ID: MW-22
Date/Time Sampled: 01/19/2018 1:26:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-04
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:06	8010572	LIH
Surrogate: Dibromofluoromethane	*93 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:42*	*8010572*	
Surrogate: Dibromofluoromethane	*96 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:31*	*8010572*	
Surrogate: Dibromofluoromethane	*93 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:06*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*98 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:31*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*99 %*	*78-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:42*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*96 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:06*	*8010572*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:42*	*8010572*	
Surrogate: Toluene-d8	*98 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:31*	*8010572*	
Surrogate: Toluene-d8	*112 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:06*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:42*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*110 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:31*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*110 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:06*	*8010572*	

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

January 26, 2018

Report No.: ABA0542
Client ID: MW-13
Date/Time Sampled: 01/19/2018 2:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-05
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Chloroform	0.011	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1-Dichloroethane	0.0027	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1-Dichloroethene	0.015	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
cis-1,2-Dichloroethene	2.0	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 6:22	8010572	LIH
trans-1,2-Dichloroethene	0.0088	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH

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

January 26, 2018

Report No.: ABA0542
Client ID: MW-13
Date/Time Sampled: 01/19/2018 2:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-05
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Methylene Chloride	0.43	0.40	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 6:22	8010572	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1,1,2-Tetrachloroethane	0.13	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1,2,2-Tetrachloroethane	0.030	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Tetrachloroethene	44	5.0	mg/L	EPA 8260B		1000	1/24/18 16:00	1/25/18 1:08	8010572	LIH
Tetrachloroethene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Tetrahydrofuran	0.083	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Toluene	0.11	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH

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

January 26, 2018

Report No.: ABA0542
Client ID: MW-13
Date/Time Sampled: 01/19/2018 2:00:00PM
Matrix: Ground Water

Project: Roper Pump
Lab Number ID: ABA0542-05
Date/Time Received: 01/19/2018 3:15:00PM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichloroethene	1.2	1.0	mg/L	EPA 8260B		200	1/23/18 21:54	1/24/18 6:22	8010572	LIH
Trichlorofluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
m+p-Xylene	0.0069	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Xylenes, total	0.0069	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 5:57	8010572	LIH
Surrogate: Dibromofluoromethane	*96 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:57*	*8010572*	
Surrogate: Dibromofluoromethane	*90 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 1:08*	*8010572*	
Surrogate: Dibromofluoromethane	*94 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:22*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*97 %*	*78-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 1:08*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*98 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:22*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*94 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:57*	*8010572*	
Surrogate: Toluene-d8	*101 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 1:08*	*8010572*	
Surrogate: Toluene-d8	*100 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:22*	*8010572*	
Surrogate: Toluene-d8	*114 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:57*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:22*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*105 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 1:08*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 5:57*	*8010572*	

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

January 26, 2018

Report No.: ABA0542
Client ID: Trip Blank
Date/Time Sampled: 01/19/2018 12:00:00AM
Matrix: Water

Project: Roper Pump
Lab Number ID: ABA0542-06
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Acrolein	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Acrylonitrile	ND	0.050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Allyl Chloride (3-Chloropropylene)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Benzene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Bromobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Bromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Bromodichloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Bromoform	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Bromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
n-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
sec-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
tert-Butylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Carbon Disulfide	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Carbon Tetrachloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Chlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1-Chlorobutane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Chloroethane	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Chloroform	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Chloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
2-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
4-Chlorotoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Dibromochloromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2-Dibromo-3-chloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2-Dibromoethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Dibromomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,3-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,4-Dichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
trans-1,4-Dichloro-2-butene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Dichlorodifluoromethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2-Dichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
cis-1,2-Dichloroethene	ND	0.070	mg/L	EPA 8260B		1	1/24/18 16:00	1/25/18 0:17	8010572	LIH
trans-1,2-Dichloroethene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	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

January 26, 2018

Report No.: ABA0542
Client ID: Trip Blank
Date/Time Sampled: 01/19/2018 12:00:00AM
Matrix: Water

Project: Roper Pump
Lab Number ID: ABA0542-06
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,3-Dichloropropane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
2,2-Dichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1-Dichloropropene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
cis-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
trans-1,3-Dichloropropene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Ethylbenzene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Ethyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Hexachlorobutadiene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
p-Isopropyltoluene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Hexachloroethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Iodomethane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Isopropylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methacrylonitrile	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methyl Acrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methyl Butyl Ketone (2-Hexanone)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methylene Chloride	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methyl Ethyl Ketone (2-Butanone)	ND	0.10	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methyl Methacrylate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
4-Methyl-2-pentanone (MIBK)	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Methyl-tert-Butyl Ether	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Naphthalene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
2-Nitropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Propionitrile (Ethyl Cyanide)	ND	0.020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
n-Propylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Styrene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Tetrachloroethene	ND	0.0050	mg/L	EPA 8260B		1	1/24/18 16:00	1/25/18 0:17	8010572	LIH
Tetrahydrofuran	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Toluene	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2,3-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2,4-Trichlorobenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1,1-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,1,2-Trichloroethane	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Trichloroethene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH

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

January 26, 2018

Report No.: ABA0542
Client ID: Trip Blank
Date/Time Sampled: 01/19/2018 12:00:00AM
Matrix: Water

Project: Roper Pump
Lab Number ID: ABA0542-06
Date/Time Received: 01/19/2018 3:15:00PM

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	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2,3-Trichloropropane	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,2,4-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
1,3,5-Trimethylbenzene	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Vinyl Acetate	ND	0.010	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Vinyl Chloride	ND	0.0020	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
m+p-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
o-Xylene	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Xylenes, total	ND	0.0050	mg/L	EPA 8260B		1	1/23/18 21:54	1/24/18 6:47	8010572	LIH
Surrogate: Dibromofluoromethane	*93 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:47*	*8010572*	
Surrogate: Dibromofluoromethane	*89 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:17*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*95 %*	*78-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:17*	*8010572*	
Surrogate: 1,2-Dichloroethane-d4	*98 %*	*78-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:47*	*8010572*	
Surrogate: Toluene-d8	*102 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:47*	*8010572*	
Surrogate: Toluene-d8	*103 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:17*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*		*EPA 8260B*			*1/24/18 16:00*	*1/25/18 0:17*	*8010572*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*1/23/18 21:54*	*1/24/18 6:47*	*8010572*	

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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542

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 8010572 - EPA 5030B										
Blank (8010572-BLK1)				Prepared & Analyzed: 01/23/18						
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

January 26, 2018

Report No.: ABA0542

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 8010572 - EPA 5030B										
Blank (8010572-BLK1)					Prepared & Analyzed: 01/23/18					
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	*45*		*ug/L*	*50.000*		*89*	*80-120*			

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Attention: Mr. Adam Hayes

January 26, 2018

Report No.: ABA0542

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 8010572 - EPA 5030B										
Blank (8010572-BLK1)					Prepared & Analyzed: 01/23/18					
Surrogate: 1,2-Dichloroethane-d4	*46*		*ug/L*	*50.000*		*92*	*78-120*			
Surrogate: Toluene-d8	*48*		*ug/L*	*50.000*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*54*		*ug/L*	*50.000*		*107*	*80-120*			
LCS (8010572-BS1)					Prepared & Analyzed: 01/23/18					
Benzene	0.049	0.0050	mg/L	0.050000		97	67-134			
Chlorobenzene	0.050	0.010	mg/L	0.050000		100	69-122			
1,1-Dichloroethene	0.056	0.0020	mg/L	0.050000		112	58-142			
Toluene	0.053	0.0020	mg/L	0.050000		107	68-127			
Trichloroethene	0.056	0.0050	mg/L	0.050000		111	72-132			
Surrogate: Dibromofluoromethane	*51*		*ug/L*	*50.000*		*102*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*49*		*ug/L*	*50.000*		*99*	*78-120*			
Surrogate: Toluene-d8	*49*		*ug/L*	*50.000*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*48*		*ug/L*	*50.000*		*96*	*80-120*			
Matrix Spike (8010572-MS1)	**Source: ABA0542-01**				Prepared: 01/23/18 Analyzed: 01/24/18					
Benzene	2.2	1.0	mg/L	10.000	ND	22	67-134			QM-05
Chlorobenzene	2.5	2.0	mg/L	10.000	ND	25	69-122			QM-05
1,1-Dichloroethene	2.8	0.40	mg/L	10.000	ND	28	58-142			QM-05
Toluene	2.1	0.40	mg/L	10.000	ND	21	68-127			QM-05
Trichloroethene	2.5	1.0	mg/L	10.000	0.34	21	72-132			QM-05
Surrogate: Dibromofluoromethane	*49*		*ug/L*	*50.000*		*99*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*49*		*ug/L*	*50.000*		*99*	*78-120*			
Surrogate: Toluene-d8	*51*		*ug/L*	*50.000*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*51*		*ug/L*	*50.000*		*102*	*80-120*			
Matrix Spike Dup (8010572-MSD1)	**Source: ABA0542-01**				Prepared: 01/23/18 Analyzed: 01/24/18					
Benzene	5.6	1.0	mg/L	10.000	ND	56	67-134	86	9	QM-06
Chlorobenzene	5.9	2.0	mg/L	10.000	ND	59	69-122	80	13	QM-06
1,1-Dichloroethene	7.1	0.40	mg/L	10.000	ND	71	58-142	85	9	QR-02
Toluene	5.5	0.40	mg/L	10.000	ND	55	68-127	91	9	QM-06
Trichloroethene	6.0	1.0	mg/L	10.000	0.34	57	72-132	84	11	QM-06
Surrogate: Dibromofluoromethane	*51*		*ug/L*	*50.000*		*101*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*51*		*ug/L*	*50.000*		*102*	*78-120*			
Surrogate: Toluene-d8	*52*		*ug/L*	*50.000*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*50*		*ug/L*	*50.000*		*101*	*80-120*			

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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

January 26, 2018

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	12/31/2018
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	06/30/2018
TX	Texas	T104704397-08-TX	03/31/2018
VA	Virginia	460204	12/14/2018

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

January 26, 2018

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

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries.

QM-06 Due to suspected matrix interference, RPD and Percent Recovery values for the MS and/or MSD were outside control limits. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

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

PAGE: 1 OF 1

CLIENT NAME: Welck

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
1080 Holcomb Bridge Road
Roswell, GA 30062

REPORT TO: Adam Hayes
CC: AHAYES@WELCK.com

REQUESTED COMPLETION DATE: Standard TAT
PO #:

PROJECT NAME/STATE: Ropes Pump

PROJECT #: 6572-000

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	CONTAINER TYPE:	PRESERVATION:	VOC 8260	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
1/19/18	11:23	GW		X	MW-7	3			3	1	
1/19/18	11:40	GW		X	MW-23	3			3	2	
1/19/18	13:00	GW		X	MW-21	3			3	3	
1/19/18	13:26	GW		X	MW-22	3			3	4	
1/19/18	14:00	GW		X	MW-13	3			3	5	
										6	Trip Blank

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: Mark Padgett / Welck
DATE/TIME: 1-19-18 1400
RELINQUISHED BY: Mark Padgett
DATE/TIME: 1-19-18 1515

RECEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME: 1/19/18 1515
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

Checked: No NA
Ice: Yes No NA
Temperature: Min: 5.5°C Max:
Custody Seal: Intact Broken Not Present N/A
# of Coolers:
Cooler ID:

FOR LAB USE ONLY
LAB #: ATA0542
Entered into LIMS: CH
Tracking #:

Sample Condition Upon Receipt

Pace Analytical

Client Name: Wenck Project # ABA0542

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 THR082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 1/19/18 LH

Temp should be above freezing to 6°C

Comments:

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: 1/22/2018 11:32:39AM**

Attn: Ms. Kristen Rivera

Client: WENCK Associates
Project: Roper Pump
Date Received: 01/19/18 15:15

Work Order: ABA0542
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 6 **#Containers:** 17

Minimum Temp(C): 5.5 **Maximum Temp(C):** 5.5 **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:

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 05, 2018

Adam Hayes
WENCK Associates
1080 Holcomb Bridge Road,
Building 100, Suite 190
Roswell, GA 30076

RE: Project:
Pace Project No.:

Dear Adam Hayes:
Enclosed are the analytical results for sample(s) received by the laboratory between and . The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Eben Buchanan

Eben Buchanan
eben.buchanan@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Mark Padgett, WENCK Associates

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: WENCK Associates	Report To: Mark Padgett	Attention: Adam Hayes
Address: 1080 Holcomb Bridge Road, Roswell, GA 30076	Copy To: Adam Hayes	Company Name: Wenck
Email: mpadgett@wenck.com	Purchase Order #: 1	Address: 1080 Holcomb Bridge Rd, Roswell, GA
Phone: 828.261.5589 Fax	Project Name: Roper	Pace Quote:
Requested Due Date: Standard TAT	Project #: B6472-0001	Pace Project Manager: eben.buchanan@pacelabs.com,
		Pace Profile #:

Regulatory Agency

State / Location: GA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	Analyses Test: VOC by 8260	Residual Chlorine (Y/N)
1	MW-6DS	WT	G	3/28/18	1405								X						X	
2	MW-9D	WT	G		1205								X						X	
3	MW-12D	WT	G		1130								X						X	
4	MW-13	WT	G		1335								X						X	
5	MW-23	WT	G		1235								X						X	
6	Trip Blank	WT	G																X	
7																				
8																				
9																				
10																				
11																				
12																				

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO#: 263332

263332

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Mark Padgett / Wenck	3/28/18	1615	M Dahman	3/28/18	1615

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
5.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Padgett

SIGNATURE of SAMPLER: Mark Padgett DATE Signed: 3/28/18

Sample Condition Upon Receipt

Pace Analytical

Client Name: Wenck

Project #

WO#: 263332

PM: EDB **Due Date: 04/04/18**

CLIENT: WENCK

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

Tracking #:

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

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

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 3/28/18 MR

			Comments:
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: W			
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
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

March 09, 2018

Adam Hayes
WENCK Associates
1080 Holcomb Bridge Road,
Building 100, Suite 190
Roswell, GA 30076

RE: Project: Roper Pump B6572-0001
Pace Project No.: 262331

Dear Adam Hayes:
Enclosed are the analytical results for sample(s) received by the laboratory on February 28, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Eben Buchanan

Eben Buchanan
eben.buchanan@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Mark Padgett, WENCK Associates

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Lab ID	Sample ID	Matrix	Date Collected	Date Received
262331001	**MW-9S**	Water	02/28/18 12:55	02/28/18 16:30
262331002	**MW-12**	Water	02/28/18 13:30	02/28/18 16:30
262331003	**MW-13D**	Water	02/28/18 14:40	02/28/18 16:30
262331004	**MW-15D**	Water	02/28/18 11:55	02/28/18 16:30
262331005	**MW-21D**	Water	02/28/18 11:35	02/28/18 16:30

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Lab ID	Sample ID	Method	Analysts	Analytes Reported
262331001	**MW-9S**	EPA 8260B	RAC	64
262331002	**MW-12**	EPA 8260B	LIH, RAC	64
262331003	**MW-13D**	EPA 8260B	LIH, RAC	64
262331004	**MW-15D**	EPA 8260B	LIH, RAC	64
262331005	**MW-21D**	EPA 8260B	LIH	64

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-9S **Lab ID: 262331001** Collected: 02/28/18 12:55 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		03/05/18 12:49	67-64-1	
Benzene	ND	ug/L	1.0	1		03/05/18 12:49	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/05/18 12:49	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/05/18 12:49	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/05/18 12:49	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/05/18 12:49	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/05/18 12:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/05/18 12:49	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/05/18 12:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/05/18 12:49	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/05/18 12:49	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/05/18 12:49	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/05/18 12:49	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 12:49	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 12:49	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		03/05/18 12:49	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/05/18 12:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/05/18 12:49	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/05/18 12:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 12:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 12:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 12:49	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/05/18 12:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/05/18 12:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/05/18 12:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/05/18 12:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/05/18 12:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/05/18 12:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 12:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/05/18 12:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 12:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/05/18 12:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 12:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 12:49	10061-02-6	
Diisopropyl ether	ND	ug/L	10.0	1		03/05/18 12:49	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		03/05/18 12:49	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		03/05/18 12:49	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/05/18 12:49	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/05/18 12:49	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		03/05/18 12:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/05/18 12:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1		03/05/18 12:49	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/05/18 12:49	91-20-3	
Styrene	ND	ug/L	1.0	1		03/05/18 12:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 12:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 12:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		03/05/18 12:49	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-9S **Lab ID: 262331001** Collected: 02/28/18 12:55 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		03/05/18 12:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 12:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 12:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/05/18 12:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/05/18 12:49	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/05/18 12:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/05/18 12:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/05/18 12:49	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/05/18 12:49	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/05/18 12:49	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/05/18 12:49	1330-20-7	
m&p-Xylene	ND	ug/L	1.0	1		03/05/18 12:49	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/05/18 12:49	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%.	81-119	1		03/05/18 12:49	17060-07-0	
Dibromofluoromethane (S)	96	%.	82-114	1		03/05/18 12:49	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	82-120	1		03/05/18 12:49	460-00-4	
Toluene-d8 (S)	95	%.	82-109	1		03/05/18 12:49	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-12 **Lab ID: 262331002** Collected: 02/28/18 13:30 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		03/05/18 13:16	67-64-1	
Benzene	ND	ug/L	1.0	1		03/05/18 13:16	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/05/18 13:16	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/05/18 13:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/05/18 13:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/05/18 13:16	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/05/18 13:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/05/18 13:16	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/05/18 13:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/05/18 13:16	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/05/18 13:16	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/05/18 13:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/05/18 13:16	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 13:16	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 13:16	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		03/05/18 13:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/05/18 13:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	1		03/05/18 13:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/05/18 13:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:16	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/05/18 13:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/05/18 13:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/05/18 13:16	107-06-2	
1,1-Dichloroethene	**67.3**	ug/L	1.0	1		03/05/18 13:16	75-35-4	
cis-1,2-Dichloroethene	**11700**	ug/L	100	100		03/07/18 13:31	156-59-2	
trans-1,2-Dichloroethene	**129**	ug/L	1.0	1		03/05/18 13:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 13:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/05/18 13:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 13:16	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/05/18 13:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 13:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 13:16	10061-02-6	
Diisopropyl ether	ND	ug/L	10.0	1		03/05/18 13:16	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		03/05/18 13:16	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		03/05/18 13:16	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/05/18 13:16	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/05/18 13:16	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		03/05/18 13:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/05/18 13:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1		03/05/18 13:16	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/05/18 13:16	91-20-3	
Styrene	ND	ug/L	1.0	1		03/05/18 13:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 13:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 13:16	79-34-5	
Tetrachloroethene	**8050**	ug/L	100	100		03/07/18 13:31	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-12 **Lab ID: 262331002** Collected: 02/28/18 13:30 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Toluene	**3.3**	ug/L	1.0	1		03/05/18 13:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/05/18 13:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/05/18 13:16	79-00-5	
Trichloroethene	**1540**	ug/L	100	100		03/07/18 13:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/05/18 13:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/05/18 13:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/05/18 13:16	108-05-4	
Vinyl chloride	**1.8**	ug/L	1.0	1		03/05/18 13:16	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/05/18 13:16	1330-20-7	
m&p-Xylene	ND	ug/L	1.0	1		03/05/18 13:16	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/05/18 13:16	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%.	81-119	1		03/05/18 13:16	17060-07-0	
Dibromofluoromethane (S)	102	%.	82-114	1		03/05/18 13:16	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	82-120	1		03/05/18 13:16	460-00-4	
Toluene-d8 (S)	96	%.	82-109	1		03/05/18 13:16	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-13D **Lab ID: 262331003** Collected: 02/28/18 14:40 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		03/05/18 13:42	67-64-1	
Benzene	ND	ug/L	1.0	1		03/05/18 13:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/05/18 13:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/05/18 13:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/05/18 13:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/05/18 13:42	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/05/18 13:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/05/18 13:42	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/05/18 13:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/05/18 13:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/05/18 13:42	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/05/18 13:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/05/18 13:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 13:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 13:42	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		03/05/18 13:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/05/18 13:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	1		03/05/18 13:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/05/18 13:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/05/18 13:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/05/18 13:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/05/18 13:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/05/18 13:42	75-35-4	
cis-1,2-Dichloroethene	**28.3**	ug/L	1.0	1		03/05/18 13:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/05/18 13:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 13:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/05/18 13:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 13:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/05/18 13:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 13:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 13:42	10061-02-6	
Diisopropyl ether	ND	ug/L	10.0	1		03/05/18 13:42	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		03/05/18 13:42	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		03/05/18 13:42	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/05/18 13:42	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/05/18 13:42	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		03/05/18 13:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/05/18 13:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1		03/05/18 13:42	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/05/18 13:42	91-20-3	
Styrene	ND	ug/L	1.0	1		03/05/18 13:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 13:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 13:42	79-34-5	
Tetrachloroethene	**592**	ug/L	100	100		03/07/18 13:57	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-13D **Lab ID: 262331003** Collected: 02/28/18 14:40 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		03/05/18 13:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 13:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/05/18 13:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/05/18 13:42	79-00-5	
Trichloroethene	**890**	ug/L	100	100		03/07/18 13:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/05/18 13:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/05/18 13:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/05/18 13:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/05/18 13:42	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/05/18 13:42	1330-20-7	
m&p-Xylene	ND	ug/L	1.0	1		03/05/18 13:42	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/05/18 13:42	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%.	81-119	1		03/05/18 13:42	17060-07-0	
Dibromofluoromethane (S)	98	%.	82-114	1		03/05/18 13:42	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	82-120	1		03/05/18 13:42	460-00-4	
Toluene-d8 (S)	94	%.	82-109	1		03/05/18 13:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-15D **Lab ID: 262331004** Collected: 02/28/18 11:55 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		03/05/18 14:09	67-64-1	
Benzene	ND	ug/L	1.0	1		03/05/18 14:09	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/05/18 14:09	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/05/18 14:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/05/18 14:09	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/05/18 14:09	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/05/18 14:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/05/18 14:09	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/05/18 14:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/05/18 14:09	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/05/18 14:09	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/05/18 14:09	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/05/18 14:09	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 14:09	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/05/18 14:09	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		03/05/18 14:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/05/18 14:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	1		03/05/18 14:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/05/18 14:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 14:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 14:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/05/18 14:09	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/05/18 14:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/05/18 14:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/05/18 14:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/05/18 14:09	75-35-4	
cis-1,2-Dichloroethene	**7.1**	ug/L	1.0	1		03/05/18 14:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/05/18 14:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 14:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/05/18 14:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/05/18 14:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/05/18 14:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 14:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/05/18 14:09	10061-02-6	
Diisopropyl ether	ND	ug/L	10.0	1		03/05/18 14:09	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		03/05/18 14:09	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		03/05/18 14:09	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/05/18 14:09	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/05/18 14:09	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		03/05/18 14:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/05/18 14:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1		03/05/18 14:09	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/05/18 14:09	91-20-3	
Styrene	ND	ug/L	1.0	1		03/05/18 14:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 14:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/05/18 14:09	79-34-5	
Tetrachloroethene	**1520**	ug/L	100	100		03/07/18 14:22	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-15D **Lab ID: 262331004** Collected: 02/28/18 11:55 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		03/05/18 14:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 14:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/05/18 14:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/05/18 14:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/05/18 14:09	79-00-5	
Trichloroethene	**97.0**	ug/L	1.0	1		03/05/18 14:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/05/18 14:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/05/18 14:09	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/05/18 14:09	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/05/18 14:09	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/05/18 14:09	1330-20-7	
m&p-Xylene	ND	ug/L	1.0	1		03/05/18 14:09	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/05/18 14:09	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%.	81-119	1		03/05/18 14:09	17060-07-0	
Dibromofluoromethane (S)	96	%.	82-114	1		03/05/18 14:09	1868-53-7	
4-Bromofluorobenzene (S)	107	%.	82-120	1		03/05/18 14:09	460-00-4	
Toluene-d8 (S)	94	%.	82-109	1		03/05/18 14:09	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-21D **Lab ID: 262331005** Collected: 02/28/18 11:35 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		03/07/18 15:39	67-64-1	
Benzene	ND	ug/L	1.0	1		03/07/18 15:39	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/07/18 15:39	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/07/18 15:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/07/18 15:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/07/18 15:39	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/07/18 15:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/07/18 15:39	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/18 15:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/07/18 15:39	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/07/18 15:39	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/07/18 15:39	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/07/18 15:39	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/18 15:39	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/18 15:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		03/07/18 15:39	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/07/18 15:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	1		03/07/18 15:39	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/07/18 15:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/18 15:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/18 15:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/18 15:39	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/18 15:39	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/18 15:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/18 15:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/18 15:39	75-35-4	
cis-1,2-Dichloroethene	**68.0**	ug/L	1.0	1		03/07/18 15:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/18 15:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/18 15:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/18 15:39	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/18 15:39	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/18 15:39	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/18 15:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/18 15:39	10061-02-6	
Diisopropyl ether	ND	ug/L	10.0	1		03/07/18 15:39	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		03/07/18 15:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		03/07/18 15:39	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/07/18 15:39	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/18 15:39	99-87-6	
Methylene Chloride	ND	ug/L	1.0	1		03/07/18 15:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/07/18 15:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1		03/07/18 15:39	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/07/18 15:39	91-20-3	
Styrene	ND	ug/L	1.0	1		03/07/18 15:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/18 15:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/18 15:39	79-34-5	
Tetrachloroethene	**7.1**	ug/L	1.0	1		03/07/18 15:39	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Sample: MW-21D **Lab ID: 262331005** Collected: 02/28/18 11:35 Received: 02/28/18 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		03/07/18 15:39	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/18 15:39	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/18 15:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/18 15:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/18 15:39	79-00-5	
Trichloroethene	**4.1**	ug/L	1.0	1		03/07/18 15:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/18 15:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/07/18 15:39	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/07/18 15:39	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/07/18 15:39	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/07/18 15:39	1330-20-7	
m&p-Xylene	ND	ug/L	1.0	1		03/07/18 15:39	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/07/18 15:39	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%.	81-119	1		03/07/18 15:39	17060-07-0	
Dibromofluoromethane (S)	98	%.	82-114	1		03/07/18 15:39	1868-53-7	
4-Bromofluorobenzene (S)	111	%.	82-120	1		03/07/18 15:39	460-00-4	
Toluene-d8 (S)	91	%.	82-109	1		03/07/18 15:39	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Roper Pump B6572-0001
Pace Project No.: 262331

QC Batch: 2001 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 262331001, 262331002, 262331003, 262331004, 262331005

METHOD BLANK: 11125 Matrix: Water
Associated Lab Samples: 262331001, 262331002, 262331003, 262331004, 262331005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	03/05/18 11:29	
1,1,1-Trichloroethane	ug/L	ND	1.0	03/05/18 11:29	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/05/18 11:29	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/05/18 11:29	
1,1-Dichloroethane	ug/L	ND	1.0	03/05/18 11:29	
1,1-Dichloroethene	ug/L	ND	1.0	03/05/18 11:29	
1,1-Dichloropropene	ug/L	ND	1.0	03/05/18 11:29	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	03/05/18 11:29	
1,2,3-Trichloropropane	ug/L	ND	1.0	03/05/18 11:29	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	03/05/18 11:29	
1,2-Dibromo-3-chloropropane	ug/L	ND	1.0	03/05/18 11:29	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/05/18 11:29	
1,2-Dichlorobenzene	ug/L	ND	1.0	03/05/18 11:29	
1,2-Dichloroethane	ug/L	ND	1.0	03/05/18 11:29	
1,2-Dichloropropane	ug/L	ND	1.0	03/05/18 11:29	
1,3-Dichlorobenzene	ug/L	ND	1.0	03/05/18 11:29	
1,3-Dichloropropane	ug/L	ND	1.0	03/05/18 11:29	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/05/18 11:29	
2,2-Dichloropropane	ug/L	ND	1.0	03/05/18 11:29	
2-Butanone (MEK)	ug/L	ND	5.0	03/05/18 11:29	
2-Chlorotoluene	ug/L	ND	1.0	03/05/18 11:29	
2-Hexanone	ug/L	ND	5.0	03/05/18 11:29	
4-Chlorotoluene	ug/L	ND	1.0	03/05/18 11:29	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	03/05/18 11:29	
Acetone	ug/L	ND	25.0	03/05/18 11:29	
Benzene	ug/L	ND	1.0	03/05/18 11:29	
Bromobenzene	ug/L	ND	1.0	03/05/18 11:29	
Bromochloromethane	ug/L	ND	1.0	03/05/18 11:29	
Bromodichloromethane	ug/L	ND	1.0	03/05/18 11:29	
Bromoform	ug/L	ND	1.0	03/05/18 11:29	
Bromomethane	ug/L	ND	2.0	03/05/18 11:29	
Carbon tetrachloride	ug/L	ND	1.0	03/05/18 11:29	
Chlorobenzene	ug/L	ND	1.0	03/05/18 11:29	
Chloroethane	ug/L	ND	1.0	03/05/18 11:29	
Chloroform	ug/L	ND	1.0	03/05/18 11:29	
Chloromethane	ug/L	ND	1.0	03/05/18 11:29	
cis-1,2-Dichloroethene	ug/L	ND	1.0	03/05/18 11:29	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/05/18 11:29	
Dibromochloromethane	ug/L	ND	1.0	03/05/18 11:29	
Dibromomethane	ug/L	ND	1.0	03/05/18 11:29	
Dichlorodifluoromethane	ug/L	ND	1.0	03/05/18 11:29	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Roper Pump B6572-0001
Pace Project No.: 262331

METHOD BLANK: 11125 Matrix: Water
Associated Lab Samples: 262331001, 262331002, 262331003, 262331004, 262331005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	10.0	03/05/18 11:29	
Ethylbenzene	ug/L	ND	1.0	03/05/18 11:29	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	03/05/18 11:29	
m&p-Xylene	ug/L	ND	1.0	03/05/18 11:29	
Methyl-tert-butyl ether	ug/L	ND	10.0	03/05/18 11:29	
Methylene Chloride	ug/L	ND	1.0	03/05/18 11:29	
Naphthalene	ug/L	ND	1.0	03/05/18 11:29	
o-Xylene	ug/L	ND	1.0	03/05/18 11:29	
p-Isopropyltoluene	ug/L	ND	1.0	03/05/18 11:29	
Styrene	ug/L	ND	1.0	03/05/18 11:29	
Tetrachloroethene	ug/L	ND	1.0	03/05/18 11:29	
Toluene	ug/L	ND	1.0	03/05/18 11:29	
trans-1,2-Dichloroethene	ug/L	ND	1.0	03/05/18 11:29	
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/05/18 11:29	
Trichloroethene	ug/L	ND	1.0	03/05/18 11:29	
Trichlorofluoromethane	ug/L	ND	1.0	03/05/18 11:29	
Vinyl acetate	ug/L	ND	2.0	03/05/18 11:29	
Vinyl chloride	ug/L	ND	1.0	03/05/18 11:29	
Xylene (Total)	ug/L	ND	2.0	03/05/18 11:29	
1,2-Dichloroethane-d4 (S)	%.	98	81-119	03/05/18 11:29	
4-Bromofluorobenzene (S)	%.	105	82-120	03/05/18 11:29	
Dibromofluoromethane (S)	%.	94	82-114	03/05/18 11:29	
Toluene-d8 (S)	%.	96	82-109	03/05/18 11:29	

LABORATORY CONTROL SAMPLE: 11126

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.7	87	68-137	
1,1,1-Trichloroethane	ug/L	50	48.7	97	72-134	
1,1,2,2-Tetrachloroethane	ug/L	50	45.4	91	51-158	
1,1,2-Trichloroethane	ug/L	50	51.9	104	78-131	
1,1-Dichloroethane	ug/L	50	57.4	115	69-151	
1,1-Dichloroethene	ug/L	50	51.3	103	64-158	
1,1-Dichloropropene	ug/L	50	49.0	98	70-133	
1,2,3-Trichlorobenzene	ug/L	50	48.7	97	73-130	
1,2,3-Trichloropropane	ug/L	50	44.4	89	78-133	
1,2,4-Trichlorobenzene	ug/L	50	47.6	95	51-163	
1,2-Dibromo-3-chloropropane	ug/L	50	41.6	83	58-124	
1,2-Dibromoethane (EDB)	ug/L	50	47.8	96	71-134	
1,2-Dichlorobenzene	ug/L	50	48.2	96	70-135	
1,2-Dichloroethane	ug/L	50	48.3	97	72-129	
1,2-Dichloropropane	ug/L	50	52.9	106	64-135	
1,3-Dichlorobenzene	ug/L	50	47.3	95	71-134	
1,3-Dichloropropane	ug/L	50	50.0	100	70-140	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Roper Pump B6572-0001
Pace Project No.: 262331

LABORATORY CONTROL SAMPLE: 11126

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	44.9	90	70-131	
2,2-Dichloropropane	ug/L	50	47.7	95	34-170	
2-Butanone (MEK)	ug/L	100	88.5	89	52-143	
2-Chlorotoluene	ug/L	50	48.6	97	77-128	
2-Hexanone	ug/L	100	83.1	83	61-136	
4-Chlorotoluene	ug/L	50	47.8	96	79-126	
4-Methyl-2-pentanone (MIBK)	ug/L	100	86.1	86	71-129	
Acetone	ug/L	100	84.4	84	48-224	
Benzene	ug/L	50	49.8	100	68-132	
Bromobenzene	ug/L	50	46.7	93	75-122	
Bromochloromethane	ug/L	50	55.9	112	73-133	
Bromodichloromethane	ug/L	50	46.0	92	67-121	
Bromoform	ug/L	50	42.8	86	57-125	
Bromomethane	ug/L	50	47.0	94	35-156	
Carbon tetrachloride	ug/L	50	49.3	99	66-122	
Chlorobenzene	ug/L	50	47.5	95	71-126	
Chloroethane	ug/L	50	59.1	118	43-143	
Chloroform	ug/L	50	52.3	105	71-136	
Chloromethane	ug/L	50	36.0	72	47-123	
cis-1,2-Dichloroethene	ug/L	50	52.8	106	74-131	
cis-1,3-Dichloropropene	ug/L	50	46.2	92	78-120	
Dibromochloromethane	ug/L	50	45.8	92	65-115	
Dibromomethane	ug/L	50	51.5	103	79-129	
Dichlorodifluoromethane	ug/L	50	20.7	41	29-124	
Diisopropyl ether	ug/L	50	59.7	119	70-130	
Ethylbenzene	ug/L	50	48.3	97	68-129	
Hexachloro-1,3-butadiene	ug/L	50	52.5	105	58-142	
m&p-Xylene	ug/L	100	98.8	99	67-137	
Methyl-tert-butyl ether	ug/L	100	96.0	96	59-130	
Methylene Chloride	ug/L	50	51.3	103	61-147	
Naphthalene	ug/L	50	44.3	89	48-144	
o-Xylene	ug/L	50	47.6	95	52-141	
p-Isopropyltoluene	ug/L	50	45.1	90	58-137	
Styrene	ug/L	50	46.3	93	77-128	
Tetrachloroethene	ug/L	50	45.9	92	51-139	
Toluene	ug/L	50	50.3	101	60-133	
trans-1,2-Dichloroethene	ug/L	50	54.3	109	69-144	
trans-1,3-Dichloropropene	ug/L	50	44.7	89	74-128	
Trichloroethene	ug/L	50	49.9	100	73-126	
Trichlorofluoromethane	ug/L	50	43.1	86	55-132	
Vinyl acetate	ug/L	50	45.3	91	52-141	
Vinyl chloride	ug/L	50	38.8	78	50-133	
Xylene (Total)	ug/L	150	146	98	78-132	
1,2-Dichloroethane-d4 (S)	%.			94	81-119	
4-Bromofluorobenzene (S)	%.			97	82-120	
Dibromofluoromethane (S)	%.			105	82-114	
Toluene-d8 (S)	%.			93	82-109	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Roper Pump B6572-0001
Pace Project No.: 262331

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11127 11128

Parameter	Units	262201001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	22.0	28.7	44	57	68-137	27	11	M1,R1
1,1,1-Trichloroethane	ug/L	ND	50	50	27.1	36.4	54	73	66-142	29	11	M1,R1
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	23.8	30.4	48	61	39-171	24	13	R1
1,1,2-Trichloroethane	ug/L	ND	50	50	26.3	34.2	53	68	73-136	26	12	M1,R1
1,1-Dichloroethane	ug/L	ND	50	50	32.0	41.6	64	83	66-155	26	15	M1,R1
1,1-Dichloroethene	ug/L	ND	50	50	36.7	45.8	73	92	33-181	22	34	
1,1-Dichloropropene	ug/L	ND	50	50	32.9	42.3	66	85	70-133	25	12	M1,R1
1,2,3-Trichlorobenzene	ug/L	ND	50	50	21.4	29.9	43	60	73-130	33	22	M1,R1
1,2,3-Trichloropropane	ug/L	ND	50	50	20.6	26.8	41	54	78-133	26	14	M1,R1
1,2,4-Trichlorobenzene	ug/L	ND	50	50	21.2	29.0	42	58	44-164	31	13	M1,R1
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	17.8	23.3	36	47	58-124	27	15	M1,R1
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	23.3	30.2	47	60	71-134	26	12	M1,R1
1,2-Dichlorobenzene	ug/L	ND	50	50	26.0	32.9	52	66	69-135	23	10	M1,R1
1,2-Dichloroethane	ug/L	ND	50	50	27.0	34.7	54	69	36-159	25	10	R1
1,2-Dichloropropane	ug/L	ND	50	50	28.6	36.5	57	73	68-132	24	11	M1,R1
1,3-Dichlorobenzene	ug/L	ND	50	50	25.3	32.6	51	65	68-135	25	10	M1,R1
1,3-Dichloropropane	ug/L	ND	50	50	26.7	33.5	53	67	70-138	23	10	M1,R1
1,4-Dichlorobenzene	ug/L	ND	50	50	23.6	30.4	47	61	49-153	25	9	M1,R1
2,2-Dichloropropane	ug/L	ND	50	50	22.2	30.1	44	60	34-170	30	9	R1
2-Butanone (MEK)	ug/L	ND	100	100	41.1	52.9	41	53	10-189	25	23	R1
2-Chlorotoluene	ug/L	ND	50	50	27.8	35.9	56	72	77-128	25	10	M1,R1
2-Hexanone	ug/L	ND	100	100	38.1	50.5	38	50	40-135	28	18	M1,R1
4-Chlorotoluene	ug/L	ND	50	50	26.6	34.4	53	69	79-126	26	10	M1,R1
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	40.7	52.6	41	53	30-177	26	10	R1
Acetone	ug/L	ND	100	100	40.4	50.3	40	50	44-223	22	14	M1,R1
Benzene	ug/L	ND	50	50	29.0	37.5	58	75	66-139	26	10	M1,R1
Bromobenzene	ug/L	ND	50	50	25.9	33.5	52	67	75-122	26	12	M1,R1
Bromochloromethane	ug/L	ND	50	50	31.1	40.5	62	81	73-133	26	13	M1,R1
Bromodichloromethane	ug/L	ND	50	50	23.8	31.3	48	63	57-120	27	13	M1,R1
Bromoform	ug/L	ND	50	50	18.7	25.0	37	50	48-128	29	13	M1,R1
Bromomethane	ug/L	ND	50	50	31.3	40.4	63	81	10-187	25	32	
Carbon tetrachloride	ug/L	ND	50	50	30.7	40.9	61	82	58-127	28	14	R1
Chlorobenzene	ug/L	ND	50	50	26.2	33.3	52	67	63-137	24	10	M1,R1
Chloroethane	ug/L	ND	50	50	40.4	50.2	81	100	52-146	22	16	R1
Chloroform	ug/L	ND	50	50	29.7	38.9	59	78	74-137	27	9	M1,R1
Chloromethane	ug/L	ND	50	50	22.1	28.8	44	58	41-127	26	10	R1
cis-1,2-Dichloroethene	ug/L	ND	50	50	29.9	38.6	60	77	71-138	25	16	M1,R1
cis-1,3-Dichloropropene	ug/L	ND	50	50	20.1	28.1	40	56	32-145	33	12	R1
Dibromochloromethane	ug/L	ND	50	50	21.7	28.7	43	57	52-116	28	13	M1,R1
Dibromomethane	ug/L	ND	50	50	25.2	33.4	50	67	79-129	28	14	M1,R1
Dichlorodifluoromethane	ug/L	ND	50	50	16.2	21.8	32	44	36-126	29	15	M1,R1
Diisopropyl ether	ug/L	ND	50	50	31.1	41.1	62	82	70-130	28	20	M1,R1
Ethylbenzene	ug/L	ND	50	50	27.6	35.1	55	70	31-174	24	10	R1
Hexachloro-1,3-butadiene	ug/L	ND	50	50	27.1	37.8	54	76	58-142	33	11	M1,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Roper Pump B6572-0001
Pace Project No.: 262331

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 11127 11128

Parameter	Units	262201001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	100	100	56.4	71.4	56	71	27-179	23	10	R1
Methyl-tert-butyl ether	ug/L	ND	100	100	42.4	56.2	42	56	38-120	28	12	R1
Methylene Chloride	ug/L	ND	50	50	29.8	38.2	60	76	61-146	25	15	M1,R1
Naphthalene	ug/L	ND	50	50	20.3	27.6	41	55	25-159	30	14	R1
o-Xylene	ug/L	ND	50	50	26.1	33.5	52	67	52-141	25	65	
p-Isopropyltoluene	ug/L	ND	50	50	25.8	33.4	52	67	59-134	26	9	M1,R1
Styrene	ug/L	ND	50	50	24.7	31.0	49	62	77-128	23	14	M1,R1
Tetrachloroethene	ug/L	ND	50	50	27.5	35.6	55	71	36-155	26	14	R1
Toluene	ug/L	ND	50	50	28.8	37.6	58	75	52-146	26	11	R1
trans-1,2-Dichloroethene	ug/L	ND	50	50	32.2	40.6	64	81	61-152	23	14	R1
trans-1,3-Dichloropropene	ug/L	ND	50	50	18.4	24.8	37	50	37-146	30	12	R1
Trichloroethene	ug/L	ND	50	50	28.7	37.4	57	75	61-141	27	12	M1,R1
Trichlorofluoromethane	ug/L	ND	50	50	34.4	43.3	69	87	51-141	23	13	R1
Vinyl acetate	ug/L	ND	50	50	19.1	26.9	38	54	52-141	34	14	M1,R1
Vinyl chloride	ug/L	ND	50	50	27.8	35.9	56	72	22-156	26	26	
Xylene (Total)	ug/L	ND	150	150	82.5	105	55	70	78-132	24	7	RS
1,2-Dichloroethane-d4 (S)	%.						96	95	81-119			
4-Bromofluorobenzene (S)	%.						101	101	82-120			
Dibromofluoromethane (S)	%.						106	106	82-114			
Toluene-d8 (S)	%.						96	94	82-109			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Roper Pump B6572-0001
Pace Project No.: 262331

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
RS	The RPD value in one of the constituent analytes was outside the control limits.

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Roper Pump B6572-0001
Pace Project No.: 262331

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
262331001	**MW-9S**	EPA 8260B	2001		
262331002	**MW-12**	EPA 8260B	2001		
262331003	**MW-13D**	EPA 8260B	2001		
262331004	**MW-15D**	EPA 8260B	2001		
262331005	**MW-21D**	EPA 8260B	2001		

CHAIN OF CUSTODY RECORD

Pace Analytical®
www.pacelabs.com

LAB W.O #________ Quote:________ Page 1 of 1

Container Type Codes

AV Amber Vial; CV Clear Vial; P Plastic; AL Amber Liter; CL Clear Liter; AP Amber Plastic; AG Amber Glass; SJ Soil Jar; Other; PPV Prepreserved vial; ES Encore Sampler; PPV Prepreserved vial; PL C Plastic container; PL J Plastic Jar; Z Ziploc bag; TB Tedlar bag; WP Whirl pak; G Gallon Jug; TC Terra-core

Size(s) 2oz, 4oz, 8oz, 16oz, 32oz or 1L, other____ 40ml 500ml 250ml 125 ml

Example: 4ozP = 4oz Plastic, 8ozSJ= 8oz Soil Jar

Matrix Codes

SD Solid Waste; GW Ground Water; EFF Effluent; AFW Analyte Free H20; WW Waste Water; DW Drinking Water; SW Surface Water; ML Misc. Liquid; OL Oil; SL Sludge; SO Sol Sediment; AQ Aqueous; NA Nonaqueous; PE Petroleum; O Other____ (Please specify)

Preservative Type Codes

A. None; B. HNO3; C. H2SO4; D. NaOH; E. HCL; F. MeOH; G. Na2S2O3; H. NaHSO4; I. Ice; J. MCAA; K. Zn Acetate; O. Other

Company Name: Wenck PO# B6572-0001
Address: 1080 Holcomb Bridge Road
City: Roswell State: GA Zip: 30076
Attn: Adam Hayes, Mark Padgett Fax#
email: ahayes@wenck.com Phone: 678-987-5845
Project Name: Roper Proj # B6572-0001
Sampler Signature: Mark Padgett
Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

LAB ANALYSIS — Parameters: 8260 - VOCs; EXAMPLE: Diss. Lead 6010 (1, 16ozP)

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code			Total # of Containers	8260 - VOCs	REMARKS
1	MW-9S	2/28/18	1255	GW	N		3	X	
2	MW-12	↓	1330	↓	↓		3	X	
3	MW-13D	↓	1440	↓	↓		3	X	
4	MW-15D	↓	1155	↓	↓		3	X	
5	MW-21D	↓	1135	↓	↓		3	X	
6									
7									
8									
9									
10									

WO#: 262331
262331

Daily T.A.T. REQUEST (Rush): (Y) N — Today 1D 2D 3D 4D 5D ___
Short Hold: Y___ N X
Circle QA/QC Report Level: 1 (2) 3 4 CLP AFCEE QAPP Other____
EDD (Fees May Apply): ADaPT SEDD ERPIMS TSV CSV Other____
COC Condition: OK Incomplete
Required State Certification: FL GA SC NC NJ PA LA TX IL ___
Coolers #'s - Temp °C: 1___ 2___ 3___ 4___ 5___

Item	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	Mark Padgett	Wenck	2/28/18	1633				
2								
3					M Rahman		2/28/18	1630
4								

Lab Use Only	YES	NO	N/A
Non-Conformance Found?			
Samples INTACT upon arrival?			
Received on Wet Ice?			
Proper Preservatives Indicated?			
Received within holding time?			
Custody seals Intact?			
Volatiles rec'd without headspace?			
Proper Containers Used?			

Ice, 5.4°C, Intact, Client.

Pompano Lab 954-582-4300 Revision: F-ALL-C-007- Rev.00 C.O.C. Serial # 108653

Sample Condition Upon Receipt

Pace Analytical

Client Name: Wenck

Project #

WO#: 262331

PM: EDB Due Date: 03/07/18

CLIENT: WENCK

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

Tracking #:

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

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

Thermometer Used 83 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.4 Biological Tissue Is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 2/28/18 MB

			Comments:
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)

Responsive partner.
Exceptional outcomes.

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