REMEDIATION WORK PLAN IMPLEMENTATION REPORT AND 1Q2022 GROUNDWATER MONTIORING RESULTS

FORMER HOUGHLAND TOMATO CANNERY
1130 EASTVIEW DRIVE
FRANKLIN, INDIANA
IDEM STATE CLEANUP SITE #2013-034567
PATRIOT PROJECT NO. 21-1359-01E

Submitted to:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Land Quality, State Cleanup Program
100 N. Senate Ave., IGCN, Room 1101
Indianapolis, IN 46204-2251
Attn: Mr. Tim Johnson

Submitted for:

RROBERT CLAWSON dba HURRICANE ROAD INDUSTRIAL DEVELOPMENT
c/o Kroger Gardis & Regas LLP
111 Monument Circle, Suite 900
Indianapolis, Indiana 46204
Attention: Mr. Greg Cafouros

Submitted by:

PATRIOT ENGINEERING AND ENVIRONMENTAL INC.
6150 E. 75th Street
Indianapolis, Indiana 46250

JULY 14, 2022

July 14, 2022

State Cleanup Section
Indiana Department of Environmental Management
100 N. Senate Avenue, IGCN Room 1101
Indianapolis, Indiana 46204-2251
Attention: Mr. Tim Johnson

Re: Remediation Work Plan Implementation Report and 1Q2022 Groundwater Monitoring Results
Former Houghland Canning Property
1130 Eastview Drive, Franklin, Indiana
IDEM State Cleanup Site #2013-034567
Patriot Project No. 21-1359-01E

Dear Mr. Johnson:

On behalf of Kroger Gardis & Regas, LLP and Robert Clawson dba Hurricane Road Industrial Development, Patriot Engineering & Environmental, Inc. has prepared this Remediation Work Plan Implementation Report for the remedial injection activities completed at the former Houghland Tomato Cannery property located at 1135 Eastview Drive and the adjoining Kasting Family Limited Partnership agricultural property, located in Franklin, Indiana. This report documents the remediation activities performed at the Project Site and the results of the First Quarter 2022 post-injection groundwater monitoring.

Please contact Mike Casper at mcasper@patrioteng.com or 317 576-8058 if you have any questions or comments regarding this report or require any additional information.

Sincerely,

Patriot Engineering and Environmental, Inc.

James J. Cody
Project Manager

Michael F. Casper, LPG
Principal, Chief Environmental Consultant

cc: Greg Cafouros, Kroger Gardis & Regas, LLP

Attachments

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REMEDIATION WORK PLAN IMPLEMENTATION REPORT AND 1Q2022 GROUNDWATER MONITORING RESULTS

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IDEM STATE CLEANUP SITE #2013-034567
PATRIOT PROJECT NO. 21-1359-01E

1.0 INTRODUCTION

On behalf of Kroger Gardis & Regas LLP and Robert Clawson dba Hurricane Road Industrial Development (HRID), Patriot Engineering and Environmental, Inc. (Patriot) is pleased to submit this *Remediation Work Plan Implementation Report* (RWP Implementation Report) for the former Houghland Tomato Cannery (Houghland) property located at 1130 Eastview Drive ("HRID Property" or "On-Site") and the adjacent Kasting Family Limited Partnership (Kasting) agricultural property ("Kasting Property" or "Off-Site"), located in Franklin, Johnson County, Indiana (collectively referred to as "the Project Site"). The remediation work was performed in accordance with the Indiana Department of Environmental Management (IDEM)-approved *Remediation Work Plan* (RWP) and the *Off-Site Investigation Report and Remediation Work Plan Addendum* (RWP Addendum) for the Project Site. This report documents the remedial injection activities performed at the Project Site and the results of the First Quarter 2022 (1Q2022) post-injection groundwater monitoring for the HRID Property.

2.0 SITE IDENTIFICATION

The Project Site is located at 1130 Eastview Drive on the northeast side of Franklin, Johnson County, Indiana as shown on the Site Location Map included as Figure 1 in Appendix A. The Project Site is composed of the following parcels:

Parcel Number	Owner	Acres
41-08-12-034-018.000-017	Robert Clawson D/B/A HRID	11.98
41-08-12-034-019.000-017	Robert Clawson D/B/A HRID	4.31
41-08-12-041-010.000-017	Kasting Family Ltd Partnership	117.60

The remediation project contacts for the Project Site are:

Environmental Consultant:	Mr. Michael F. Casper, LPG Patriot Engineering and Environmental, Inc. 6150 E. 75th Street Indianapolis, Indiana 46250 (317) 576-8058 / mcasper@patrioteng.com
Representative for HRID:	Mr. Greg Cafouros Kroger Gardis & Regas LLP 111 Monument Circle, Suite 900 Indianapolis, Indiana 46204 (317) 692-9000 / gcafouros@kgrlaw.com
Representative for Kasting:	Dustin Huddleston Huddleston & Huddleston 98 West Jefferson Street, PO Box 9 Franklin, Indiana 46131 (317) 7365121 / dustin@huddlestonlaw.com

3.0 BACKGROUND

3.1 Project Site Description

The HRID Property is a portion of the former Houghland property, a former tomato canning operation that was subsequently divided into two properties. Mr. Robert Clawson, doing business as HRID, owns the eastern portion of the former Houghland property at 1130 Eastview Drive. Mr. Clawson leases the buildings on the property to various commercial tenants. The HRID Property includes six buildings, including two along the west portion of the northern property boundary, two in the south-central part of the site, and two unoccupied structures in the central part of the site. The area around the buildings is concrete paved and most of the remainder of the western portion of the HRID Property is grass and/or gravel covered. A large, wooded area comprises the northeastern part of the HRID Property.

The Kasting Property is located immediately east of the HRID Property and consists of approximately 117.6 acres of arable land. Hurricane Creek flows westward across the northeastern portion of the Kasting Property and then turns southward across the

central portion. The layout of the Project Site is shown on the Site Layout Map included as Figure 2 in Appendix A.

3.2 Contaminants of Concern

No significant quantities of hazardous materials have been used or stored at the Project Site by HRID or Kasting and no records were available detailing the use of hazardous materials by previous owners of the HRID Property. It is not known whether the soil and groundwater impacts discovered at the Project Site are the results of historic commercial/industrial activities at the HRID Property, or unknown and illegal dumping of waste materials on the HRID Property or properties to the west of the HRID Property.

The Project Site has been the subject of environmental investigation activities from 2013 through 2021. The previous investigations performed at the Project Site have revealed the presence of chlorinated volatile organic compounds (cVOCs) in both soil and groundwater. The specific chemicals of concern (COCs) at the Project Site include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene (tDCE), and vinyl chloride (VC).

Shallow and deep-zone groundwater PCE impacts are limited to the western part of the HRID Property; however, shallow-zone TCE impacts extend off-Site to the east approximately 500 feet beyond the eastern property line and onto the Kasting Property. In addition, deep and intermediate-zone TCE and cDCE impacts extend off-Site to the east-northeast approximately 1,700 feet onto the Kasting Property, with the direction of COC migration believed to be historically controlled by a former municipal water supply well field located on the northeast portion of the Kasting Property and the topography of the clay confining layer beneath the Kasting Property.

3.3 Remediation Work Plan and Addendum

An RWP (Patriot, June 18, 2021) was prepared for the Project Site and submitted to IDEM, proposing enhanced reductive dechlorination (ERD), along with a permeable contaminant plume cut-off wall and institutional controls as the most efficient, cost-effective option to address the residual impacts at the Project Site. The ERD injection and subsequent plume stability monitoring will be combined with the use of an

Environmental Restrictive Covenant (ERC) on the HRID Property that will prohibit groundwater extraction or use and limit land use to non-residential purposes in order to prevent future exposure. Following the installation and sampling of temporary groundwater monitoring wells on the Kasting Property, an RWP Addendum (Patriot, January 27, 2022) was prepared proposing a scope of work for remediation of the Kasting Property using ERD. The IDEM approved the RWP with conditions on August 5, 2021 and approved the RWP Addendum with conditions on February 16, 2022.

4.0 MONITORING WELL INSTALLATION AND PRE-INJECTION MONITORING

4.1 Monitoring Well Installation

Fourteen temporary groundwater monitoring wells were installed on the Kasting Property as part of the Off-Site Investigation described in the RWP (TMW-8S/8D, TMW-9S/9I/9D, TMW-10S/10I/10D, TMW-11D, TMW-12I/12D, TMW-13I/13D, TMW-14D). The well installation was documented in Patriot's RWP Addendum. On April 14 and 15, 2022, ten of the temporary wells were converted into permanent monitoring wells by adjusting the above-grade height of the riser pipe and installing above-ground steel protective covers. The top-of-casing elevations of the new wells will be surveyed prior to the first quarterly groundwater sampling event on the Kasting Property, which will occur in the fourth quarter of 2022 (4Q2022). The temporary wells that were converted and the corresponding permanent well identification numbers are as follows:

TMW-8D = MW-59D	TMW-10D = MW-61D
TMW-9S = MW-60S	TMW-12I = MW-62I
TMW-9I = MW-60I	TMW-12D = MW-62D
TMW-9D = MW-60D	TMW-13I = MW-63I
TMW-10I = MW-61I	TMW-13D = MW-63D.

Monitoring wells TMW-8S, TMW-10S, TMW-11D, and TMW-14D were abandoned in accordance with Indiana Department of Natural Resources (IDNR) and IDEM regulations.

The following monitoring wells will be installed on the Kasting Property in October 2022 after the current crops are harvested and before the first off-site sampling event:

Well ID	Location
MW-53S / MW-53D	Former TMW-1
MW-54S / MW-54D	Former TMW-2
MW55S / MW-55D	Former TMW-3
MW56S / MW-56D	Former TMW-4
MW-57S / MW-57D	Former TMW-5
MW-58S / MW-58D	Former TMW-6
MW-64I / MW-64D	New wells between TMW-12 and MW-46

The locations of the temporary monitoring wells, permanent monitoring wells, and wells to be installed in the Fall 2022 are shown on Figure 2 and the well construction details for the existing wells are provided in Table 1 in Appendix B.

4.2 Pre-injection Groundwater Monitoring

Between August 12 and August 18, 2021, Patriot collected groundwater samples from 46 monitoring wells for field screening (temperature, pH, specific conductivity, oxidation reduction potential (ORP), turbidity, and dissolved oxygen (DO)) and laboratory VOC analysis to establish pre-remediation baseline conditions. The results of the groundwater monitoring were provided in Patriot's *Further Site Investigation #4 Supplemental Investigation* report dated January 19, 2022.

On December 1 and 2, 2021, Patriot collected groundwater samples from the 14 newly installed temporary groundwater monitoring wells on the Kasting Property for field screening and laboratory VOC analysis. The sampling was conducted to establish pre-remediation baseline conditions and the results of the sampling were provided in Patriot's RWP Addendum.

5.0 REMEDIAL INJECTIONS

5.1 Remediation Approach and Injection Products

The remediation approach for the Project Site was the injection of liquid activated carbon (LAC) adsorption and ERD products in a series of permeable reactive barriers (PRBs) on both the HRID Property and Kasting Property. This remedial technique is combined with plume stability monitoring and an ERC on the HRID Property to reduce potential current and future exposure pathways.

The remediation approach included the injection of PlumeStop® Liquid Activated Carbon™ (PlumeStop), S-MicroZVI™ zero-valent iron, 3D MicroEmulsion (3DMe), and BioDechlor INNOCULUM Plus (BDI Plus), all of which are manufactured by Regenesis Bioremediation Products, Inc. (Regenesis).

PlumeStop is included in the injection to rapidly reduce the dissolved-phase plume (days/weeks versus months), inhibit further contaminant migration, and provide a long-term barrier to treat impacted groundwater that is migrating off-Site. PlumeStop is composed of very fine particles of activated carbon suspended in water through unique polymer dispersion chemistry. Once injected into the subsurface, PlumeStop behaves as a colloidal biomatrix, binding to the aquifer materials, rapidly removing dissolved-phase VOCs, and expediting permanent contaminant biodegradation.

S-MicroZVI is composed of colloidal, sulfidated zero-valent iron (ZVI) particles suspended in an aqueous medium with environmentally acceptable, proprietary dispersants. The passivation technique of sulfidation, completed through proprietary processing methods, provides unparalleled reactivity with chlorinated hydrocarbons like PCE and TCE, and increases its stability and longevity *in situ* by minimizing undesirable side-reactions. S-MicroZVI is delivered to the Site as a colloidal suspension at 40% ZVI by weight, with a particle size in the range of less than 5 microns.

3DMe is an engineered electron donor material that provides a three-stage electron donor release profile and pH-neutral chemistry and is delivered to the Site as a factory-emulsified product. 3DMe includes a patented molecular structure that provides a unique hydrophile-lipophile balance which enables maximum subsurface distribution

well beyond that of conventional emulsified vegetable oils. During the first stage, free lactic acid (lactate) is immediately available and rapidly fermented to enhance reductive dechlorination. The second stage involves a controlled release of lactic acid (lactate esters and polylactate esters) that are metabolized at a more controlled rate for longer-term enhancement of reductive dechlorination. During the third and final stage, free fatty acids and fatty acid esters are converted to hydrogen over a mid- to long-range timeline, providing for an exceptionally long electron donor release profile (up to 4 years).

After injection, 3DMe rapidly distributes itself throughout the subsurface via micellar movement. During this process, microscopic colloidal aggregates (micelles) continuously promulgate from areas of high concentrations to areas of lower concentration, thus moving the 3DMe electron donor material into areas beyond those affected by the initial injection. Additionally, as a result of its unique hydrophile-lipophile balance, applications of 3DMe have not demonstrated the significant aquifer blockage that is frequently seen with conventional emulsified oil products.

BDI Plus is an enriched natural microbial consortium containing species of *dehalococcoides sp.* that was developed by Regenesis. BDI Plus stimulates the rapid and complete dechlorination of cVOCs and provides an immediate population of degraders to take advantage of the reducing conditions created by the 3DMe.

Using these products in combination provides an optimal approach whereby chlorinated VOCs will be rapidly captured on the PlumeStop colloidal biomatrix where it is then abiotically and biologically reduced by the S-MicroZVI and 3DMe/BDI Plus without the generation of excessive daughter products.

5.2 Remediation Injection Techniques

Patriot retained Regenesis Remediation Services (RRS) to perform the remedial injections on the Project Site with direct oversight and supervision by Patriot personnel. The RRS Application Summary Report for the On-Site (HRID Property) Groundwater PRBs and the On-Site PlumeStop PRB is provided in Appendix C and the RRS Application Summary Report for the Off-Site (Kasting Property) PRBs is provided in Appendix D. The RRS Application Summary Reports contain detailed information

regarding the injection equipment and techniques, quality assurance and quality control (QA/QC) procedures, the volume of remediation products injected at each injection point, and any deviations from the RWP. Appendix A of each RRS Report contains tables providing a detailed explanation of the volumes of material injected at each injection point in each of the PRBs. Appendix A of each RRS Report also contains figures depicting the locations of each PRB and each injection point within each PRB. For ease of reference, the RRS figures are also provided in Appendix E of this report.

The activities that were conducted during PRB injections are summarized in the following sections.

5.3 On-Site PlumeStop PRB

The PlumeStop PRB injections on the HRID Property were conducted between September 14 and November 17, 2021. The PlumeStop PRB was divided into two transects on the HRID Property as shown on Figure 3 in Appendix A. One transect starts approximately 50 feet west of monitoring well MW-12 and continues approximately 357 feet east along the property boundary toward monitoring well MW-14 and the second transect starts at monitoring well MW-14 and continues approximately 478 feet north along the property boundary to a point just north of monitoring wells MW-43S/MW-43D. A total of 38,000 pounds of PlumeStop, 7,900 pounds of S-MZVI, and 58 liters of BDI were mixed and applied as a 10,000 milligrams per liter (mg/L) solution with a total volume of 93,577 gallons into 138 injection points in the PlumeStop PRB. The injection points were placed approximately 6 feet apart. Following injection at each location, the borings were backfilled with bentonite chips to the ground surface.

Table 1 in Appendix A of the RRS Application Summary Report for the On-Site Groundwater PRBs provides a detailed explanation of the volumes of material injected at each point and RRS's Figure 1 in Appendix A of the RRS report (also provided in Appendix E of this report) shows the location of the PlumeStop PRB and each injection point within the PRB.

The following deviations from the RWP occurred during the PlumeStop remedial injections:

- The original barrier was estimated to be 850 feet long but during the layout of the PRB lines it was measured to be 835 feet in length. The RRS team reduced the total number of injection points from 142 to 138 and increased the total product mass for each injection point to account for this.
- The barrier was moved upgradient of monitoring wells MW-14, MW-15S, MW-15D, MW-43S and MW-43D.
- The RRS team switched from 3-foot screens to expendable tips to decrease potential of surfacing, heaving, and to increase the distribution throughout the bottom intervals.
- The injection depths varied throughout the barrier based on soil borings and the drillers' discretion of where the clay confining layer began.
- Several injection points were redrilled due to heaving and/or surfacing issues. Table 1 in Appendix A of the RRS Application Summary Report for the On-Site Groundwater PRBs provides further details for these points.
- Several depth intervals within an injection point did not receive full volume of product due to surfacing/insufficient flow rates. The unused product volume was redistributed to the next depth interval.
- Several injection points did not receive full volume of product. In these cases, the remaining product volume was allocated to the deepest interval in the adjacent injection point.
- Injection points 16, 18, 20, and 22 received less volume due to confusion on the depth of the clay confining layer in the subsurface. Neighboring injection points received an additional volume of materials to ensure adequate distribution of product mix throughout the area.
- A concrete wall that was reportedly part of a containment for Houghland Canning's disposal of residual vegetable matter is present between injection points 107 and 108, which prevented uniform barrier point placement. Injection point 138 was renamed injection point 107 B and placed near the concrete barrier to ensure there were no gaps in coverage. The map in the RRS Application Summary Report for the On-Site Groundwater PRBs shows the location of the concrete wall and relocated injection point.

5.4 On-Site Groundwater Remediation

The remedial injections on the HRID Property were conducted between September 22 and November 17, 2021. The remediation products were injected in five PRBs as described below, with an injection point spacing of approximately 8 feet in each PRB. The locations of the PRBs are shown on Figure 3 in Appendix A. The volumes of materials injected in each PRB are summarized below and a detailed explanation of the volumes of material injected at each point in each PRB is provided on Table 2 through Table 6 in Appendix A of the RRS Application Summary Report for the On-site Groundwater PRBs. Figures 2 through 7 in Appendix A of the RRS report (also provided in Appendix E of this report) show the location of each On-Site Groundwater Remediation PRB and each injection point within each PRB.

ID	Length (ft)	Points	3DME (lbs)	ZVI (lbs)	BDI (Liters)	Total Volume (gals)	RRS Report Reference
PRB 1	344	44	5,382	4,037	12	13,288	App A: Table 2 and Figure 2
PRB 2	192	25	3,076	2,307	6.82	7,593	App A: Table 3 and Figure 2
PRB 3	228	38	4,646	3,485	10.36	11,471	App A: Table 4 and Figure 3
PRB 4	366	62	7,600	5,700	16.91	18,763	App A: Table 5 and Figures 4 and 5
PRB 5	366	62	7,301	5,476	16.91	18,197	App A: Table 6 and Figures 6 and 7

The following deviations from the RWP occurred during the On-Site remedial injections:

- Depths in each of the PRBs varied based on the depth of the clay confining layer beneath the site
- The orientation of PRB 3 was changed slightly due to the presence of underground utilities on the northern end of the PBR. The northern points of the line skew eastward when encountering the utilities
- PRB 4 was broken into two segments to allow more coverage perpendicular to the southerly direction of groundwater flow on the northern portion of the HRID Property and the easterly direction of groundwater flow on the central and southern portions of the HRID Property

- PRB 5 was broken into two segments and angled southwest to northeast to allow more coverage perpendicular to the direction of groundwater flow in this area.

As shown on Table 2 of the RRS Report, groundwater data collected after the injections in each PRB showed noticeable drops in ORP levels, indicating a more reducing environment caused by adequate dispersion of the injected materials. Following injection at each location, the borings were backfilled with bentonite chips to the ground surface.

5.5 Off-Site Groundwater Remediation

The remedial injections on the Kasting Property were conducted on 24 days between February 22 and April 26, 2022. Delays caused by rain, flooding, and access limitations were experienced, resulting in the extended calendar timeframe to complete the project. The remediation products were injected in six PRBs with an injection point spacing of approximately 8 feet in each PRB. The Shallow and Deep Southern PRB (PRB 6) and the Shallow and Deep Northern PRB (PRB 7) were installed throughout the entire depth of the water-bearing unit on the western portion of the Kasting property. These two PRBs were installed from the groundwater interface to the clay confining layer, with average injection depth intervals of approximately 10 to 65 feet below ground surface (ft bgs). Four additional reactive barriers were installed from average depths of approximately 30 ft bgs to approximately 65 ft bgs on the western (Deep Only Northern Barrier or PRB 8 and Deep Only Southern Barrier or PRB 9), central (Deep Only Central Barrier or PRB 10), and eastern (Deep Only Northern Barrier of PRB 11) portions of the Kasting property in locations where groundwater sampling and analysis had shown the COC impacts to be limited to the deeper or intermediate portions of the water-bearing unit.

The COC plume on the Kasting Property is oriented in a west-southwest to east-northeast direction due to historic pumping from the municipal Webb Wellfield located east-northeast of the Project Site along Hurricane Creek and due to the topography of the top of the clay confining layer beneath the Kasting Property. The orientations of the remediation barriers appear to be parallel to the axis of the COC plume but are perpendicular to the actual south-southeasterly direction of groundwater flow on this portion of the Project Site.

The locations of the PRBs are shown on Figure 3 in Appendix A. The volumes of materials injected in each PRB are summarized below and a detailed explanation of the volumes of material injected at each point in each PRB is provided on Tables 1 through 6 in Appendix A of the RRS Application Summary Report for the Off-Site Groundwater PRBs. Figures 1 through 4 in Appendix A of the RRS report (also provided in Appendix E of this report) show the location of each Off-Site Groundwater Remediation PRB and each injection point within each PRB.

ID	Length (ft)	Points	3DME (lbs)	ZVI (lbs)	BDI (Liters)	Total Volume (gals)	RRS Report Reference
PRB 6	210	36	9,900	7,412	26.82	25,974	Shallow and Deep Southern Barrier: App A: Table 6 and Figure 3
PRB 7	84	15	4,118	3,088	11.18	10,302	Shallow and Deep Northern Barrier. App A: Table 5 and Figure 3
PRB 8	222	38	6,045	4,534	18.14	15,162	Deep Northern PRB App A: Table 3 and Figure 3
PRB 9	174	30	4,773	3,580	14.32	11,970	Deep Southern PRB. App A: Table 2 and Figure 3
PRB 10	588	99	15,750	411,813	47.25	39,501	Deep Central PBR. App A: Table 1 and Figures 1 and 2
PRB 11	48	9	1,432	1,074	4.3	3,591	Deep Northern PRB. App A: Table 4 and Figure 4

The following deviation from the RWP occurred during the On-Site remedial injections:

- Several points were completed using expendable tips rather than the proposed 4'-drop screens due to clogging and/or surfacing issues. See log for details on the tooling for each point.

6.0 FIRST QUARTER 2022 POST-INJECTION GROUNDWATER MONITORING

The 1Q2022 groundwater monitoring was the first post-injection quarterly performance groundwater monitoring event following completion of the remediation at the HRID Property. In accordance with the RWP and IDEM's August 5, 2021 *Further Site Investigation 4, Remediation Work Plan Review* letter, the quarterly sampling events for the HRID Property remediation include the following monitoring wells:

- MW-11, 12, 12D, 14, 14D, 15, 15D, 22, 22D, 23, 24, 26, 29, 29D, 30, 32, 33, 33D, 36, 37, 39, 40, 41, 41D, 42, 42D, 43, 43D, and 46I (29 wells)

The future semi-annual groundwater monitoring events will include all quarterly wells plus the following wells:

- MW-25, MW-31, and MW-40D (32 wells total)

The future annual groundwater monitoring events will include all quarterly and semi-annual wells plus the following wells:

- Annually: MW-10, 11D, 13, 16, 17, 18, 19, 20, 21, 27, 28, 34, 34D, 35, 35D, 36D, 37D, 38, 38D, 39D, 44, 44D, 45, 45D, 46, 46D, 47, 47I, 47D, 48, 48D, 49, 49D (65 wells total)

The post-injection quarterly performance groundwater monitoring events for the Kasting Property will commence in the 4Q2022.

6.1 Monitoring Well Sampling

Patriot mobilized to the Project Site on March 14 through March 17, 2022 to collect groundwater samples from the 29 quarterly monitoring wells for the HRID Property remediation. On-Site monitoring well MW-11 was covered with equipment and materials and could not be sampled. Patriot was temporarily denied access to the Kasting property so monitoring well MW-46I was not sampled during the 1Q2022 event. Prior to sampling, the water levels in the accessible monitoring wells were gauged using an electronic water level meter. The depth to groundwater and total well depth from the surveyed top-of-casing was measured to the nearest 0.1 foot at each well. The water

level probe and tape were decontaminated with a non-phosphate detergent wash and distilled water rinses after use at each well to prevent cross contamination. The depth to groundwater measurements were recorded in a field log and used to calculate groundwater elevations to evaluate groundwater flow conditions at the Project Site.

Groundwater sampling was conducted using low flow procedures in accordance with the low-flow sampling method outlined in the IDEM Micro-Purge Sampling Option Technical Guidance Document (June 3, 1998, revised November 3, 2009). Low flow sampling causes minimal drawdown of the water level within the well thus limiting the volatilization of VOCs or the introduction of sediment into the sample. To conduct the low flow sampling, Patriot placed a small diameter, submersible pump into the well fitted with dedicated tubing that reached above the ground surface. The well was pumped at a rate ranging between 50 to 200 milliliters per minute (ml/min), and the static water level within the well was monitored to ensure that drawdown was limited to 0.1 meter or less.

The groundwater removed from the well was pumped through a flow-through cell equipped with a water quality meter that measured water temperature, pH, specific conductivity, oxidation-reduction potential (ORP), turbidity and dissolved oxygen (DO). Stabilization of these water quality parameters (e.g., consecutive readings within 10 percent of the previous reading) indicate that the water being withdrawn from the well was representative of the actual groundwater conditions and the groundwater sample can be collected. The groundwater samples were collected by disconnecting the discharge tubing from the flow-through cell and filling 40 milliliter (ml) glass vials with Teflon-lined septa directly from the discharge tubing. The groundwater sampling activities including the field measurements specified above were recorded and documented on field sampling forms that are included in Appendix F. The sample containers were labeled, placed on ice in a cooler, and delivered to Pace Analytical Services, Inc. (Pace) using chain of custody controls. The samples were analyzed for VOCs using U.S. EPA SW-846 Method 8260. The sampling purge water was placed in sealed 55-gallon drums and stored on-site pending characterization and disposal.

Quality Assurance/Quality Control (QA/QC) procedures included the collection and analysis of duplicate groundwater samples from monitoring wells MW-30 (DUP A) and MW-32 (DUP B) and one trip blank per cooler of samples delivered to the laboratory. The QA/QC samples were also analyzed for VOCs using U.S. EPA SW-846 Method 8260.

Patriot remobilized to the HRID Property on April 5, 2022 to collect groundwater samples for biogeochemical analysis. Groundwater samples were collected from monitoring wells MW-22, MW-30, MW-38D, MW-39, MW-40, MW-41, and MW-14D using the low flow sampling methods described above. The samples were submitted to Pace for analysis of nitrate and sulfate by EPA Method 9056, dissolved iron by EPA Method 6010, total organic carbon (TOC) by EPA Method 5310C, chemical oxygen demand (COD) by Method 410.4, biological oxygen demand (BOD 5-day) by EPA Method 5210B, and ethane, ethene, and methane by Method RSK 175 Modified. Sample aliquots were also submitted to Microbial Insights, Inc. for *dehalococcoides* microbial counts

6.2 Groundwater Flow Data

Groundwater elevation data from the 1Q2022 groundwater sampling event and from previous groundwater sampling events are provided in Table 2 in Appendix B. The shallow and deep groundwater elevations and resulting groundwater elevation contours from the 1Q2022 gauging were plotted on groundwater potentiometric surface maps. The shallow and deep potentiometric surface maps are provided as Figures 4 and 5, respectively, in Appendix A.

The shallow groundwater flow direction on the HRID Property is generally southerly on the northwestern and north-central portions of the property changing to easterly on the southern half of the property and onto the Kasting Property. The deep groundwater flow direction is similar to the shallow groundwater flow direction. Evaluation of the shallow and corresponding deeper groundwater elevation data indicates that there is no significant upward or downward gradient between the upper and lower portions of the unconfined aquifer.

6.3 Groundwater Field Screening Results

As described above, the groundwater samples were monitored in the field for various physical parameters. Decreases in ORP and DO between the pre-injection samples and the post-injection samples are indicative of increasingly anaerobic groundwater conditions, which are necessary for effective reductive dichlorination. The target value for ORP is <0.0 millivolts (mV) and the target value for DO is <1.0 milligram per liter

(mg/L). The pH, ORP, and DO measurements from the pre-injection sampling event and the post-injection sampling event are shown on Table 3 in Appendix B.

Of the 27 wells sampled in the 1Q2022, ORP decreased in samples from 18 wells, increased in samples from six wells, and had no significant change in samples from three wells. ORP values of <0.0 mV were encountered in samples from 10 of the monitoring wells with samples from an additional four monitoring wells having an ORP of 10.0 mV or less. DO concentrations decreased in samples from 19 wells, increased in samples from four wells, and had no significant change in samples from four wells. DO concentrations of <1.0 mg/L were encountered in samples from 20 of the wells. Samples from 18 of these wells also had DO concentrations of 0.10 mg/L or less, and samples from 10 of the monitoring wells had DO concentrations of 0.0 mg/L.

The decreasing ORP measurements and DO concentrations, as well as the very low or non-detectable DO concentrations in the majority of the monitoring wells, indicate that the remedial injections are effectively altering the groundwater conditions at the HRID Property to support reductive dichlorination.

6.4 Groundwater Analytical Results

The 1Q2022 Bio/Geochemical analytical results are summarized on Table 4 in Appendix C and the laboratory analytical reports are included in Appendix G.

The 1Q2022 VOC analytical results were compared to the IDEM Remediation Guide (RCG) Residential Tap Water Screening Levels (TWSLs) and the RCG Residential and Commercial/Industrial Vapor Intrusion from Groundwater Screening Levels (VIGWSLs), where established. The groundwater analytical results from the 1Q2022 sampling and the corresponding RCG Screening Levels are summarized on Table 5 in Appendix B and a copy of the laboratory groundwater analytical report is included in Appendix G. Table 5 also contains the corresponding analytical results from the two most recent sampling events prior to the groundwater remediation injections so that post-injection increasing or decreasing trends can be observed. The compiled groundwater analytical data for all investigations conducted at the Project Site by Patriot are summarized on Table 6 in Appendix C. The shallow and intermediate/deep groundwater analytical results from the 1Q2022 investigation are depicted on Figures 6 and 7, respectively, in

Appendix A. Figures 6 and 7 also contain the most recent pre-injection groundwater analytical data for each of the sampled wells.

PCE was detected in pre-injection samples from 15 of the wells in the quarterly groundwater monitoring network. Analysis of the samples from the 1Q2022 monitoring event revealed decreasing PCE concentrations in samples from six of the wells (with four of the wells reduced to non-detectable), an increasing trend in samples from five of the wells, and no apparent trend in samples from three of the wells. One well (MW-11) was not sampled during the 1Q2022.

TCE was detected in samples from 18 of the 1Q2022 wells as compared to samples from 23 of the pre-injection wells (monitoring wells MW-11 and MW-46I also contained TCE in pre-injection samples but could not be accessed and were not sampled during the 1Q2022). TCE concentrations showed a decreasing trend in samples from 13 of the wells (with five of the wells reduced to non-detectable), an increasing trend in samples from seven of the wells, and no apparent trend in samples from three of wells

cDCE was detected in samples from 17 of the 1Q2022 wells as compared to pre-injection samples from nine wells. cDCE concentrations showed a decreasing trend in samples from four of the wells (including one well that was reduced to non-detectable), an increasing trend in samples from 13 of the wells, and no apparent trend in samples from one well.

tDCE was detected in samples from four of the 1Q2022 and pre-injection wells. tDCE concentrations showed a decreasing trend in samples from three wells and an increasing trend in samples from one well.

VC was detected in samples from six of the 1Q2022 wells as compared to samples from three of the pre-injection wells. VC concentrations did not show a decreasing trend in any of the wells, showed an increasing trend in samples from five wells, and no apparent trend in samples from one well.

The overall reduction in PCE and TCE concentrations and the increase in cDCE and VC concentrations indicate that reductive chlorination of PCE and TCE to daughter

products is occurring. A summary of the COC concentration trends by PRB is provided below.

PlumeStop PRB

MW-12 – TCE trending downward, no PCE, cDCE , or VC
MW-12D – No COCs detected in pre- or post-injection samples
MW-14 – No COCs detected in pre- or post-injection samples
MW-14D – TCE trending downward, cDCE trending upward, no PCE or VC
MW-15 – TCE trending downward, cDCE trending upward, no PCE or VC
MW-15D – cDCE trending strongly downward, no PCE, TCE or VC
MW-43 – No COCs detected in pre- or post-injection samples
MW-43D – TCE and cDCE reduced to non-detectable, no PCE or VC

PRB 1

MW-24 – PCE and TCE trending downward, cDCE trending upward, no VC
MW-37 – PCE and TCE trending upward, no cDCE or VC

PRB 2

MW-11 – Not accessible to be sampled during 1Q2022
MW-23 – PCE and TCE reduced to non-detectable, cDCE and VC strongly upward
MW-30 – PCE and TCE trending downward, cDCE and VC trending strongly upward

PRB 3

MW-26 – PCE reduced to non-detectable, TCE trending downward, cDCE and VC trending strongly upward
MW-32 (deep) – PCE, TCE and cDCE trending upward, no VC
MW-39 – PCE and TCE trending upward, VC stable, no cDCE

PRB 4

MW-22 – PCE and TCE reduced to non-detectable, cDCE trending upward, no VC
MW-22D – PCE stable, TCE and cDCE trending upward, no VC
MW-33 – PCE and TCE are stable, cDCE trending upward, no VC
MW-33D – PCE, DCE and cDCE trending upward, no VC

PRB 5

MW-29 – PCE and TCE reduced to non-detectable, cDCE trending upward, no VC
MW-29D – No trends for PCE, TCE, and cDCE, no VC
MW-40 – TCE stable, cDCE and tDCE trending downward, no VC
MW-41 – TCE trending downward, cDCE and VC trending upward
MW-41D – TCE reduced to non-detectable, cDCE and VC trending upward, no PCE

Other Wells

MW-36 – PCE and TCE trending upward, no cDCE or VC
MW-42 – TCE trending downward, no PCE, cDCE or VC
MW-42D – TCE trending upward, cDCE trending downward, no PCE or VC
MW-46I – not accessible to be sampled during 1Q2022

7.0 CONCLUSIONS

Based on the findings of the 1Q2022 groundwater monitoring event, the following conclusions are drawn:

- The PlumeStop PRB is significantly reducing the TCE concentrations at the downgradient boundary of the HRID Property in both shallow and deep groundwater. The increasing cDCE concentrations in MW-14D and MW-15 is evidence that reductive dechlorination is occurring.
- PRB-1 is reducing the PCE and TCE concentrations at MW-24, which is located adjacent to the PRB, but has not yet had a noticeable effect on the COC concentrations at MW-37, which is located approximately 100 feet northeast of the PRB. The increasing cDCE concentration in MW-24 is evidence that reductive dechlorination is occurring.
- PRB-2 is reducing the downgradient PCE and TCE concentrations, and the strongly increasing cDCE and VC concentrations in both monitoring wells is evidence that reductive dichlorination is occurring.
- PRB-3 has reduced the PCE and TCE concentrations in one shallow well but has not yet impacted the PCE or TCE concentrations in the other shallow well or in the deep well. The appearance of cDCE and or VC in all three wells is evidence that reductive dichlorination is occurring.

- PRB-4 has reduced the PCE and TCE concentrations to non-detectable in one shallow monitoring well but had not yet had a noticeable effect in the other shallow well or either of the deep wells. Increasing cDCE concentrations in all four monitoring wells is evidence that reductive dichlorination is occurring, but the relatively low concentrations of tDCE and the absence of VC indicate reductive dichlorination has not yet become well established.
- PRB-5 has reduced the TCE concentrations in the southern and central shallow wells and the southern deep well but has not yet had a noticeable effect in the northern shallow or central deep monitoring wells. Increasing cDCE and VC concentrations in the southern wells (MW-41 and MW41D) indicate that reductive dechlorination is occurring along the southern portion of PRB-5 but evidence of reductive dichlorination decreases northward along PRB-5.

In general, it appears that reductive dechlorination if occurring to a greater degree on the southern portion of the HRID Property and lessens in a northward direction. The direction of groundwater flow is southerly on the northern portion of the HRID Property switching to easterly along the central and southern portions of the property. The southerly flow on the northern portion of the HRID property is not directly perpendicular to the PRBs and appears to be slowing the establishment of groundwater conditions that are most supportive of reductive dechlorination.

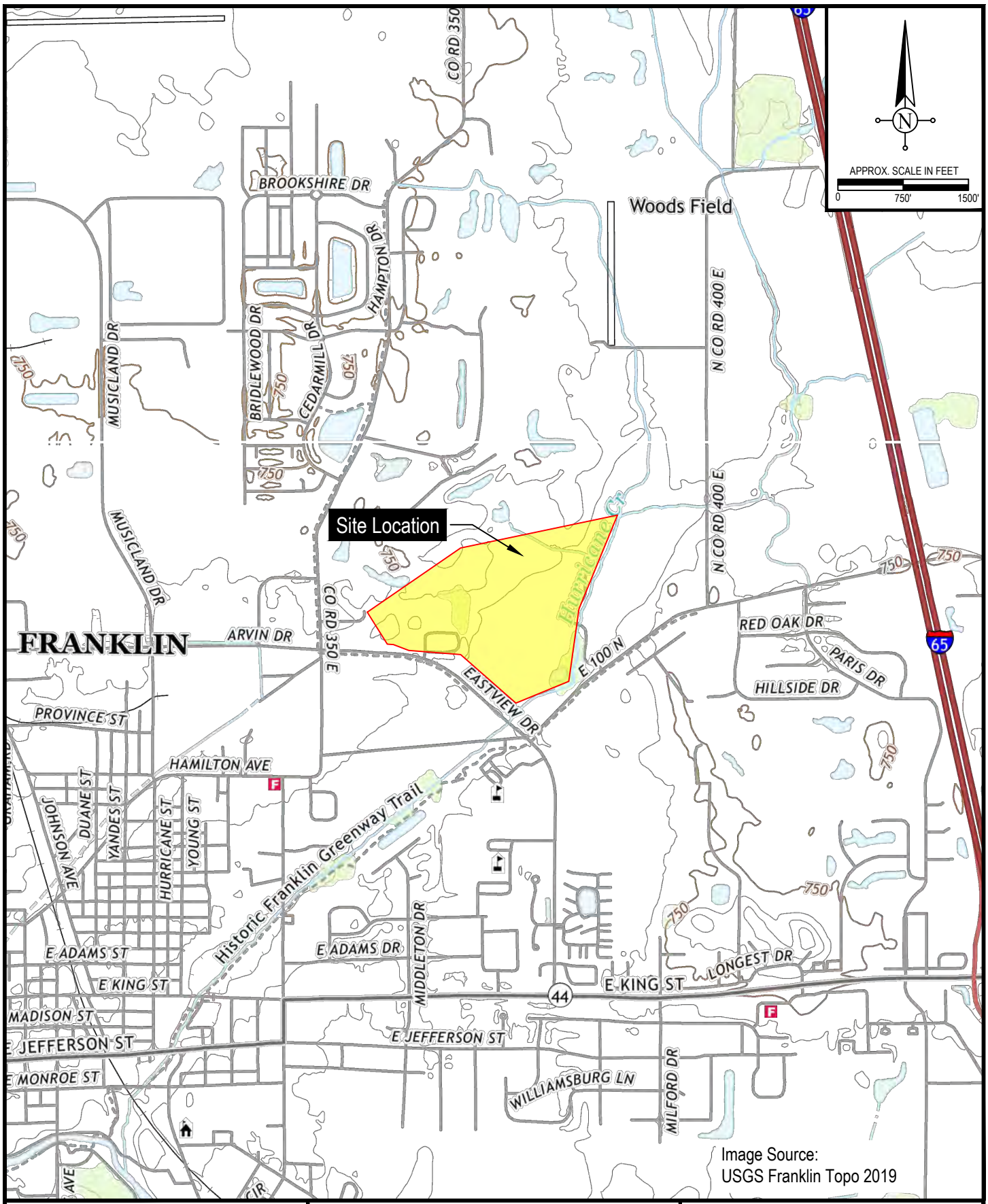
8.0 MONITORING SCHEDULE

The second quarter 2022 (2Q2022)/semi-annual monitoring event on the HRID Property was performed in June 2022 and the results will be submitted to IDEM in a quarterly monitoring report. The third quarter 2022 (3Q2022) monitoring event on the HRID Property will be performed in August 2022 and the fourth quarter 2022 (4Q2022) monitoring event on the HRID Property and Kasting Property be performed in October 2022. The 4Q2022 monitoring event on the HRID property will be the annual monitoring event for 2022.

The additional monitoring wells discussed in Section 4.1 of this report will be installed on the Kasting property prior to the 4Q2022 sampling event.

APPENDIX A

FIGURES



Patriot Engineering & Environmental, Inc.

Project: Former Houghland Tomato Cannery 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
	Drawn By: J. DuMond
Project Number 21-1359-01E	Approved: M. Casper
Date: January 24, 2022	DWG: 21-1359-01_1

Figure 1

Site Location Map

Patriot Engineering & Environmental, Inc.

LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- Water Production Well

Project: Former Houghland Tomato Cannery 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
	Drawn By: J. DuMond
Project Number21-1359-01E	Approved: J. Cody
Date: June 9, 2022	DWG: 21-1359-01_FSI4b

Figure 2

Site Layout Map

Patriot Engineering & Environmental, Inc.

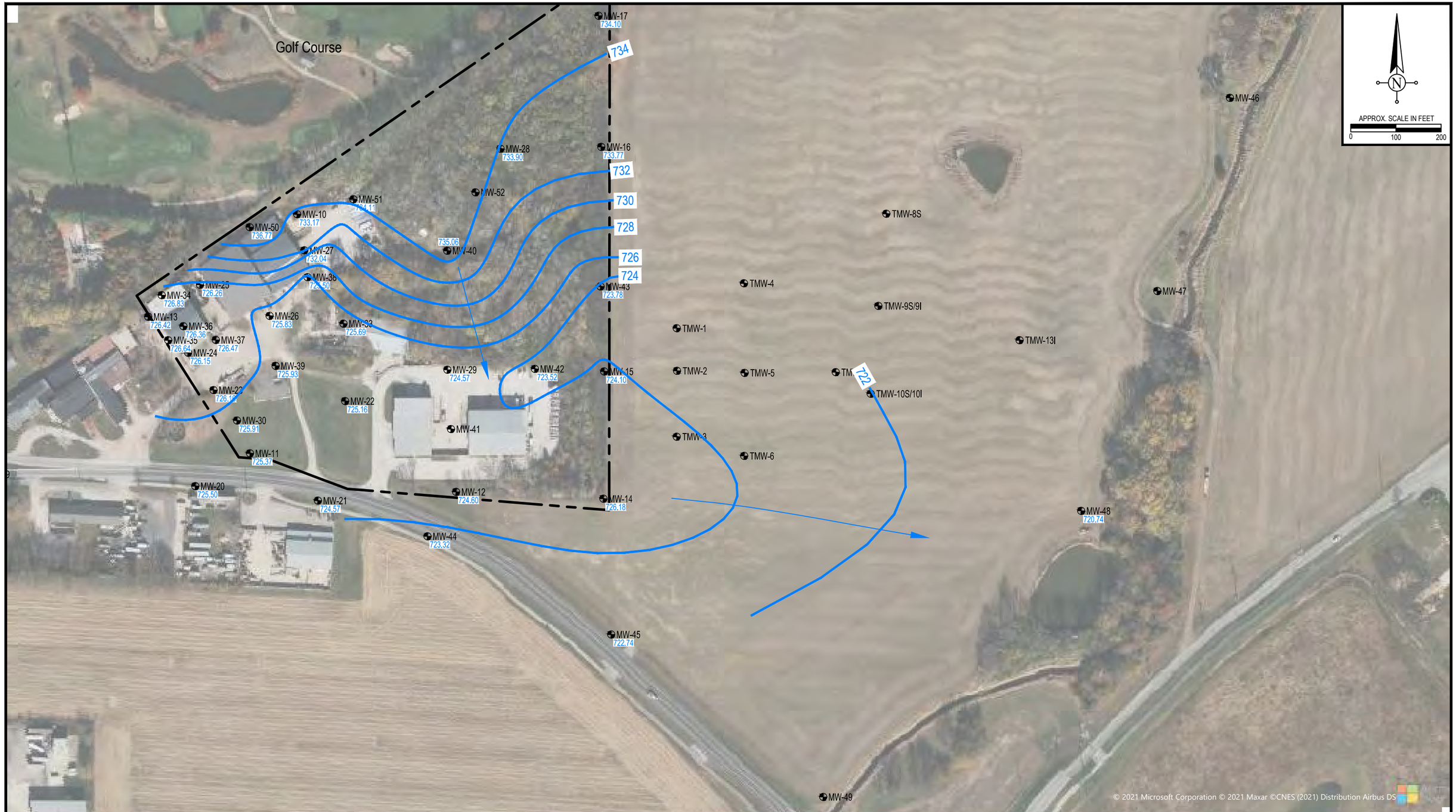
LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- Water Production Well
- Permeable Reactive Barrier

Project: Former Houghland Tomato Cannery 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
	Drawn By: J. DuMond
Project Number 21-1359-01E	Approved: M. Casper
Date: June 21, 2022	DWG: 21-1359-01_FSI4b

Figure 3

Permeable Reactive Barrier Locations



Patriot Engineering & Environmental, Inc.

LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- 719.84 Groundwater Elevation (ft.)
- 719 Groundwater Elevation Contour Line
- Inferred Groundwater Contour Line
- Groundwater Flow Direction

Project: Former Houghland Tomato Cannery 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
	Drawn By: J. DuMond
Project Number21-1359-01E	Approved: M. Casper
Date: April 7, 2022	DWG: 21-1359-01_FSI4b

Figure 4

Shallow Potentiometric Surface Map
March 17, 2022

Patriot Engineering & Environmental, Inc.

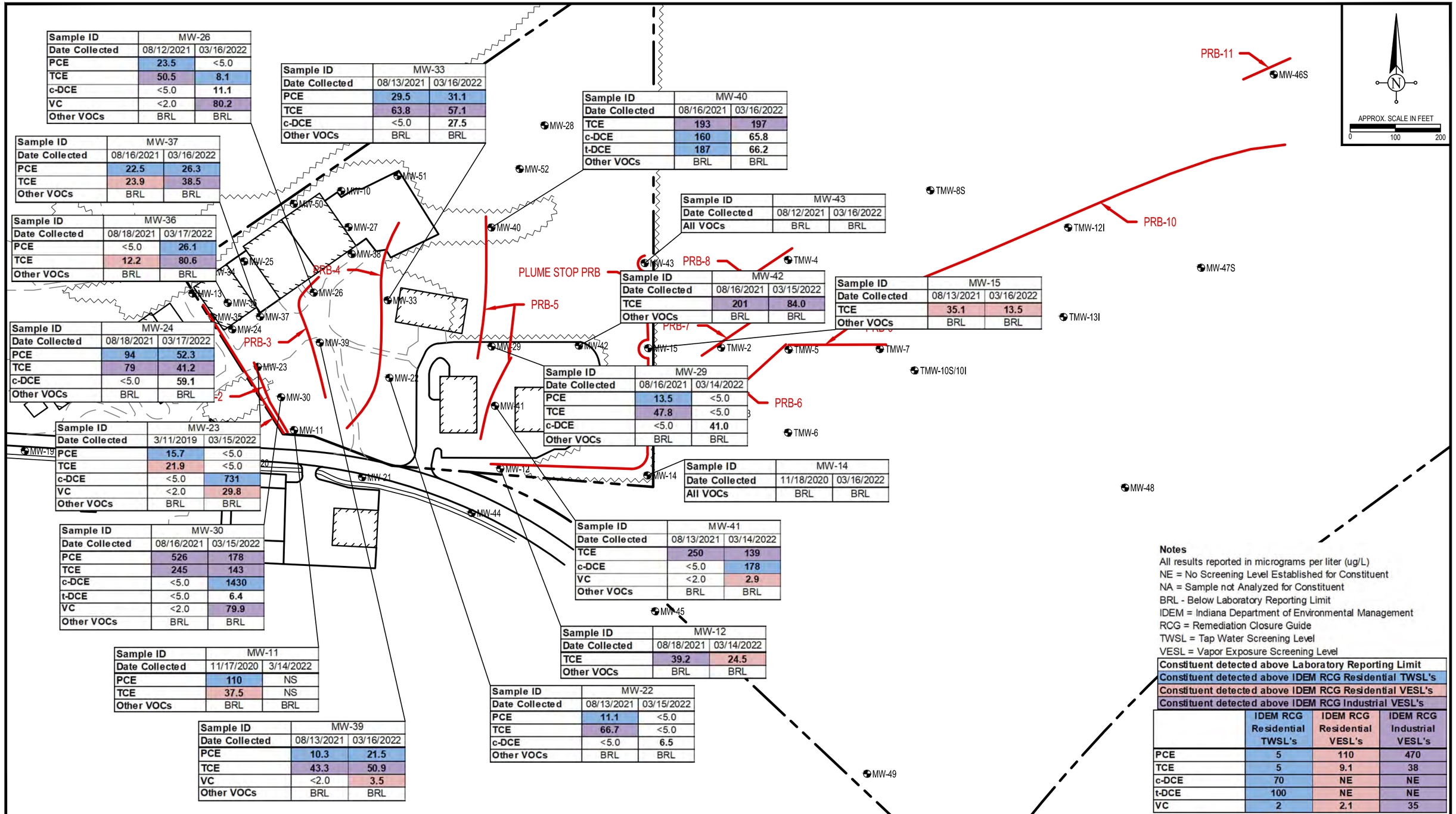
LEGEND

- Site Boundary
- Patriot Monitoring Well Location
- 719.84 Groundwater Elevation (ft.)
- 719 Groundwater Elevation Contour Line
- Groundwater Flow Direction

Project: Former Houghland Tomato Cannery 1130 E. Eastview Drive Franklin, Indiana IDEM Identification No. 2013-34567	
	Drawn By: J. DuMond
Project Number 21-1359-01E	Approved: M. Casper
Date: April 7, 2022	DWG: 21-1359-01_FSI4b

Figure 5

Deep Potentiometric Surface Map
March 17, 2022



Sample ID	MW-26	
Date Collected	08/12/2021	03/16/2022
PCE	23.5	<5.0
TCE	50.5	8.1
c-DCE	<5.0	11.1
VC	<2.0	80.2
Other VOCs	BRL	BRL

Sample ID	MW-33	
Date Collected	08/13/2021	03/16/2022
PCE	29.5	31.1
TCE	63.8	57.1
c-DCE	<5.0	27.5
Other VOCs	BRL	BRL

Sample ID	MW-40	
Date Collected	08/16/2021	03/16/2022
TCE	193	197
c-DCE	160	65.8
t-DCE	187	66.2
Other VOCs	BRL	BRL

Sample ID	MW-37	
Date Collected	08/16/2021	03/16/2022
PCE	22.5	26.3
TCE	23.9	38.5
Other VOCs	BRL	BRL

Sample ID	MW-43	
Date Collected	08/12/2021	03/16/2022
All VOCs	BRL	BRL

Sample ID	MW-36	
Date Collected	08/18/2021	03/17/2022
PCE	<5.0	26.1
TCE	12.2	80.6
Other VOCs	BRL	BRL

Sample ID	MW-42	
Date Collected	08/16/2021	03/15/2022
TCE	201	84.0
Other VOCs	BRL	BRL

Sample ID	MW-15	
Date Collected	08/13/2021	03/16/2022
TCE	35.1	13.5
Other VOCs	BRL	BRL

Sample ID	MW-24	
Date Collected	08/18/2021	03/17/2022
PCE	94	52.3
TCE	79	41.2
c-DCE	<5.0	59.1
Other VOCs	BRL	BRL

Sample ID	MW-29	
Date Collected	08/16/2021	03/14/2022
PCE	13.5	<5.0
TCE	47.8	<5.0
c-DCE	<5.0	41.0
Other VOCs	BRL	BRL

Sample ID	MW-23	
Date Collected	3/11/2019	03/15/2022
PCE	15.7	<5.0
TCE	21.9	<5.0
c-DCE	<5.0	731
VC	<2.0	29.8
Other VOCs	BRL	BRL

Sample ID	MW-14	
Date Collected	11/18/2020	03/16/2022
All VOCs	BRL	BRL

Sample ID	MW-30	
Date Collected	08/16/2021	03/15/2022
PCE	526	178
TCE	245	143
c-DCE	<5.0	1430
t-DCE	<5.0	6.4
VC	<2.0	79.9
Other VOCs	BRL	BRL

Sample ID	MW-41	
Date Collected	08/13/2021	03/14/2022
TCE	250	139
c-DCE	<5.0	178
VC	<2.0	2.9
Other VOCs	BRL	BRL

Sample ID	MW-12	
Date Collected	08/18/2021	03/14/2022
TCE	39.2	24.5
Other VOCs	BRL	BRL

Sample ID	MW-11	
Date Collected	11/17/2020	3/14/2022
PCE	110	NS
TCE	37.5	NS
Other VOCs	BRL	BRL

Sample ID	MW-22	
Date Collected	08/13/2021	03/15/2022
PCE	11.1	<5.0
TCE	66.7	<5.0
c-DCE	<5.0	6.5
Other VOCs	BRL	BRL

Sample ID	MW-39	
Date Collected	08/13/2021	03/16/2022
PCE	10.3	21.5
TCE	43.3	50.9
VC	<2.0	3.5
Other VOCs	BRL	BRL

Notes

All results reported in micrograms per liter (ug/L)
NE = No Screening Level Established for Constituent
NA = Sample not Analyzed for Constituent
BRL - Below Laboratory Reporting Limit
IDEM = Indiana Department of Environmental Management
RCG = Remediation Closure Guide
TWSL = Tap Water Screening Level
VESL = Vapor Exposure Screening Level

Constituent detected above Laboratory Reporting Limit
Constituent detected above IDEM RCG Residential TWSL's
Constituent detected above IDEM RCG Residential VESL's
Constituent detected above IDEM RCG Industrial VESL's

	IDEM RCG Residential TWSL's	IDEM RCG Residential VESL's	IDEM RCG Industrial VESL's
PCE	5	110	470
TCE	5	9.1	38
c-DCE	70	NE	NE
t-DCE	100	NE	NE
VC	2	2.1	35

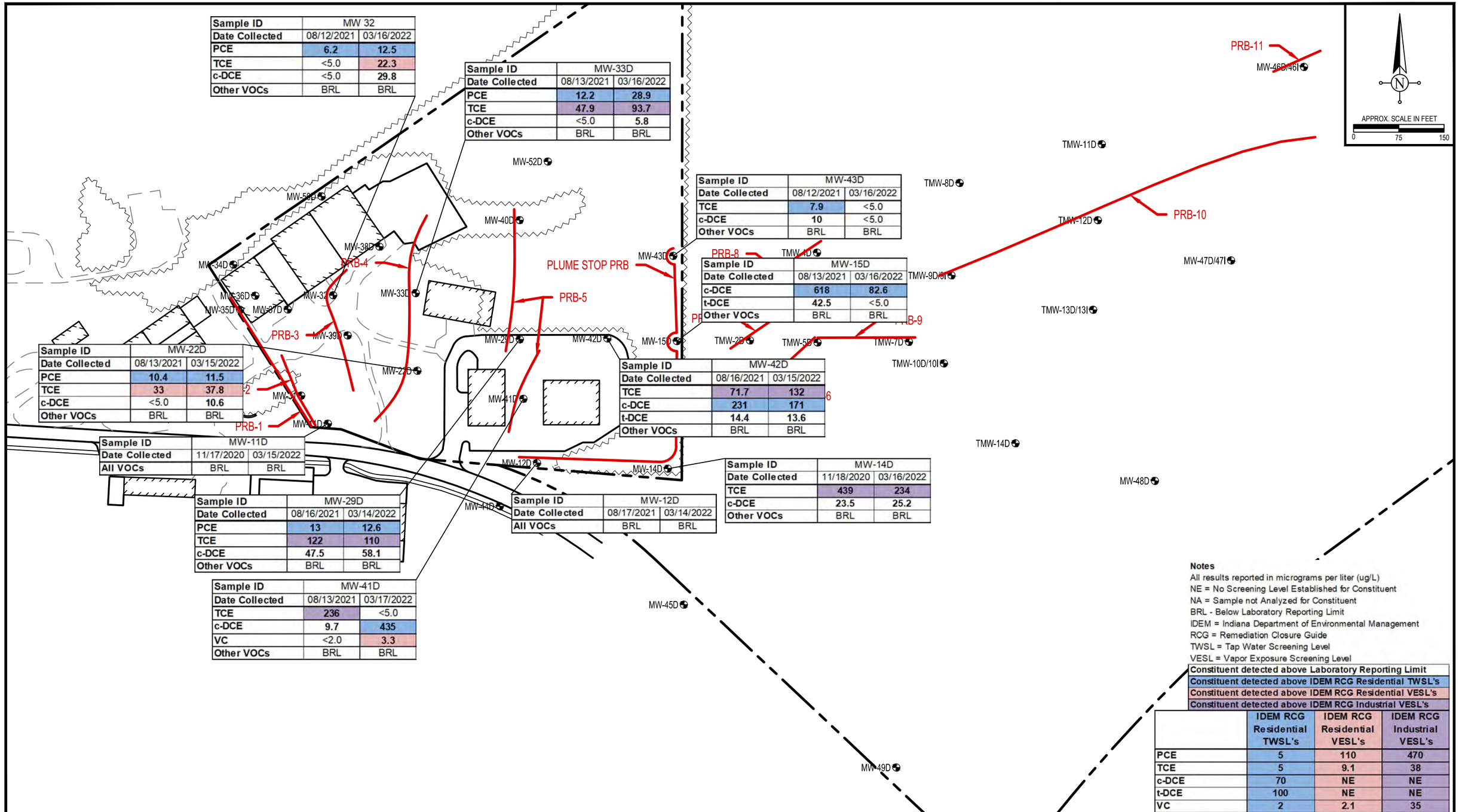
Patriot Engineering & Environmental, Inc.

LEGEND
Site Boundary
Patriot Monitoring Well Location
Permeable Reactive Barrier

Project: Former Houghland Tomato Cannery
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Drawn By: J. DuMond
Project Number 21-1359-01E
Approved: M. Casper
Date: June 21, 2022
DWG: 21-1359-01_FSI4b

Figure 6
Shallow Groundwater
Analytical Results Map
Pre- and Post-Injection
March 2022



Sample ID	MW 32	
Date Collected	08/12/2021	03/16/2022
PCE	6.2	12.5
TCE	<5.0	22.3
c-DCE	<5.0	29.8
Other VOCs	BRL	BRL

Sample ID	MW-33D	
Date Collected	08/13/2021	03/16/2022
PCE	12.2	28.9
TCE	47.9	93.7
c-DCE	<5.0	5.8
Other VOCs	BRL	BRL

Sample ID	MW-43D	
Date Collected	08/12/2021	03/16/2022
TCE	7.9	<5.0
c-DCE	10	<5.0
Other VOCs	BRL	BRL

Sample ID	MW-15D	
Date Collected	08/13/2021	03/16/2022
c-DCE	618	82.6
t-DCE	42.5	<5.0
Other VOCs	BRL	BRL

Sample ID	MW-22D	
Date Collected	08/13/2021	03/15/2022
PCE	10.4	11.5
TCE	33	37.8
c-DCE	<5.0	10.6
Other VOCs	BRL	BRL

Sample ID	MW-42D	
Date Collected	08/16/2021	03/15/2022
TCE	71.7	132
c-DCE	231	171
t-DCE	14.4	13.6
Other VOCs	BRL	BRL

Sample ID	MW-11D	
Date Collected	11/17/2020	03/15/2022
All VOCs	BRL	BRL

Sample ID	MW-14D	
Date Collected	11/18/2020	03/16/2022
TCE	439	234
c-DCE	23.5	25.2
Other VOCs	BRL	BRL

Sample ID	MW-29D	
Date Collected	08/16/2021	03/14/2022
PCE	13	12.6
TCE	122	110
c-DCE	47.5	58.1
Other VOCs	BRL	BRL

Sample ID	MW-12D	
Date Collected	08/17/2021	03/14/2022
All VOCs	BRL	BRL

Sample ID	MW-41D	
Date Collected	08/13/2021	03/17/2022
TCE	236	<5.0
c-DCE	9.7	435
VC	<2.0	3.3
Other VOCs	BRL	BRL

Notes

All results reported in micrograms per liter (ug/L)
NE = No Screening Level Established for Constituent
NA = Sample not Analyzed for Constituent
BRL - Below Laboratory Reporting Limit
IDEM = Indiana Department of Environmental Management
RCG = Remediation Closure Guide
TWSL = Tap Water Screening Level
VESL = Vapor Exposure Screening Level

Constituent detected above Laboratory Reporting Limit
Constituent detected above IDEM RCG Residential TWSL's
Constituent detected above IDEM RCG Residential VESL's
Constituent detected above IDEM RCG Industrial VESL's

	IDEM RCG Residential TWSL's	IDEM RCG Residential VESL's	IDEM RCG Industrial VESL's
PCE	5	110	470
TCE	5	9.1	38
c-DCE	70	NE	NE
t-DCE	100	NE	NE
VC	2	2.1	35

Patriot Engineering & Environmental, Inc.

LEGEND
Site Boundary
Patriot Monitoring Well Location
Permeable Reactive Barrier

Project: Former Houghland Tomato Cannery
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Drawn By: J. DuMond
Project Number: 21-1359-01E
Approved: J. Cody
Date: June 21, 2022
DWG: 21-1359-01_FSI4b

Figure 7
Deep Groundwater
Analytical Results Map
Pre- and Post-Injection
March 2022

APPENDIX B

TABLES

TABLE 1
WELL CONSTRUCTION SUMMARY
HRID / Former Houghland Tomato Cannery Property
Franklin, Indiana

WELL	DATE INSTALLED	WELL ELEVATION (ft)*	TOTAL DEPTH (ft)	SCREEN INTERVAL (depth in ft)
MW-10	6/10/2013 (ISI)	738.15	14.4	723.8 - 733.8
MW-11	6/10/2013 (ISI)	731.85	13.7	718.2 - 728.2
MW-11D	6/6/2018 (FSI #2)	731.71	23.0	708.7- 713.7
MW-12	6/10/2013 (ISI)	732.36	15.1	717.3 - 727.3
MW-12D	1/24/2019 (FSI #3)	731.82	28.0	703.8- 708.8
MW-13	6/10/2013 (ISI)	740.45	20.9	719.6 - 729.6
MW-14	9/18/2013 (ISI)	734.15	20.0	714.2 - 724.2
MW-14D	1/24/2019 (FSI #3)	731.45	33.0	698.5- 703.5
MW-15	9/18/2013 (ISI)	735.30	21.0	714.3 - 724.3
MW-15D	6/6/2018 (FSI #2)	734.76	48.0	686.7 - 691.7
MW-16	9/18/2013 (ISI)	735.65	19.9	715.7 - 725.7
MW-17	9/18/2013 (ISI)	745.02	24.1	720.9 - 730.9
MW-18	2/13/2014 (FSI)	737.39	14.4	723.0 - 733.0
MW-19	2/13/2014 (FSI)	733.21	12.4	720.8 - 730.8
MW-20	2/13/2014 (FSI)	729.99	14.7	715.3 - 725.3
MW-21	2/13/2014 (FSI)	729.21	13.6	715.6 - 725.6
MW-22	2/13/2014 (FSI)	736.47	18.9	717.6 - 727.6
MW-22D	6/6/2018 (FSI #2)	736.85	28.0	708.8 - 713.8
MW-23	2/13/2014 (FSI)	739.78	20.0	719.8 - 729.8
MW-24	2/13/2014 (FSI)	740.93	21.8	719.1 - 729.1
MW-25	2/14/2014 (FSI)	741.01	23.6	717.4 - 727.4
MW-26	2/14/2014 (FSI)	739.31	22.9	716.4 - 726.4
MW-27	2/14/2014 (FSI)	740.06	16.9	723.2 - 733.2
MW-28	2/19/2014 (FSI)	739.62	21.3	718.3 - 728.3
MW-29	2/13/2014 (FSI)	732.96	17.6	715.4 - 725.4
MW-29D	6/6/2018 (FSI #2)	733.12	41.0	692.1 - 697.1
MW-30	8/29/2016 (FSI)	734.02	14.5	719.5 - 724.5
MW-31	8/16/2017 (ASI)	733.87	30.0	703.8 - 708.8
MW-32	8/16/2017 (ASI)	739.72	33.0	706.7 - 711.7
MW-33	1/22/2019 (FSI #3)	740.79	18.0	722.8 - 732.8
MW-33D	1/22/2019 (FSI #3)	741.05	33.0	708.1 - 713.1
TMW-1*	1/22/2019 (FSI #3)	731.54	12.0	719.5 - 729.5
TMW-1D*	1/22/2019 (FSI #3)	730.32	58.0	672.3 - 677.3
TMW-2*	1/22/2019 (FSI #3)	730.12	14.0	716.1 - 726.1
TMW-2D*	1/22/2019 (FSI #3)	730.40	60.0	670.4 - 675.4
TMW-3*	1/24/2019 (FSI #3)	731.24	13.0	718.2 - 728.2

WELL	DATE INSTALLED	WELL ELEVATION (ft)*	TOTAL DEPTH (ft)	SCREEN INTERVAL (depth in ft)
TMW-3D*	1/24/2019 (FSI #3)	731.27	52.0	679.3 - 684.3
TMW-4*	1/28/2019 (FSI #3)	730.43	13.0	717.4 - 727.4
TMW-4D*	1/28/2019 (FSI #3)	730.03	61.0	669.1 - 674.1
TMW-5*	1/28/2019 (FSI #3)	729.60	13.0	716.6 - 726.6
TMW-5D*	1/28/2019 (FSI #3)	730.69	57.0	673.7 - 678.7
TMW-6*	1/28/2019 (FSI #3)	731.29	13.0	718.3 - 728.3
TMW-6D*	1/28/2019 (FSI #3)	731.22	42.0	689.2 - 694.2
TMW-7*	1/25/2019 (FSI #3)	730.16	13.0	717.2 - 727.2
TMW-7D*	1/25/2019 (FSI #3)	730.62	62.0	668.6 - 673.6
MW-34	11/5/2020 (FSI #4)	741.09	17.0	714.1 - 724.1
MW-34D	11/5/2020 (FSI #4)	741.49	30.0	706-5 - 711.5
MW-35	11/5/2020 (FSI #4)	740.98	24.0	707.0 - 717.0
MW-35D	11/5/2020 (FSI #4)	740.97	30.0	716.0 - 711.0
MW-36	11/5/2020 (FSI #4)	741.80	28.0	723.8 - 713.8
MW-36D	11/5/2020 (FSI #4)	741.55	36.0	710.5 - 705.5
MW-37	11/5/2020 (FSI #4)	741.96	25.0	727.0 - 717.0
MW-37D	11/5/2020 (FSI #4)	741.95	38.0	716.5 - 711.5
MW-38	11/5/2020 (FSI #4)	738.90	20.0	728.9 - 718.9
MW-38D	11/5/2020 (FSI #4)	739.17	30.0	714.2 - 709.2
MW-39	11/5/2020 (FSI #4)	739.33	25.0	724.3 - 714.3
MW-39D	11/5/2020 (FSI #4)	739.34	38.0	706.4 - 701.4
MW-40	11/5/2020 (FSI #4)	738.75	18.0	730.8 - 720.8
MW-40D	11/5/2020 (FSI #4)	738.52	31.0	712.5 - 707.5
MW-41	11/5/2020 (FSI #4)	734.03	22.0	722.0 - 712.0
MW-41D	11/5/2020 (FSI #4)	734.02	35.0	704.0 - 699.0
MW-42	11/5/2020 (FSI #4)	732.26	18.0	724.0 - 714.0
MW-42D	11/5/2020 (FSI #4)	732.23	52.0	685.2 - 680.2
MW-43	11/5/2020 (FSI #4)	733.36	16.0	727.4 - 717.4
MW-43D	11/5/2020 (FSI #4)	733.17	31.0	707.2 - 702.2
MW-44	11/5/2020 (FSI #4)	728.73	14.0	707.2 - 702.2
MW-44D	11/5/2020 (FSI #4)	728.71	29.0	704.7 - 699.7
MW-45	11/5/2020 (FSI #4)	729.59	15.0	724.6 - 714.6
MW-45D	11/5/2020 (FSI #4)	729.34	31.0	703.4 - 698.4
MW-46	11/5/2020 (FSI #4)	730.43	15.0	725.4 - 715.4
MW-46I	11/5/2020 (FSI #4)	730.74	55.0	680.6 - 675.6
MW-46D	11/5/2020 (FSI #4)	730.65	97.0	638.6 - 633.6
MW-47	11/5/2020 (FSI #4)	728.74	15.0	724.7 - 714.7
MW-47I	11/5/2020 (FSI #4)	729.58	40.0	699.6 - 689.6
MW-47D	11/5/2020 (FSI #4)	728.33	68.0	665.3 - 660.3
MW-48	11/5/2020 (FSI #4)	728.49	15.0	724.5 - 714.5

WELL	DATE INSTALLED	WELL ELEVATION (ft)*	TOTAL DEPTH (ft)	SCREEN INTERVAL (depth in ft)
MW-48D	11/5/2020 (FSI #4)	727.77	56.0	665.3 - 660.3
MW-49	11/5/2020 (FSI #4)	725.01	15.0	722.8 - 712.8
MW-49D	11/5/2020 (FSI #4)	725.11	29.0	701.1 - 696.1
MW-50S	7/29/2021 (FSI 4-S)	737.81	22.0	725.8 - 715.8
MW-50D	7/29/2021 (FSI 4-S)	737.61	25.0	717.6 - 712.6
MW-51	7/29/2021 (FSI 4-S)	737.82	23.0	724.8 - 714.8
MW-52S	7/30/2021 (FSI 4-S)	739.64	24.0	725.6 - 715.6
MW-52D	7/30/2021 (FSI 4-S)	739.46	28.0	716.4 - 711.4
TMW-8S*	10/25/2021 (OSI)	727.04	16.0	721.0 - 711.0
TMW-8D**	10/25/2021 (OSI)	727.59	55.0	677.6 - 672.6
TMW-9S**	10/25/2021 (OSI)	729.40	16.0	723.4 - 713.4
TMW-9I**	10/25/2021 (OSI)	728.34	46.0	687.3 - 682.3
TMW-9D**	10/25/2021 (OSI)	729.50	75.0	659.5 - 654.5
TMW-10S*	10/25/2021 (OSI)	729.90	15.0	724.9 - 714.9
TMW-10I**	10/25/2021 (OSI)	728.96	46.0	688.0 - 683.0
TMW-10D**	10/25/2021 (OSI)	730.00	85.0	650.0 - 645.0
TMW-11D*	10/25/2021 (OSI)	727.69	30.0	702.7 - 697.7
TMW-12I**	11/22/2021 (OSI)	727.72	48.0	684.7 - 679.7
TMW-12D**	10/25/15 (OSI)	727.03	70.0	662.0 - 657.0
TMW-13I**	10/25/15 (OSI)	727.90	58.0	674.9 - 699.9
TMW-13D**	10/25/15 (OSI)	728.18	102.0	631.2 - 625.2
TMW-14D*	10/28/2021 (OSI)	728.73	25.0	708.7 - 703.7
MW-53S	TBI			
MW-53D	TBI			
MW-54S	TBI			
MW-54D	TBI			
MW-55S	TBI			
MW-55D	TBI			
MW-56S	TBI			
MW-56D	TBI			
MW-57S	TBI			
MW-57D	TBI			
MW-58S	TBI			
MW-58D	TBI			
MW-59D	TMW-8D			677.6 - 672.6
MW-60S	TMW-9S			723.4 - 713.4
MW-60I	TMW-9I			687.3 - 682.3
MW-60D	TMW-9D			659.5 - 654.5
MW-61I	TMW-10I			688.0 - 683.0
MW-61D	TMW-10D			650.0 - 645.0

WELL	DATE INSTALLED	WELL ELEVATION (ft)*	TOTAL DEPTH (ft)	SCREEN INTERVAL (depth in ft)
MW-62I	TMW-12I			684.7 - 679.7
MW-62D	TMW-12D			662.0 - 657.0
MW-63I	TMW-13I			674.9 - 699.9
MW-63D	TMW-13D			631.2 - 625.2
MW-64I	TBI			
MW-64D	TBI			

Table Notes:

Top of casing elevations based on USC & GS Datum

* = Well Abandononed

** = Temporary Well Converted to Permanent Montioring Well

TBI = To Be Installed Fall 2022

ISC = Initial Site Characterization
FSI = Further Site Investigation
ASI = Additional Site Investigation
OSI = Off-Site Investigation
Well Elevation = Top of the 2" Diameter Pipe - North Rim

TABLE 2
GROUNDWATER ELEVATION DATA
HRID/Former Houghland Tomato Cannery
Franklin, Indiana

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-10	9/24/2013	738.15	8.89	729.26
	3/5/2014		4.95	733.20
	8/31/2016		5.35	732.80
	8/21/2017		6.36	731.79
	6/14/2018		NS	NS
	2/4/2019		5.27	732.88
	3/4/2019		4.09	734.06
	3/25/2019		4.17	733.98
	11/16/2020		7.01	731.14
	3/1/2021		2.38	735.77
	8/12/2021		6.33	731.82
	3/17/2022		4.98	733.17
MW-11	9/24/2013	731.85	10.56	721.29
	3/5/2014		7.95	723.90
	8/31/2016		8.45	723.40
	8/21/2017		8.79	723.06
	6/14/2018		8.60	723.25
	2/4/2019		7.57	724.28
	3/4/2019		6.53	725.32
	3/25/2019		6.61	725.24
	11/16/2020		10.54	721.31
	3/1/2021		9.07	722.78
	8/12/2021		8.54	723.31
	3/17/2022		6.48	725.37
MW-11D	6/14/2018	731.71	14.85	716.86
	2/4/2019		7.54	724.17
	3/4/2019		6.40	725.31
	3/25/2019		6.48	725.23
	11/16/2020		10.48	721.23
	3/1/2021		9.00	722.71
	8/12/2021		8.43	723.28
	3/15/2022		6.04	725.67
MW-12	9/24/2013	732.36	12.14	720.22
	3/5/2014		9.68	722.68
	8/31/2016		10.55	721.81
	8/21/2017		10.90	721.46
	6/14/2018		NS	NS
	2/4/2019		9.51	722.85
	3/4/2019		8.78	723.58
	3/25/2019		8.87	723.49
	11/16/2020		11.84	720.52
	3/1/2021		10.12	722.24
	8/12/2021		10.55	721.81
	3/17/2022		NS	NS
MW-12D	2/4/2019	731.82	9.17	722.65
	3/4/2019		8.41	723.41
	3/25/2019		8.53	723.29
	11/16/2020		11.41	720.41
	3/1/2021		9.62	722.20
	8/12/2021		10.15	721.67
	3/17/2022		NS	NS
MW-13	9/24/2013	740.45	18.69	721.76
	3/5/2014		15.58	731.56
	8/31/2016		15.94	724.51
	8/21/2017		15.58	724.87
	6/14/2018		NS	NS
	2/4/2019		NS	NS
	3/4/2019		NS	NS
	3/25/2019		NS	NS
	11/16/2020		18.71	721.74
	3/1/2021		16.71	723.74
	8/12/2021		16.29	724.16
	3/17/2022		14.03	726.42

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-14	9/24/2013	734.15	14.32	719.83
	3/5/2014		11.95	722.20
	8/31/2016		Well Inaccessible	
	8/21/2017		13.31	720.84
	6/14/2018		NS	NS
	2/4/2019		9.15	725.00
	3/4/2019		11.28	722.87
	3/25/2019		11.44	722.71
	11/16/2020		13.95	720.20
	3/1/2021		11.93	722.22
	8/12/2021		12.98	721.17
	3/16/2022		7.97	726.18
MW-14D	2/4/2019	731.45	11.95	719.50
	3/4/2019		8.47	722.98
	3/25/2019		8.56	722.89
	11/16/2020		11.14	720.31
	3/1/2021		9.11	722.34
	8/12/2021		10.14	721.31
	3/16/2022		10.79	720.66
MW-15	9/24/2013	735.30	15.41	719.89
	3/5/2014		12.98	722.32
	8/31/2016		Well Inaccessible	
	8/21/2017		14.35	720.95
	6/14/2018		13.95	721.35
	2/4/2019		12.94	722.36
	3/4/2019		12.23	723.07
	3/25/2019		12.34	722.96
	11/16/2020		15.08	720.22
	3/1/2021		12.80	722.50
	8/12/2021		13.99	721.31
	3/16/2022		11.20	724.10
MW-15D	6/14/2018	734.76	13.45	721.31
	2/4/2019		11.45	723.31
	3/4/2019		11.71	723.05
	3/25/2019		11.78	722.98
	11/16/2020		14.52	720.24
	3/1/2021		12.27	722.49
	8/12/2021		13.47	721.29
	3/16/2022		11.96	722.80
MW-16	9/24/2013	735.65	7.06	728.59
	3/5/2014		2.88	732.77
	8/31/2016		Well Inaccessible	
	8/21/2017		5.35	730.30
	6/14/2018		NS	NS
	2/4/2019		2.51	733.14
	3/4/2019		2.28	733.37
	3/25/2019		3.09	732.56
	11/16/2020		5.55	730.10
	3/1/2021		0.92	734.73
	8/12/2021		4.43	731.22
	3/16/2022		1.88	733.77
MW-17	9/24/2013	745.02	16.22	728.80
	3/5/2014		12.00	733.02
	8/31/2016		Well Inaccessible	
	8/21/2017		NS	NS
	6/14/2018		NS	NS
	2/4/2019		11.67	733.35
	3/4/2019		11.40	733.62
	3/25/2019		11.55	733.47
	11/16/2020		14.72	730.30
	3/1/2021		NS	NS
	8/12/2021		NS	NS
	3/16/2022		10.92	734.10
MW-18	3/5/2014	737.79	10.03	727.76
	8/31/2016		10.32	727.47
	8/21/2017		NS	NS
	6/14/2018		NS	NS
	2/4/2019		9.54	728.25
	3/4/2019		9.22	728.57
	3/25/2019		9.19	728.60
	11/16/2020		NS	NS
	3/1/2021		NS	NS
	8/12/2021		NS	NS
	3/17/2022		NS	NS

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-19	3/5/2014	733.21	7.17	726.04
	8/31/2016		7.55	725.66
	8/21/2017		NS	NS
	6/14/2018		NS	NS
	2/4/2019		7.08	726.13
	3/4/2019		6.30	726.91
	3/25/2019		6.29	726.92
	11/16/2020		NS	NS
	3/1/2021		NS	NS
	8/12/2021		NS	NS
	3/17/2022		NS	NS
MW-20	3/5/2014	729.99	5.94	724.05
	8/31/2016		6.38	723.61
	8/21/2017		6.71	723.28
	6/14/2018		NS	NS
	2/4/2019		5.54	724.45
	3/4/2019		4.53	725.46
	3/25/2019		4.48	725.51
	11/16/2020		8.55	721.44
	3/1/2021		7.14	722.85
	8/12/2021		6.49	723.50
	3/17/2022		4.49	725.50
MW-21	3/5/2014	729.21	6.04	723.17
	8/31/2016		6.64	722.57
	8/21/2017		6.99	722.22
	6/14/2018		NS	NS
	2/4/2019		5.75	723.46
	3/4/2019		4.74	724.47
	3/25/2019		4.73	724.48
	11/16/2020		9.33	719.88
	3/1/2021		6.83	722.38
	8/12/2021		6.70	722.51
	3/17/2022		4.64	724.57
MW-22	3/5/2014	736.47	13.04	723.43
	8/31/2016		13.68	722.79
	8/21/2017		14.07	722.40
	6/14/2018		13.90	722.57
	2/4/2019		12.69	723.78
	3/4/2019		11.84	724.63
	3/25/2019		11.82	724.65
	11/16/2020		15.56	720.91
	3/1/2021		14.18	722.29
	8/12/2021		13.76	722.71
	3/15/2022		11.31	725.16
MW-22D	6/14/2018	736.85	14.21	722.64
	2/4/2019		13.03	723.82
	3/4/2019		12.12	724.73
	3/25/2019		12.09	724.76
	11/16/2020		15.88	720.97
	3/1/2021		14.49	722.36
	8/12/2021		14.08	722.77
	3/15/2022		11.65	725.20
MW-23	3/5/2014	739.78	15.40	724.38
	8/31/2016		15.91	723.87
	8/21/2017		16.30	723.48
	6/14/2018		NS	NS
	2/4/2019		Well Innaccesible	
	3/4/2019		13.81	725.97
	3/25/2019		13.75	726.03
	11/16/2020		Well Dry	-
	3/1/2021		16.96	722.82
	8/12/2021		15.85	723.93
	3/15/2022		13.62	726.16
MW-24	3/5/2014	740.93	16.31	724.62
	8/31/2016		16.71	724.22
	8/21/2017		17.16	723.77
	6/14/2018		NS	NS
	2/4/2019		15.87	725.06
	3/4/2019		14.81	726.12
	3/25/2019		14.80	726.13
	11/16/2020		19.32	721.61
	3/1/2021		17.33	723.60
	8/12/2021		16.97	723.96
	3/17/2022		14.78	726.15

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-25	3/5/2014	741.01	16.50	724.51
	8/31/2016		Well Inaccessible	
	8/21/2017		Well Inaccessible	
	6/14/2018		Well Inaccessible	
	2/4/2019		Well Innaccesible	
	3/4/2019		Well Innaccesible	
	3/25/2019		Well Innaccesible	
	11/16/2020		19.44	721.57
	3/1/2021		17.90	723.11
	8/12/2021		17.11	723.90
	3/17/2022		NS	NS
MW-26	3/5/2014	739.31	15.25	724.06
	8/31/2016		15.80	723.51
	8/21/2017		16.19	723.12
	6/14/2018		16.11	723.20
	2/4/2019		14.86	724.45
	3/4/2019		13.92	725.39
	3/25/2019		13.86	725.45
	11/16/2020		18.05	721.26
	3/1/2021		16.60	722.71
	8/12/2021		15.96	723.35
	3/17/2022		NS	NS
MW-27	3/5/2014	740.06	8.11	731.95
	8/31/2016		8.19	731.87
	8/21/2017		8.81	731.25
	6/14/2018		NS	NS
	2/4/2019		8.25	731.81
	3/4/2019		7.88	732.18
	3/25/2019		7.88	732.18
	11/16/2020		9.80	730.26
	3/1/2021		7.58	732.48
	8/12/2021		6.76	733.30
	3/17/2022		8.02	732.04
MW-28	3/5/2014	739.62	6.72	732.90
	8/31/2016		Well Inaccessible	
	8/21/2017		9.40	730.22
	6/14/2018		NS	NS
	2/4/2019		6.43	733.19
	3/4/2019		6.15	733.47
	3/25/2019		6.11	733.51
	11/16/2020		9.71	729.91
	3/1/2021		5.09	734.53
	8/12/2021		8.77	730.85
	3/16/2022		5.72	733.90
MW-29	3/5/2014	732.96	10.17	722.79
	8/31/2016		11.04	721.92
	8/21/2017		11.43	721.53
	6/14/2018		11.16	721.80
	2/4/2019		10.00	722.96
	3/4/2019		9.21	723.75
	3/25/2019		9.23	723.73
	11/16/2020		Well Dry	-
	3/1/2021		10.70	722.26
	8/12/2021		11.10	721.86
	3/17/2022		NS	NS
MW-29D	6/14/2018	733.12	11.28	721.84
	2/4/2019		10.11	723.01
	3/4/2019		9.35	723.77
	3/25/2019		9.28	723.84
	11/16/2020		12.59	720.53
	3/1/2021		10.80	722.32
	8/12/2021		11.21	721.91
	3/17/2022		NS	NS
MW-30	8/31/2016	734.02	10.17	723.85
	8/21/2017		10.64	723.38
	6/14/2018		10.52	723.50
	2/4/2019		9.43	724.59
	3/4/2019		10.35	723.67
	3/25/2019		8.30	725.72
	11/16/2020		12.54	721.48
	3/1/2021		11.13	722.89
	8/12/2021		10.43	723.59
	3/15/2022		8.11	725.91

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-31	8/21/2017	733.87	11.69	722.18
	6/14/2018		10.53	723.34
	2/4/2019		9.25	724.62
	3/4/2019		8.37	725.50
	3/25/2019		8.29	725.58
	11/16/2020		11.81	722.06
	3/1/2021		10.56	723.31
	8/12/2021		10.56	723.31
	3/17/2022		8.39	725.48
MW-32	8/21/2017	739.72	16.64	723.08
	6/14/2018		16.56	723.16
	2/4/2019		15.30	724.42
	3/4/2019		13.33	726.39
	3/25/2019		13.31	726.41
	11/16/2020		18.46	721.26
	3/1/2021		17.03	722.69
	8/12/2021		16.37	723.35
	3/17/2022		NS	NS
MW-33	2/4/2019	740.79	15.50	725.29
	3/4/2019		15.49	725.30
	3/25/2019		15.38	725.41
	11/16/2020		19.59	721.20
	3/1/2021		18.18	722.61
	8/12/2021		17.58	723.21
	3/17/2022		NS	NS
MW-33D	2/4/2019	741.05	16.81	724.24
	3/4/2019		15.87	725.18
	3/25/2019		15.83	725.22
	11/16/2020		19.89	721.16
	3/1/2021		18.48	722.57
	8/12/2021		17.91	723.14
	3/17/2022		NS	NS
MW-34	11/16/2020	741.09	18.99	722.10
	3/1/2021		16.99	724.10
	8/12/2021		16.55	724.54
	3/17/2022		14.26	726.83
MW-34D	11/16/2020	741.49	19.45	722.04
	3/1/2021		17.62	723.87
	8/12/2021		16.96	724.53
	3/17/2022		14.75	726.74
MW-35	11/16/2020	740.98	19.10	721.88
	3/1/2021		17.57	723.41
	8/12/2021		16.70	724.28
	3/17/2022		NS	NS
MW-35D	11/16/2020	740.97	19.10	721.87
	3/1/2021		17.61	723.36
	8/12/2021		16.67	724.30
	3/17/2022		NS	NS
MW-36	11/16/2020	741.80	21.23	720.57
	3/1/2021		18.51	723.29
	8/12/2021		17.65	724.15
	3/17/2022		15.44	726.36
MW-36D	11/16/2020	741.55	21.03	720.52
	3/1/2021		18.28	723.27
	8/12/2021		17.42	724.13
	3/17/2022		NS	NS
MW-37	11/16/2020	741.96	20.27	721.69
	3/1/2021		18.85	723.11
	8/12/2021		17.99	723.97
	3/17/2022		NS	NS
MW-37D	11/16/2020	741.95	20.28	721.67
	3/1/2021		18.81	723.14
	8/12/2021		18.02	723.93
	3/17/2022		NS	NS
MW-38	11/16/2020	738.90	17.63	721.27
	3/1/2021		16.23	722.67
	8/12/2021		16.62	722.28
	3/17/2022		13.40	725.50
MW-38D	11/16/2020	739.17	17.91	721.26
	3/1/2021		16.49	722.68
	8/12/2021		15.92	723.25
	3/17/2022		13.69	725.48

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-39	11/16/2020	739.33	17.95	721.38
	3/1/2021		16.59	722.74
	8/12/2021		15.87	723.46
	3/17/2022		NS	NS
MW-39D	11/16/2020	739.34	17.96	721.38
	3/1/2021		16.58	722.76
	8/12/2021		15.91	723.43
	3/17/2022		NS	NS
MW-40	11/16/2020	738.75	9.11	729.64
	3/1/2021		4.01	734.74
	8/12/2021		7.67	731.08
	3/17/2022		NS	NS
MW-40D	11/16/2020	738.52	20.45	718.07
	3/1/2021		13.19	725.33
	8/12/2021		13.26	725.26
	3/17/2022		NS	NS
MW-41	11/16/2020	734.03	13.57	720.46
	3/1/2021		11.88	722.15
	8/12/2021		12.24	721.79
	3/17/2022		NS	NS
MW-41D	11/16/2020	734.02	13.56	720.46
	3/1/2021		11.86	722.16
	8/12/2021		12.23	721.79
	3/17/2022		10.41	723.61
MW-42	11/16/2020	732.26	11.95	720.31
	3/1/2021		9.87	722.39
	8/12/2021		10.79	721.47
	3/15/2022		8.74	723.52
MW-42D	11/16/2020	732.23	12.03	720.20
	3/1/2021		9.81	722.42
	8/12/2021		10.90	721.33
	3/15/2022		8.44	723.79
MW-43	11/16/2020	733.36	12.99	720.37
	3/1/2021		10.34	723.02
	8/12/2021		11.95	721.41
	3/16/2022		9.58	723.78
MW-43D	11/16/2020	733.17	12.81	720.36
	3/1/2021		10.27	722.90
	8/12/2021		11.76	721.41
	3/16/2022		9.44	723.73
MW-44	11/16/2020	728.73	8.37	720.36
	3/1/2021		6.55	722.18
	8/12/2021		7.19	721.54
	3/17/2022		5.41	723.32
MW-44D	11/16/2020	728.71	8.35	720.36
	3/1/2021		6.54	722.17
	8/12/2021		7.19	721.52
	3/17/2022		5.39	723.32
MW-45	11/16/2020	729.59	9.41	720.18
	3/1/2021		7.42	722.17
	8/12/2021		8.50	721.09
	3/17/2022		6.85	722.74
MW-45D	11/16/2020	729.34	9.17	720.17
	3/1/2021		7.20	722.14
	8/12/2021		8.25	721.09
	3/17/2022		6.60	722.74
MW-46	11/16/2020	730.43	9.74	720.69
	3/1/2021		6.89	723.54
	8/12/2021		9.77	720.66
	3/17/2022		NS	NS
MW-46I	11/16/2020	730.74	10.01	720.73
	3/1/2021		7.17	723.57
	8/12/2021		9.85	720.89
	3/17/2022		NS	NS
MW-46D	11/16/2020	730.65	9.91	720.74
	3/1/2021		7.05	723.60
	8/12/2021		9.96	720.69
	3/17/2022		NS	NS
MW-47	11/16/2020	728.74	8.34	720.40
	3/1/2021		4.16	724.58
	8/12/2021		7.37	721.37
	3/17/2022		NS	NS

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-47I	11/16/2020	729.58	8.12	721.46
	3/1/2021		5.31	724.27
	8/12/2021		8.01	721.57
	3/17/2022		NS	NS
MW-47D	11/16/2020	728.33	7.81	720.52
	3/1/2021		5.01	723.32
	8/12/2021		7.72	720.61
	3/17/2022		NS	NS
MW-48	11/16/2020	728.49	8.76	719.73
	3/1/2021		6.11	722.38
	8/12/2021		8.60	719.89
	3/17/2022		7.75	720.74
MW-48D	11/16/2020	727.77	8.04	719.73
	3/1/2021		5.27	722.50
	8/12/2021		9.92	717.85
	3/17/2022		6.12	721.65
MW-49	11/16/2020	725.01	5.97	719.04
	3/1/2021		3.62	721.39
	8/12/2021		6.01	719.00
	3/17/2022		NS	NS
MW-49D	11/16/2020	725.11	5.78	719.33
	3/1/2021		4.38	720.73
	8/12/2021		5.49	719.62
	3/17/2022		NS	NS
MW-50	8/12/2021	737.81	4.41	733.40
	3/17/2022		1.04	736.77
MW-50D	8/12/2021	737.61	2.16	735.45
	3/17/2022		1.06	736.55
MW-51	8/12/2021	737.82	6.55	731.27
	3/17/2022		3.71	734.11
MW-52	8/12/2021	739.64	8.56	731.08
	3/17/2022		NS	NS
MW-52D	8/12/2021	739.46	8.42	731.04
	3/17/2022		NS	NS
TMW-8S	11/5/2021	727.04	4.60	722.44
	12/1/2021		4.74	-4.74
	3/17/2022		NS	NS
TMW-8D	11/5/2021	727.59	6.10	721.49
	12/1/2021		6.58	721.01
	3/17/2022		NS	NS
TMW-9S	11/5/2021	729.40	7.90	721.50
	12/1/2021		8.40	721.00
	3/17/2022		NS	NS
TMW-9I	11/5/2021	728.34	6.80	721.54
	12/1/2021		7.33	721.01
	3/17/2022		NS	NS
TMW-9D	11/5/2021	730.00	8.00	722.00
	12/1/2021		8.49	721.51
	3/17/2022		NS	NS
TMW-10S	11/5/2021	729.90	8.40	721.50
	12/1/2021		8.90	721.00
	3/17/2022		NS	NS
TMW-10I	11/5/2021	728.96	7.50	721.46
	12/1/2021		7.98	720.98
	3/17/2022		NS	NS
TMW-10D	11/5/2021	730.00	8.60	721.40
	12/1/2021		9.01	720.99
	3/17/2022		NS	NS
TMW-11D	11/5/2021	727.69	6.20	721.49
	12/1/2021		6.64	721.05
	3/17/2022		NS	NS
TMW-12I	12/1/2021	Not Surveyed	6.87	
	3/17/2022		NS	NS
TMW-12D	11/5/2021	727.03	5.60	721.43
	12/1/2021		6.18	720.85
	3/17/2022		NS	NS
TMW-13I	11/5/2021	727.90	6.40	721.50
	12/1/2021		6.91	720.99
	3/17/2022		NS	NS
TMW-13D	11/5/2021	728.18	6.60	721.58
	12/1/2021		7.11	721.07
	3/17/2022		NS	NS

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
TMW-14	11/5/2021	728.73	7.60	721.13
	12/1/2021		8.08	-8.08
	3/17/2022		NS	NS

Well Elevation = Top of the 2" Diameter Pipe NS=Not Sampled

TABLE 3
PRE AND POST INJECTION FIELD PARAMETERS
HRID / Former Houghland Tomato Cannery Property
Franklin, Indiana

Sample Identification	Date Collected	pH	Oxidation-Reduction Potential (mV)	Dissolved Oxygen (mg/L)
Quarterly Wells				
MW-11	11/17/2020	7.08	71	0.37
	Remedial Injections - Fall 2021			
	3/14/2022	NS	NS	NS
MW-12	08/18/2021	7.52	148	2.93
	Remedial Injections - Fall 2021			
	03/14/2022	7.02	203	3.53
MW-12D	08/17/2021	7.52	(-29)	0
	Remedial Injections - Fall 2021			
	03/14/2022	8.29	374	0
MW-14	11/18/2020	7.28	(-55)	0
	Remedial Injections - Fall 2021			
	03/16/2022	7.29	(-40)	0.03
MW-14D	11/18/2020	6.96	21	0
	Remedial Injections - Fall 2021			
	03/16/2022	6.7	6.3	0
MW-15	08/13/2021	7.41	274	0.54
	Remedial Injections - Fall 2021			
	03/16/2022	6.95	77	3.11
MW-15D	08/13/2021	7.73	(-85)	0.12
	Remedial Injections - Fall 2021			
	03/16/2022	6.85	(-56)	0
MW-22	08/13/2021	6.94	152	1.97
	Remedial Injections - Fall 2021			
	03/15/2022	6.78	22	1.75
MW-22D	08/13/2021	7.03	113	2.17
	Remedial Injections - Fall 2021			
	03/15/2022	7.01	(-17)	0
MW-23	3/11/2019	6.98	106	1.66
	Remedial Injections - Fall 2021			
	03/15/2022	6.81	(-137)	0.01

MW-24	08/18/2021	7.44	186	3.45
	Remedial Injections - Fall 2021			
	03/17/2022	6.96	75	2.68
MW-26	08/12/2021	6.75	182	2.72
	Remedial Injections - Fall 2021			
	03/16/2022	7.31	(-130)	0.01
MW-32 (Deep Well paired with MW-26)	08/12/2021	7.07	144	1.21
	Remedial Injections - Fall 2021			
	03/16/2022	7.14	19	0.1
MW-29	3/27/2019	7.04	99	4.41
	Remedial Injections - Fall 2021			
	03/14/2022	7.13	(-178)	0
MW-29D	08/16/2021	7.15	(-84)	0.21
	Remedial Injections - Fall 2021			
	03/14/2022	7.13	(-87)	0
MW-30	08/16/2021	7.33	(-10)	0.39
	Remedial Injections - Fall 2021			
	03/15/2022	7.09	(-127)	0.04
MW-33	08/13/2021	7.14	145	0.71
	Remedial Injections - Fall 2021			
	03/16/2022	7.18	10	0
MW-33D	08/13/2021	7.19	70	0.74
	Remedial Injections - Fall 2021			
	03/16/2022	7.17	(-32)	0.15
MW-36D	08/18/2021	7.58	189	3.43
	Remedial Injections - Fall 2021			
	03/17/2022	6.93	65	7.31
MW-37D	08/16/2021	7.05	151	3.05
	Remedial Injections - Fall 2021			
	03/16/2022	7.14	10	0.03
MW-39	08/13/2021	6.82	139	3.26
	Remedial Injections - Fall 2021			
	03/16/2022	6.9	132	1.15
MW-40	08/16/2021	7.29	16	0.14
	Remedial Injections - Fall 2021			
	03/16/2022	6.76	84	0
MW-41	08/13/2021	6.98	115	1.09
	Remedial Injections - Fall 2021			
	03/14/2022	7.18	(-110)	0.09

MW-41D	08/13/2021	7.05	(-40)	0.23
	Remedial Injections - Fall 2021			
	03/17/2022	6.98	(-78)	0
MW-42	08/16/2021	7.07	124	1.1
	Remedial Injections - Fall 2021			
	03/15/2022	7.05	70	5.15
MW-42D	08/16/2021	7.15	(-39)	0.58
	Remedial Injections - Fall 2021			
	03/15/2022	7.04	(-38)	0.06
MW-43	08/12/2021	6.6	147	2.62
	Remedial Injections - Fall 2021			
	03/16/2022	6.61	106	0.38
MW-43D	08/12/2021	7.06	(-25)	0.11
	Remedial Injections - Fall 2021			
	03/16/2022	6.9	8	0
MW-46I	08/17/2021	7.76	(-62)	0.49
	Remedial Injections - Fall 2021			
	3/15/2022	NS	NS	NS

Notes

	Decrease in DO or ORP from pre to post injection sampling
	Increase in DO or ORP from pre to post injection sampling

NS = Not Sampled

TABLE 4

BIO/GEOCHEMICAL ANALYTICAL RESULTS

HRID / Former Houghland Tomato Cannery Property

Franklin, Indiana

		VOCs via RSK 175 Modified			SVOCs via EPA 9056		Inorganics				
Sample Identification	**Date Collected**	**Ethane**	**Ethene**	**Methane**	**Nitrate as N**	**Sulfate**	**Iron, Dissolved**	**Total Organic Carbon**	**Chemical Oxygen Demand**	**Biological Oxygen Demand**	***dehalococcoides* (cells per ml)**
MW-22	04/05/2022	<10.0	<10.0	**3950**	**980**	**16200**	<100	**3800**	**<10,000**	**4,800**	**3.74E+01**
MW-30	04/05/2022	**17.8**	**225**	**1300**	**3000**	**10700**	<100	**83700**	**232,000**	**156,000**	**3.71E+01**
MW-38D	04/05/2022	<10.0	<10.0	**10.4**	**290**	**17200**	<100	**1000**	**<10,000**	**10,400**	**2.70E+00**
MW-39	04/05/2022	<10.0	<10.0	**318**	**2600**	**5100**	<100	**3800**	**<10,000**	**<2,000**	**6.00E-01**
MW-40	04/05/2022	<10.0	<10.0	**40.6**	**6900**	**115000**	<100	**3700**	**<10,000**	**<2,000**	**5.00E+00**
MW-41	04/05/2022	<10.0	<10.0	**344**	<50	**2500**	<100	**4600**	**<10,000**	**6,700**	**3.30E+00**
MW-41D	04/05/2022	<10.0	<10.0	**3480**	**1600**	**400**	<100	**2400**	**<10,000**	**4,300**	**2.32E+02**
IDEM RCG Residential TWSL's		**NE**	**NE**	**NE**	**10,000**	**NE**	**14,000**	**NE**	**NE**	**NE**	**NE**
IDEM RCG Residential VESL's		**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
IDEM RCG Industrial VESL's		**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**

Notes

BOLD = Constituent detected above Laboratory Reporting Limit

BOLD = Constituent detected above IDEM RCG Residential TWSL's

BOLD = Constituent detected above IDEM RCG Residential VESL's

BOLD = Constituent detected above IDEM RCG Industrial VESL's

All results reported in micrograms per liter (ug/L) unless otherwise noted

IDEM = Indiana Department of Environmental Management

RCG = Remediation Closure Guide

TWSL = Tap Water Screening Level

VESL = Vapor Exposure Screening Level

NE = No Screening Level Established for Constituent

TABLE 5
1Q2022 GROUNDWATER ANALYTICAL RESULTS AND POST-INJECTION TRENDS
HRID / Former Houghland Tomato Cannery Property
Franklin, Indiana

		PCE	TCE	cDCE	tDCE	VC	Other VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
Sample Identification	**Date Collected**	**Analytical Results in micrograms per liter (ug/L)**					
Quarterly Wells							
MW-11	3/29/2019	**45.3**	**31.5**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**110**	**37.5**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	3/14/2022	NS	NS	NS	NS	NS	BRL
	TREND	NA	NA	NA	NA	NA	
MW-12	11/17/2020	<5.0	**55.3**	<5.0	<5.0	<2.0	BRL
	08/18/2021	<5.0	**39.2**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	**24.5**	<5.0	<5.0	<2.0	BRL
	TREND	NA	↓	NA	NA	NA	
MW-12D	11/17/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/17/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	TREND	NA	NA	NA	NA	NA	
MW-14	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	TREND	NA	NA	NA	NA	NA	
MW-14D	4/1/2019	<5.0	**524**	**11**	<5.0	<2.0	BRL
	11/18/2020	<5.0	**439**	**23.5**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**234**	**25.2**	<5.0	<2.0	BRL
	TREND	NA	↓	↑	NA	NA	
MW-15	11/18/2020	<5.0	**32.6**	<5.0	<5.0	<2.0	BRL
	08/13/2021	<5.0	**35.1**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**13.5**	<5.0	<5.0	<2.0	BRL
	TREND	NA	↓	NA	NA	NA	
MW-15D	11/18/2020	<5.0	<5.0	**588**	**54.2**	<2.0	BRL
	08/13/2021	<5.0	<5.0	**618**	**42.5**	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	**82.6**	<5.0	<2.0	BRL
	TREND	NA	NA	↓	↓	NA	
MW-22	11/17/2020	**11.8**	**68.7**	<5.0	<5.0	<2.0	BRL
	08/13/2021	**11.1**	**66.7**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	<5.0	**6.5**	<5.0	<2.0	BRL
	TREND	↓	↓	↑	NA	NA	
MW-22D	11/17/2020	**10.5**	**32.8**	<5.0	<5.0	<2.0	BRL
	08/13/2021	**10.4**	**33**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	**11.5**	**37.8**	**10.6**	<5.0	<2.0	BRL
	TREND		↑	↑	NA	NA	
MW-23	8/21/2017	**115**	**234**	<5.0	<5.0	<2.0	BRL
	3/11/2019	**15.7**	**21.9**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	<5.0	**731**	<5.0	**29.8**	BRL
	TREND	↓	↓	↑	NA	↑	
MW-24	11/16/2020	**64.9**	**35.9**	<5.0	<5.0	<2.0	BRL
	08/18/2021	**94**	**79**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/17/2022	**52.3**	**41.2**	**59.1**	<5.0	<2.0	BRL
	TREND	↓	↓	↑	NA	NA	

		PCE	TCE	cDCE	tDCE	VC	Other VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-26	11/17/2020	**27.9**	**47.6**	<5.0	<5.0	<2.0	BRL
	08/12/2021	**23.5**	**50.5**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**8.1**	**11.1**	<5.0	**80.2**	BRL
	TREND	↓	↓	↑	NA	↑	
MW 32 (Deep Well paired with MW-26)	3/11/2019	**16.1**	**37.9**	<5.0	<5.0	<2.0	BRL
	03/28/2019	**15.8**	**29.5**	<5.0	<5.0	<5.0	BRL
	11/16/2020	**7.6**	**7.8**	**8.2**	<5.0	<2.0	BRL
	08/12/2021	**6.2**	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**12.5**	**22.3**	**29.8**	<5.0	<2.0	BRL
	3/16/22 Dup	**11.9**	**19.6**	**24.3**	<5.0	<2.0	BRL
	TREND	↑	↑	↑	NA	NA	
MW-29	3/27/2019	**6.8**	**40.6**	<5.0	<5.0	<2.0	BRL
	08/16/2021	**13.5**	**47.8**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	<5.0	**41.0**	<5.0	<2.0	BRL
	TREND	↓	↓	↑	NA	NA	
MW-29D	11/17/2020	**7.4**	**75.9**	**90**	<5.0	<2.0	BRL
	08/16/2021	**13**	**122**	**47.5**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	**12.6**	**110**	**58.1**	<5.0	<2.0	BRL
	TREND				NA	NA	
MW-30	11/17/2020	**636**	**214**	<5.0	<5.0	<2.0	BRL
	08/16/2021	**526**	**245**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	**178**	**143**	**1430**	**6.4**	**79.9**	BRL
	3/15/22 Dup	**167**	**139**	**1920**	**6.1**	**96.1**	BRL
	TREND	↓	↓	↑	↑	↑	
MW-33	11/17/2020	**28.4**	**56.6**	<5.0	<5.0	<2.0	BRL
	08/13/2021	**29.5**	**63.8**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**31.1**	**57.1**	**27.5**	<5.0	<2.0	BRL
	TREND			↑	NA	NA	
MW-33D	11/17/2020	**24.6**	**68.6**	<5.0	<5.0	<2.0	BRL
	08/13/2021	**12.2**	**47.9**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**28.9**	**93.7**	**5.8**	<5.0	<2.0	BRL
	TREND	↑	↑	↑	NA	NA	
MW-36	03/05/2021	**9.2**	**38.4**	<5.0	<5.0	<2.0	BRL
	08/18/2021	<5.0	**12.2**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/17/2022	**26.1**	**80.6**	<5.0	<5.0	<2.0	BRL
	TREND	↑	↑	NA	NA	NA	
MW-37	03/05/2021	**17.8**	**12.6**	<5.0	<5.0	<2.0	BRL
	08/16/2021	**22.5**	**23.9**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**26.3**	**38.5**	<5.0	<5.0	<2.0	BRL
	TREND	↑	↑	NA	NA	NA	
MW-39	03/04/2021	**14.4**	**36.7**	<5.0	<5.0	**4.7**	BRL
	08/13/2021	**10.3**	**43.3**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**21.5**	**50.9**	<5.0	<5.0	**3.5**	BRL
	TREND	↑	↑	NA	NA		
MW-40	03/03/2021	<5.0	**159**	**296**	**405**	**2.2**	BRL
	08/16/2021	<5.0	**193**	**160**	**187**	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**197**	**65.8**	**66.2**	<2.0	BRL
	TREND	NA		↓	↓	NA	

		PCE	TCE	cDCE	tDCE	VC	Other VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-41	03/03/2021	<5.0	**304**	**5.3**	<5.0	**3.5**	BRL
	08/13/2021	<5.0	**250**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	**139**	**178**	<5.0	**2.9**	BRL
	TREND	NA	↓	↑	NA	↑	
MW-41D	03/03/2021	<5.0	**248**	**6.6**	<5.0	<2.0	BRL
	08/13/2021	<5.0	**236**	**9.7**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/17/2022	<5.0	<5.0	**435**	<5.0	**3.3**	BRL
	TREND	NA	↓	↑	NA	↑	
MW-42	03/05/2021	<5.0	**131**	<5.0	<5.0	<2.0	BRL
	08/16/2021	<5.0	**201**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	**84.0**	<5.0	<5.0	<2.0	BRL
	TREND	NA	↓	NA	NA	NA	
MW-42D	03/05/2021	<5.0	**48.8**	**369**	**26.4**	<2.0	BRL
	08/16/2021	<5.0	**71.7**	**231**	**14.4**	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	**132**	**171**	**13.6**	<2.0	BRL
	TREND	NA	↑	↓	↓	NA	
MW-43	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/12/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	TREND	NA	NA	NA	NA	NA	
MW-43D	03/04/2021	<5.0	<5.0	**10.7**	<5.0	<2.0	BRL
	08/12/2021	<5.0	**7.9**	**10**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	TREND	NA	↓	↓	NA	NA	
MW-46I	03/02/2021	<5.0	**29.7**	**40.5**	<5.0	<2.0	BRL
	08/17/2021	<5.0	**31.2**	**45.3**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021 and Spring 2022						
	3/15/2022	NS	NS	NS	NS	NS	NS
	TREND	NA	NA	NA	NA	NA	

Notes

↓	= Decreasing trend since injections
↓	= Decreased to BRL since injections
	= No distinct trend since injections
↑	= Increasing trend since injections
BOLD	= Constituent detected above Laboratory Reporting Limit
BOLD	= Constituent detected above IDEM RCG Residential TWSL's
BOLD	= Constituent detected above IDEM RCG Residential VESL's
BOLD	= Constituent detected above IDEM RCG Industrial VESL's

NE = No Screening Level Established for Constituent

BRL = Below Laboratory Reporting Limit

NS = Not Sampled

NA = Not Applicable

TABLE 6
COMPREHENSIVE GROUNDWATER ANALYTICAL RESULTS
HRID / Former Houghland Tomato Cannery Property
Franklin, Indiana

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
Sample Identification	**Date Collected**	**Analytical Results in micrograms per liter (ug/L)**					
MW-10	9/24/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/11/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-11	3/5/2014	**135**	**94.4**	< 5.0	< 5.0	< 2.0	BRL
	9/24/2013	**94.6**	**83.2**	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	**136**	**110**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	**124**	**82.4**	< 5.0	< 5.0	< 2.0	BRL
	6/15/2018	**102**	**60.0**	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	**68.7**	**50.4**	<5.0	<5.0	<2.0	BRL
	03/05/2019	**39.6**	**29.5**	<5.0	<5.0	<2.0	BRL
	3/29/2019	**45.3**	**31.5**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**110**	**37.5**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-11D	6/15/2018	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2019	**7.2**	<5.0	<5.0	<5.0	<2.0	BRL
	3/29/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/17/2020	<5.0	<2.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW 12	3/5/2014	< 5.0	**10.3**	< 5.0	< 5.0	< 2.0	BRL
	3/3/2014	< 5.0	**10.3**	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	**42.4**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	02/05/2019	<5.0	**38.8**	<5.0	<5.0	<2.0	BRL
	3/7/2019	<5.0	**42.0**	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	**29.9**	<5.0	<5.0	<2.0	BRL
	11/17/2020	<5.0	**55.3**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/18/2021	<5.0	**39.2**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	**24.5**	<5.0	<5.0	<2.0	BRL
MW 12D	02/05/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/7/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/17/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/17/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-13	9/24/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/5/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	11/17/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-14	9/25/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	**495**	**7.7**	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-14D	02/08/2019	<5.0	**583**	**26.4**	<5.0	<2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	**524**	**11**	<5.0	<2.0	BRL
	11/18/2020	<5.0	**439**	**23.5**	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**234**	**25.2**	<5.0	<2.0	BRL
MW-15	9/25/2013	< 5.0	**26.3**	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	**16.6**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	**42.3**	< 5.0	< 5.0	< 2.0	BRL
	6/15/2018	< 5.0	**50.3**	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	**49.3**	<5.0	<5.0	<2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/1/2019	<5.0	**6.7**	**579**	**18.1**	<2.0	BRL
	11/18/2020	<5.0	**32.6**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/13/2021	<5.0	**35.1**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**13.5**	<5.0	<5.0	<2.0	BRL
MW-15D	6/15/2018	< 5.0	**120**	**384**	**42.3**	< 2.0	BRL
	02/08/2019	<5.0	**12.3**	**780**	**53.5**	<2.0	BRL
	3/6/2019	<5.0	**7.8**	**430**	**17.9**	<2.0	BRL
	4/1/2019	<5.0	<5.0	**557**	**29.5**	<2.0	BRL
	11/18/2020	<5.0	<5.0	**588**	**54.2**	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/13/2021	<5.0	<5.0	**618**	**42.5**	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	**82.6**	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-16	9/25/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-17	9/25/2013	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/7/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-18	3/3/2014	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-19	3/3/2014	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/12/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	NS	NS	NS	NS	NS	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-20	3/3/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/12/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-21	3/3/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/12/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-22	3/5/2014	**8.5**	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	**8.4**	**89.5**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	**9.6**	**86.4**	< 5.0	< 5.0	< 2.0	BRL
	6/14/2018	**8.9**	**73.9**	<5.0	<5.0	<2.0	BRL
	02/08/2019	**8.1**	**71.5**	**10.8**	<5.0	<2.0	BRL
	3/7/2019	**5.8**	**30**	<5.0	<5.0	<2.0	BRL
	3/27/2019	**6.7**	**30.8**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**11.8**	**68.7**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/13/2021	**11.1**	**66.7**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	<5.0	**6.5**	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-22D	6/14/2018	**7.4**	**34.6**	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	**9.1**	**42.6**	<5.0	<5.0	<2.0	BRL
	3/7/2019	**13.3**	**43.6**	<5.0	<5.0	<2.0	BRL
	3/27/2019	**7.4**	**32.1**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**10.5**	**32.8**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/13/2021	**10.4**	**33**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	**11.5**	**37.8**	**10.6**	<5.0	<2.0	BRL
MW-23	3/3/2014	**141**	**469**	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	**156**	**323**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	**115**	**234**	<5.0	<5.0	<2.0	BRL
	3/11/2019	**15.7**	**21.9**	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Dry - Not Sampled					
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	<5.0	**731**	<5.0	**29.8**	BRL
MW-24	3/6/2014	**183**	**65.6**	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	**185**	**52.0**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	**167**	**59.0**	<5.0	<5.0	<2.0	BRL
	3/12/2019	**55.2**	**60.2**	<5.0	<5.0	<2.0	BRL
	11/16/2020	**64.9**	**35.9**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/18/2021	**94**	**79**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/17/2022	**52.3**	**41.2**	**59.1**	<5.0	<2.0	BRL
MW-25	3/5/2014	< 5.0	**9.4**	< 5.0	< 5.0	< 2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/18/2021	<5.0	**5.1**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-26	3/5/2014	**26.9**	**63.1**	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	**22.2**	**55.4**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	**21.8**	**48.0**	<5.0	<5.0	<2.0	BRL
	6/14/2018	**22.3**	**39.8**	<5.0	<5.0	<2.0	BRL
	02/05/2019	**14.8**	**46.1**	<5.0	<5.0	<2.0	BRL
	3/11/2019	**12.5**	**35.5**	<5.0	<5.0	<2.0	BRL
	03/28/2019	**15.6**	**31**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**27.9**	**47.6**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/12/2021	**23.5**	**50.5**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**8.1**	**11.1**	<5.0	**80.2**	BRL
MW 32 (Deep Well paired with MW-26)	8/21/2017	**11.0**	**26.9**	**19.1**	< 5.0	< 2.0	BRL
	6/15/2018	**15.1**	**27.1**	**26.5**	< 5.0	< 2.0	BRL
	02/05/2019	**8.0**	**9.4**	**5.9**	<5.0	<2.0	BRL
	3/11/2019	**16.1**	**37.9**	<5.0	<5.0	<2.0	BRL
	03/28/2019	**15.8**	**29.5**	<5.0	<5.0	<5.0	BRL
	11/16/2020	**7.6**	**7.8**	**8.2**	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/12/2021	**6.2**	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**12.5**	**22.3**	**29.8**	<5.0	<2.0	BRL
		11.9	**19.6**	**24.3**	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-27	3/5/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	3/11/2019	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	BRL
	11/16/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	8/13/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Fall 2021						
MW-28	3/7/2014	< 5.0	< 5.0	**19.3**	< 5.0	< 2.0	BRL
	8/22/2017	< 5.0	< 5.0	**47.7**	< 5.0	< 2.0	BRL
	3/6/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/18/2020	<5.0	<5.0	**56.8**	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/16/2021	<5.0	<5.0	**57.8**	**7.4**	<2.0	BRL
	Remedial Injections - Fall 2021						
MW 29	3/7/2014	**14.5**	**153**	< 5.0	< 5.0	< 2.0	BRL
	9/1/2016	**13.6**	**128**	< 5.0	< 5.0	< 2.0	BRL
	8/21/2017	**13.4**	**106**	< 5.0	< 5.0	< 2.0	BRL
	6/14/2018	**14.0**	**97.6**	< 5.0	< 5.0	< 2.0	BRL
	02/05/2019	<5.0	**34.5**	<5.0	<5.0	<2.0	BRL
	3/7/2019	<5.0	**15.7**	<5.0	<5.0	<2.0	BRL
	3/27/2019	**6.8**	**40.6**	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Dry - Not Sampled					
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/16/2021	**13.5**	**47.8**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	<5.0	**41.0**	<5.0	<2.0	BRL
MW 29D	6/14/2018	**12.9**	**148**	**33.6**	< 5.0	< 2.0	BRL
	02/05/2019	**13.4**	**149**	**25.7**	<5.0	<2.0	BRL
	3/7/2019	**14.4**	**124**	**21.2**	<5.0	<2.0	BRL
	3/27/2019	**9.8**	**106**	**21.4**	<5.0	<2.0	BRL
	11/17/2020	**7.4**	**75.9**	**90**	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/16/2021	**13**	**122**	**47.5**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	**12.6**	**110**	**58.1**	<5.0	<2.0	BRL
MW-30	9/1/2016	**695**	**386**	< 5.0	< 5.0	< 2.0	BRL
	8/22/2017	**475**	**253**	< 5.0	< 5.0	< 2.0	BRL
	6/15/18	**520**	**283**	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	**171**	**173**	<5.0	<5.0	<2.0	BRL
	3/11/2019	**293**	**163**	<5.0	<5.0	<2.0	BRL
	3/29/2019	**444**	**159**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**636**	**214**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/16/2021	**526**	**245**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	**178**	**143**	**1430**	**6.4**	**79.9**	BRL
		167	**139**	**1920**	**6.1**	**96.1**	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-31 (Deep well paired with MW-30)	8/22/2017	**5.7**	<5.0	< 5.0	< 5.0	< 2.0	BRL
	6/15/2018	< 5.0	<5.0	< 5.0	< 5.0	< 2.0	BRL
	02/08/2019	<5.0	<5.0	**5.4**	<5.0	<2.0	BRL
	3/11/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/29/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/17/2020	**13.3**	<5.0	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/16/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW 33	02/05/2019	**28.9**	**61**	<5.0	<5.0	<2.0	BRL
	3/7/2019	**46.0**	**71.1**	**5.6**	<5.0	<2.0	BRL
	03/28/2019	**7.8**	**29.3**	<5.0	<5.0	<2.0	BRL
	11/17/2020	**28.4**	**56.6**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/13/2021	**29.5**	**63.8**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**31.1**	**57.1**	**27.5**	<5.0	<2.0	BRL
MW 33D	02/05/2019	**21.1**	**114**	<5.0	<5.0	<2.0	BRL
	3/7/2019	**35.4**	**97.3**	<5.0	<5.0	<2.0	BRL
	03/28/2019	**17.1**	**59.9**	<2.0	<5.0	<2.0	BRL
	11/17/2020	**24.6**	**68.6**	<5.0	<5.0	<2.0	BRL
	3/4/2021	NS	NS	NS	NS	NS	BRL
	08/13/2021	**12.2**	**47.9**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**28.9**	**93.7**	**5.8**	<5.0	<2.0	BRL
MW-34	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	8/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-34D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	8/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-35	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	8/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-35D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	8/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-36	11/18/2020	**11.9**	**39.2**	<5.0	<5.0	<2.0	BRL
	03/05/2021	**9.2**	**38.4**	<5.0	<5.0	<2.0	BRL
	08/18/2021	<5.0	**12.2**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/17/2022	**26.1**	**80.6**	<5.0	<5.0	<2.0	BRL
MW-36D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/18/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-37	11/18/2020	**23.8**	**23.5**	<5.0	<5.0	<2.0	BRL
	03/05/2021	**17.8**	**12.6**	<5.0	<5.0	<2.0	BRL
	08/16/2021	**22.5**	**23.9**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**26.3**	**38.5**	<5.0	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-37D	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/16/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-38	11/17/2020	**47.6**	**35.1**	<5.0	<5.0	<2.0	BRL
	03/04/2021	**35**	**27.1**	<5.0	<5.0	<2.0	BRL
	08/12/2021	**37.5**	**46.3**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-38D	11/17/2020	**18.5**	**105**	<5.0	<5.0	<2.0	BRL
	03/04/2021	**13.2**	**99.7**	<5.0	<5.0	<2.0	BRL
	08/12/2021	**23.1**	**141**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-39	11/18/2020	**8**	**12.4**	<5.0	<5.0	**9.9**	BRL
	03/04/2021	**14.4**	**36.7**	<5.0	<5.0	**4.7**	BRL
	08/13/2021	**10.3**	**43.3**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	**21.5**	**50.9**	<5.0	<5.0	**3.5**	BRL
MW-39D	11/18/2020	<5.0	<5.0	**10.9**	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/13/2021	<5.0	<5.0	**23.8**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-40	11/18/2020	<5.0	**213**	**401**	**640**	**4.1**	BRL
	03/03/2021	<5.0	**159**	**296**	**405**	**2.2**	BRL
	08/16/2021	<5.0	**193**	**160**	**187**	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	**197**	**65.8**	**66.2**	<2.0	BRL
MW-40D	11/18/2020	<5.0	<5.0	**15.5**	**22.1**	<2.0	BRL
	03/03/2021	<5.0	<5.0	**6.6**	**5.4**	<2.0	BRL
	08/16/2021	<5.0	<5.0	**6.1**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-41	11/17/2020	<5.0	**400**	**6.3**	<5.0	**3.3**	BRL
	03/03/2021	<5.0	**304**	**5.3**	<5.0	**3.5**	BRL
	08/13/2021	<5.0	**250**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/14/2022	<5.0	**139**	**178**	<5.0	**2.9**	BRL
MW-41D	11/17/2020	<5.0	**277**	**7.1**	<5.0	<2.0	BRL
	03/03/2021	<5.0	**248**	**6.6**	<5.0	<2.0	BRL
	08/13/2021	<5.0	**236**	**9.7**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/17/2022	<5.0	<5.0	**435**	<5.0	**3.3**	BRL
MW-42	11/17/2020	<5.0	**258**	<5.0	<5.0	<2.0	BRL
	03/05/2021	<5.0	**131**	<5.0	<5.0	<2.0	BRL
	08/16/2021	<5.0	**201**	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	**84.0**	<5.0	<5.0	<2.0	BRL
MW-42D	11/17/2020	<5.0	**46.4**	**450**	**37**	<2.0	BRL
	03/05/2021	<5.0	**48.8**	**369**	**26.4**	<2.0	BRL
	08/16/2021	<5.0	**71.7**	**231**	**14.4**	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/15/2022	<5.0	**132**	**171**	**13.6**	<2.0	BRL
MW-43	11/18/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/12/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-43D	11/18/2020	<5.0	**7.1**	**16.7**	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	**10.7**	<5.0	<2.0	BRL
	08/12/2021	<5.0	**7.9**	**10**	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
	03/16/2022	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
MW-44	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/12/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-44D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/12/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-45	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/12/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-45D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/12/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-46	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-46I	11/19/2020	<5.0	**35.7**	**43.1**	<5.0	<2.0	BRL
	03/02/2021	<5.0	**29.7**	**40.5**	<5.0	<2.0	BRL
	08/17/2021	<5.0	**31.2**	**45.3**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-46D	11/19/2020	<5.0	<5.0	**52.5**	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	**9.3**	<5.0	<2.0	BRL
	08/13/2021	<5.0	<5.0	**10**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-47	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-47I	11/19/2020	<5.0	<5.0	**9.9**	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	**6.7**	<5.0	<2.0	BRL
	08/17/2021	<5.0	<5.0	**34.1**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-47D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/13/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-48	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/16/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-48D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/16/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-49	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/03/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	08/16/2021	NS	NS	NS	NS	NS	BRL
	Remedial Injections - Spring 2022						
MW-49D	11/19/2020	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/3/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-50	08/17/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-50D	08/17/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-51	08/17/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-52	08/16/2021	<5.0	**20.5**	**124**	**191**	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-52D	08/16/2021	<5.0	**5.5**	**129**	**221**	<2.0	BRL
	Remedial Injections - Fall 2021						
MW-53S (former TMW-1)	02/06/2019	<5.0	**11.2**	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	**14.9**	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	**7**	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-53D (former TMW-1D)	02/06/2019	<5.0	**24.2**	**510**	**41.6**	<2.0	BRL
	3/8/2019	<5.0	**19.8**	**660**	<5.0	<2.0	BRL
	03/26/2019	<5.0	**11.9**	**829**	**41**	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-54S (former TMW-2)	02/06/2019	<5.0	**94.1**	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	**106**	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	**73.7**	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-54D (former TMW-2D)	02/06/2019	<5.0	**15.9**	**550**	**43.4**	<2.0	BRL
	3/8/2019	<5.0	**40.9**	**250**	<5.0	<2.0	BRL
	03/26/2019	<5.0	**13.7**	**683**	**49.6**	**2.3**	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-55S (former TMW-3)	02/06/2019	<5.0	**30.4**	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	**37.3**	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	**25.2**	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-55D (former TMW-3D)	02/06/2019	<5.0	**383**	**1060**	**87.5**	<2.0	BRL
	3/8/2019	<5.0	**152**	**539**	<5.0	<2.0	BRL
	03/26/2019	<5.0	**288**	**904**	**78.4**	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-56S (former TMW-4)	02/07/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	3/8/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
MW-56D (former TMW-4D)	02/07/2019	<5.0	**9.1**	**437**	**14.5**	<2.0	BRL
	03/05/2019	<5.0	**7.3**	**270**	**9.8**	<2.0	BRL
	03/26/2019	<5.0	**10.9**	**395**	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-57S (former TMW-5)	02/08/2019	<5.0	**479**	<5.0	<5.0	<2.0	BRL
	03/05/2019	<5.0	**311**	<5.0	<5.0	<2.0	BRL
	03/26/2019	<5.0	**244**	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-57D (former TMW-5D)	02/08/2019	<5.0	**528**	**1560**	**139**	<2.0	BRL
	03/05/2019	<5.0	**444**	**1040**	**80.9**	<2.0	BRL
	03/26/2019	<5.0	**500**	**1220**	**112**	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-58S (former TMW-6)	02/08/2019	<5.0	**14.7**	**24.4**	<5.0	<2.0	BRL
	03/05/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/27/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-58D (former TMW-6D)	02/08/2019	<5.0	<5.0	**8.3**	<5.0	<2.0	BRL
	03/05/2019	<5.0	<5.0	**5.2**	<5.0	<2.0	BRL
	03/27/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned. New well installed 10/xx/2022					
	Remedial Injections - Spring 2022						
MW-59D (former TMW-8D)	11/05/2021	<5.0	<5.0	**41.2**	<5.0	<2.0	BRL
	12/02/2021	<5.0	<5.0	**35.2**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-60S (former TMW-9S)	11/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	12/02/2021	<5.0	<5.0	**19.9**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-60I (former TMW-9I)	11/04/2021	<5.0	**240**	**150**	**15.5**	<2.0	BRL
	12/02/2021	<5.0	**175**	**213**	**16.9**	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-60D (former TMW-9D)	11/04/2021	<5.0	**27.7**	**1110**	**202**	<2.0	BRL
	12/02/2021	<5.0	**19.9**	**1430**	**208**	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-61I (former TMW-10I)	11/04/2021	<5.0	<5.0	**33.0**	<5.0	<2.0	BRL
	12/02/2021	<5.0	<5.0	**23.7**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-61D (former TMW-10D)	11/05/2021	<5.0	<5.0	**6.4**	<5.0	<2.0	BRL
	12/02/2021	<5.0	<5.0	**7.3**	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-62I (former TMW-12I)	12/01/2021	<5.0	**277**	**774**	**62.8**	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-62D (former TMW-12D)	11/05/2021	<5.0	<5.0	**517**	**33.4**	<2.0	BRL
	12/01/2021	<5.0	<5.0	**704**	**30.9**	**3.1**	BRL
	Remedial Injections - Spring 2022						
MW-63I (former TMW-13I)	11/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	12/01/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						
MW-63D (former TMW-13D)	11/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	12/01/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	Remedial Injections - Spring 2022						

		Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	All Remaining VOCs
IDEM RCG Residential TWSL's		**5**	**5**	**70**	**100**	**2**	**Varies**
IDEM RCG Residential VESL's		**110**	**9.1**	**NE**	**NE**	**2.1**	**Varies**
IDEM RCG Industrial VESL's		**470**	**38**	**NE**	**NE**	**35**	**Varies**
TMW-7	02/07/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/05/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	03/27/2019	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	11/16/2020	Well Abandoned					
TMW-7D	02/07/2019	<5.0	<5.0	**780**	**38.2**	<2.0	BRL
	03/05/2019	<5.0	**19.2**	**246**	**14.2**	<2.0	BRL
	03/27/2019	<5.0	<5.0	**943**	**46**	<2.0	BRL
	11/16/2020	Well Abandoned					
TMW-8S	11/05/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	12/01/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/14/2022	Well Abandoned					
TMW-10S	11/04/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	12/02/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/14/2022	Well Abandoned					
TMW-11D	11/05/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	12/01/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/14/2022	Well Abandoned					
TMW-14D	11/04/2021	<5.0	<5.0	**10.5**	<5.0	<2.0	BRL
	12/01/2021	<5.0	<5.0	<5.0	<5.0	<2.0	BRL
	4/14/2022	Well Abandoned					

Notes

BOLD	= Constituent detected above Laboratory Reporting Limit
BOLD	= Constituent detected above IDEM RCG Residential TWSL's
BOLD	= Constituent detected above IDEM RCG Residential VESL's
BOLD	= Constituent detected above IDEM RCG Industrial VESL's

NE = No Screening Level Established for Constituent

BRL - Below Laboratory Reporting Limit

NS=Not Sampled

APPENDIX C

RRS APPLICATION SUMMARY REPORT FOR THE ON-SITE GROUNDWATER PRBS

Global Headquarters
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San Clemente, CA 92673
Ph: (949) 366-8000
Fax: (949) 366-8090

11/29/21 **REGENESIS Proposal No. Kgask69758**

Patriot Engineering
6150 E 75th St, Indianapolis, IN 46250

SUBJECT: Application Summary Report for Remedial Services at the Houghland Canning

Mike Casper,

REGENESIS Remediation Services (RRS) has recently completed an *in-situ* injection application of PlumeStop, 3D-Microemulstion (3DME), Zero Valent Iron (S-MicroZVI), and Bio-Dechlor Inoculum (BDI) at the Houghland Canning (Site) located at 1130 E Eastview Dr, Franklin IN. The goal of the application was to remediate Chlorinated Volatile Organic Compounds (CVOCs). RRS employed *in-situ* ISCR, Sorption and Biodegredation, Bioaugmentation, and Enhanced Anaerobic Biodegredation technologies to meet remediation goals.

RRS mobilized a support pickup truck, injection trailer, and personnel to the site to begin work over thirty nine (39) days on 9/22/21 through 11/17/21. RRS staffed this project with an experienced Project Supervisor who ensured a safe, successful injection application. The first team arrived on September 22nd and began working in the 3DME barriers. After setting up equipment and preliminary activities were completed injections began. The second team arrived on-site October 12th and began injections in the PlumeStop portion of the application. Injections continued until the 17th of November at which point the site was cleaned, rental equipment was returned, and all RRS personnel demobilized offsite.

Please review the attached application summary page, injection logs, groundwater parameter logs, maps and photo logs for more detail on the application.

RRS appreciates the opportunity to work at this site with Patriot Engineering. RRS will be available to interpret the field data as it was collected or answer any questions. If you need additional information regarding the application process or attached field notes, please contact Andrew Kavanagh at 574.304.4353, Bill Disselhorst at 630.740.8815 or Seth Benson at 231.638.8222.

Sincerely,

Bill Disselhorst
Project Supervisor
REGENESIS Remediation Services

Andrew Kavanagh
Central Region Project Manager
REGENESIS Remediation Services

cc: kgaskil@regenesis.com; bhicks@regenesis.com; sbenson@regenesis.com

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Summary

OVERVIEW

Client: Patriot Engineering
Client PM: Mike Casper
RRS Project Manager: Andrew Kavanagh
RRS Project Supervisor: Bill Disselhorst

Site Address: 1130 E Eastview Dr, Franklin, IN 46131
Project Name: Houghland Canning
Project Dates: 9/22/21-11/17/21

Design

The proposed design called for five barriers utilizing 3DME throughout the plume. There is also an additional barrier of PlumeStop at the property boundary.

In the PlumeStop barrier, the original design called for 142 injection points where each point would be receiving 646 gallons at an injection concentration of 10,000 mg/L. These points were to receive PlumeStop, S-MZVI, and BDI. The barrier was estimated to be 850' long where there was to be 6' between points. The vertical intervals were to be between 10' and 30' below ground surface (bgs).

In the proposed 3DME barriers, there were to be 231 points with each point receiving 302 gallons at a 5% concentration. These barriers would total a distance of 1,850' with 8' between points. The vertical treatment intervals were to be between 10' and 30' bgs.

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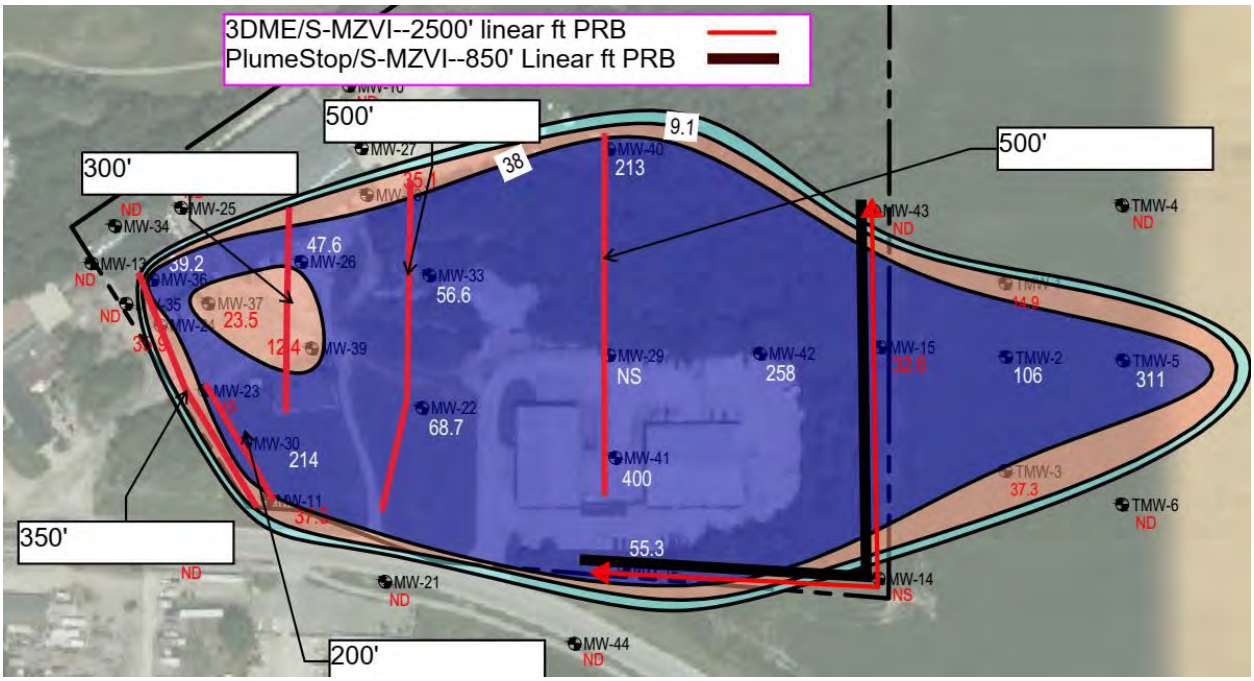

Figure 1. Original Treatment Barrier Location Design

- Major Changes
  - The 3DME barrier PRB3 and PRB4 were changed from a North-South Orientation to a Southwest-Northeast orientation prior to injections at the direction of Patriot personnel.
  - The total length of the PlumeStop barrier was measured to be less than estimated resulting in 138 points rather than 142 with each point receiving more than the originally designed volume.
  - Depths varied throughout each interval based on where the clay layer began. This was determined both by preliminary soil borings and at the drillers' discretion.

Site Preparations

Site Recon

- Equipment staging
  - All product containers were stored in the open field between barriers three and four.
  - Empty containers and vehicles were stored in the unused parking lot adjacent to barrier three.
- Utility locates
  - All utility locates were done at the direction of Patriot Engineering prior to RRS beginning injections.

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Reagent Delivery

- Product and equipment shipping
  - Product was shipped in three different shipments. The first arrived prior to the start of injections and contained 16,000 lbs of S-MZVI and 20,000 lbs of 3DME. The next shipment contained 38,000 lbs of PlumeStop. The last was 12,900 lbs of S-MZI and 8,000 lbs of 3DME.
  - All product was delivered directly to site where it was off loaded by RRS personnel and organized into the staging area.

On Site Equipment

- Two GeoProbe Drills were used on-site at various points in time. One was operated by Midway Services. The other was supplied and operated by Patriot's in-house drilling team.
- Two different telehandlers were used on-site. These were subcontracted and operated by the RRS team.

Health and Safety Compliance

Daily safety tailgates took place to instill a safety-first attitude during work hours. Subjects included vehicular and equipment traffic, stop work authority, weather, heat stress, emergency medical locations, and 3M site specific health and safety protocol. A health and safety plan (HASP) was maintained and signed by all onsite workers.

General Application Information

The remediation reagent was prepared and applied via an RRS custom injection trailer. The injection trailer is fully enclosed and contains mixing tanks, pumps, and a delivery system equipped for direct connection to the injection wells. The RRS injection trailer used for the completion of this project contains the following components:

- Complete drain conical mixing tanks
- Vortex/Cyclone mixer
- Application pump
- Multiple fluid delivery lines
- Self-sufficient, dedicated power
- Slip-resistant and chemical resistant flooring
- Flow and pressure controls
- Backflow prevention
- Pressure bypass controls
- Emergency eyewash and First-Aid station

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The application pump is a multiple diaphragm positive displacement pump designed to prevent pulsation of the remediation reagent while being applied. The application pump can deliver the remediation reagent at up to 250 pounds per square inch (psi) at up to 20 gallons per minute (gpm) to overcome potential hydraulic limitations. Mechanisms capable of maintaining and controlling injection pressures and injection flowrates per injection point have been installed to achieve and maintain desired application pressures and flowrates. Safety bypass mechanisms are also installed to release back pressure in the event injection pressures exceed desired application ranges. Our application delivery system can deliver the remediation reagent at up to four (4) separate delivery lines simultaneously, each having the capability of monitoring injection pressures and injection flowrates/totals at any given time. Additional line extensions were utilized when necessary to increase the trailers range without being moved.

The remediation reagent solutions were prepared in 350-gallon conical tanks that are configured with chemically resistant materials. This system setup allows for the remediation reagent solutions to be injected while mixing and preparing the second tank so that downtime is avoided due to mixing and continuous pumping can occur. A vortex/cyclone mixer mounted to the mixing tanks rated with a liquid movement of 1800 gpm in water and is outfitted with a shaft and propellers capable of sustaining a homogenous mixture was used to help mix the reagents properly. For each batch, mix water was supplied by a nearby fire hydrant before turning on the mixer. Once the water filled to the appropriate volume per the design concentration the remedial reagent was transferred from their containers via an air-driven diaphragm pump. Each tote was measured and marked to show volumetric measurements to ensure accurate reagent dosing.

On-Site Work Summary

Design Verification & Calibration

- Groundwater monitoring
  - Temporary wells were put in throughout the barriers to monitor the distribution of the product mix. In the PlumeStop Barriers, additional concentration tests were completed to gauge the amount of solution (measured in parts per million (ppm)) in each piezometer.
- Boring collected
  - Borings were done prior to the start of injections to verify the treatment intervals. Vertical treatment intervals were adjusted based on the findings.
  - Borings were completed throughout each barrier. See attached maps for locations.

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PlumeStop Barrier

- Orientation
  - The PlumeStop barrier was divided into two transects. One starting about 50' west of MW-12 and continuing east along the property boundary towards MW-14. From MW-14, the barrier continues north just past MW-43S and MW-43D.
- Surfacing
  - Surfacing usually occurred due to heaving. In most cases, the RRS team was able to seal the bore and continue injections. If the bore was not able to be sealed, volume was redistributed into the next interval or an adjacent point. See log for details on location of surfacing.
- IP Relocation
  - Points were moved upgradient of MW-14, MW-15S, MW-15D, MW-43S and MW-43D to ensure adequate coverage in front of the wells.
  - Points were moved around near the concrete barrier to ensure there were no gaps in coverage.
  - Several points needed to be redrilled due to heaving. In this case, the point was redrilled within 1-2' of the original bore. See attached log for details on which points were relocated.
- QA/QC During Application
  - Groundwater
    - Temporary wells
      - Temporary wells were utilized throughout the barrier to gauge satisfactory distribution.
        - Temporary wells were bailed and tested via both a YSI meter. If the sample came up showing visual confirmation of the product mix it was given a colorimetric PlumeStop test. Concentrations of these samples are listed in the attached Groundwater Parameter Log.
    - Well data
      - Wells were sampled throughout the completion of the barrier using a water level meter and YSI meter. Data from this can be found in the Appendix under Groundwater Parameter Log.
  - Borings
    - Preliminary Borings
      - Borings were completed throughout the PlumeStop barrier to ascertain the depth of the impermeable clay layer. Treatment intervals were adjusted based on our findings.
    - Confirmation Borings
      - Five confirmation borings were taken throughout the PlumeStop barrier between two completed points to confirm adequate distribution

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throughout the target intervals. All soil cores taken showed satisfactory distribution.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
4.4	1.1	4.5	27	26	19

Table 1: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **38,000 lbs of PlumeStop, 7,900 lbs of S-MZVI, and 58 L of BDI** was mixed and applied as a 10,000 ppm(mg/L) solution with a total volume of **93,577 gallons** applied in the area.

Application Method: Direct Push Technology (DPT), Expendable Tips
Injection Depth: Injection depth varies point to point based on depth to impermeable clay layer. Please see log for more details.
Number of Injection Points: 138

Deviations from Proposal:

1. The original barrier was estimated to be 850' long. Upon measuring it in person it was found to be 835'. The RRS team reduced the total amount of points from 142 to 138 and increased the total product mass for each point to account for this.
2. The barrier was moved upgradient of MW-14, MW-15S, MW-15D, MW-43S and MW-43D.
3. The RRS team switched from 3-Foot screens to expendable tips to decrease potential of surfacing, heaving, and increase distribution throughout the bottom intervals.
4. Depths varied throughout the barrier based on soil boring and the drillers' discretion of where the clay layer began.
5. Several points were redrilled due to heaving and/or surfacing issues. See log for details.
6. Several intervals did not receive full volume due to surfacing/insufficient flow rates. Volume was then redistributed to the next interval.
7. Several points did not receive full volume. In this case, the remaining volume was allocated to the deepest interval in the adjacent points.
8. IPs 16, 18, 20, and 22 received less volume due to confusion on location in the subsurface. Neighboring IPs received additional volume to ensure adequate distribution of product mix throughout the area.
9. The concrete barrier between IPs 107 and 108 prevented uniform barrier point placement. IP 138 was renamed IP 107 B and placed near the concrete barrier to ensure there were no gaps in coverage. See map for details.

General Observations

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1. PlumeStop concentrations were completed when visual confirmation of product mix occurred. See Groundwater Parameter Log for details.
2. Delays were a common occurrence due to weather conditions.
3. Several natural and man-made barriers affected point placement.

Please see attached Table 1 (of injection logbook) for details on injection flow rates and pressures observed.

3DME PRB 1

- Orientation
  - PRB 1 was located on the western edge of the property line running from north to south.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. Several points needed to be redrilled due to this and were offset 1-3' from the original bore hole.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Temporary wells
      - Temporary wells were utilized throughout the barrier to gauge satisfactory distribution.
        - The RRS team saw an increase in turbidity as well as a rise in water level during injections taking place within 8' of a piezometer.
    - Well data
      - Monitoring wells near the barrier saw noticeable drops in ORP levels indicating a more reducing environment in the subsurface after injections. See attached Groundwater Parameter Log for details.
  - Borings
    - Preliminary Borings
      - Borings were completed throughout the barrier to ascertain the depth of the impermeable clay layer. Treatment intervals were adjusted based on our findings.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
3.65	0.73	3.64	19.2	11.2	15

Table 2: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

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A total of **5,382 lbs of 3DME, 4,037 lbs ZVI, and 12 L of BDI** was mixed and applied as a 5% solution, with a total volume of **13,288 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 3-Foot Screens
Injection Depth: Injection depth varies point to point based on depth to impermeable clay layer. Please see log for more details.
Number of Injection Points: 44
Deviations from Proposal:

- Depths varied point to point based on the depth of the clay layer.

General Observations

- Depth to the clay layer deepened as the RRS team moved North throughout the barrier.
- Groundwater data collected showed evidence of a more reducing environment post injection activities.

Please see attached Table # (of injection logbook) for details on injection flow rates and pressures observed.

3DME PRB 2

- Orientation
  - PRB 2 was located just east of PRB 1 and ran north to south starting just south of MW-11 and continuing just north of MW-23.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. However, at any time that surfacing occurred the bore was able to be resealed and no volume was redistributed because of this.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Temporary wells
      - Temporary wells were utilized throughout the barrier to gauge satisfactory distribution.
        - Visual confirmation of the product mix was seen in PZ-1 after about 120 gallons was injected into IP-16
    - Well data
      - Monitoring wells near the barrier saw noticeable drops in ORP levels indicating a more reducing environment in the subsurface after injections. See attached Groundwater Parameter Log for details.
  - Borings
    - Preliminary Borings

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- Borings were completed throughout the barrier to ascertain the depth of the impermeable clay layer. Treatment intervals were adjusted based on our findings.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
3.29	0.7	3.38	32	25.9	20

Table 3: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **3,076 lbs of 3DME, 2,307 lbs ZVI, and 6.82 L of BDI** was mixed and applied as a 5% solution, with a total volume of **7,593 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 3-Foot Screens
Injection Depth: Injection depth varies point to point based on depth to impermeable clay layer. Please see log for more details.
Number of Injection Points: 25
Deviations from Proposal:

- Depths varied point to point based on the depth of the clay layer.

General Observations

- Depth to the clay layer deepened as the RRS team moved North throughout the barrier.
- Groundwater data collected showed evidence of a more reducing environment post injection activities.

Please see attached Table 3 (of injection logbook) for details on injection flow rates and pressures observed.

3DME PRB 3

- Orientation
  - PRB 3 was located towards the center of the property running north to south. Utilities at the northern edge of the barrier cause the shape to skew to the east.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. In this case, the volume originally designated for that interval was redistributed to the next one.
- IP Relocation
    - Several points were put in a more east-west orientation in order to avoid utilities.
- QA/QC During Application

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- Groundwater
  - Temporary wells
    - Temporary wells were utilized throughout the barrier to gauge satisfactory distribution.
      - The RRS team saw an increase in turbidity as well as a rise in water level during injections taking place within 8' of a piezometer.
  - Well data
    - Monitoring wells near the barrier saw noticeable drops in ORP levels indicating a more reducing environment in the subsurface after injections. See attached Groundwater Parameter Log for details.
- Borings
  - Preliminary Borings
    - Borings were completed throughout the barrier to ascertain the depth of the impermeable clay layer. Treatment intervals were adjusted based on our findings.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
4.24	0.65	4.14	19.0	10.3	18

Table 3: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **4,646 lbs of 3DME, 3,485 lbs ZVI, and 10.36 L of BDI** was mixed and applied as a 5% solution, with a total volume of **11,471 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 3-Foot Screens
Injection Depth: Injection depth varies point to point based on depth to impermeable clay layer. Please see log for more details.
Number of Injection Points: 38
Deviations from Proposal:

- The orientation of the barrier was changed in order to avoid underground utilities and ensure there were no gaps in the barrier. The most northern points start to skew towards the east upon reaching the utilities running east to west. See attached map for details.
- Depths varied point to point based on the depth of the clay layer.

General Observations

- Depth to the clay layer deepened as the RRS team moved North throughout the barrier.

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- Groundwater data collected showed evidence of a more reducing environment post injection activities.

Please see attached Table 4 (of injection logbook) for details on injection flow rates and pressures observed.

3DME PRB 4

- Orientation
  - At the request of Patriot, the barrier was broken up into a northern and southern portion. The two transects were orientated from southwest heading northeast.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. Several points needed to be redrilled due to this and were offset 1-3' from the original bore hole.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Temporary wells
      - Temporary wells were not used in this barrier as the RRS team felt confident in the design based on the previous barriers completed.
    - Well data
      - Monitoring wells near the barrier saw noticeable drops in ORP levels indicating a more reducing environment in the subsurface after injections. See attached Groundwater Parameter Log for details.
  - Borings
    - Preliminary Borings
      - Borings were completed throughout the barrier to ascertain the depth of the impermeable clay layer. Treatment intervals were adjusted based on our findings.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
4.09	0.90	4.10	21.7	22.3	12

Table 5: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **7,600 lbs of 3DME, 5,700 lbs ZVI, and 16.91 L of BDI** was mixed and applied as a 5% solution, with a total volume of **18,763 gal** applied in the area. BDI was added at a 2x concentration.

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Application Method: DPT, 3-Foot Screens, Expendable Tips with 2' Lifts
Injection Depth: Injection depth varies point to point based on depth to impermeable clay layer. Please see log for more details.
Number of Injection Points: 62
Deviations from Proposal:

- Part way through the completion of the barrier the decision was made to switch to expendable tips due to the continuous breaking of the retractable screens. When expendable tips were used, vertical intervals were completed in 2' intervals rather than 3' intervals. See the attached log for details of tooling used at each point.
- At the request of Patriot, the barrier was broken up into two sections and angled from southwest to northeast.
- Depths varied point to point based on the depth of the clay layer.

General Observations

- Depth to the clay layer deepened as the RRS team moved North throughout the barrier.
- Groundwater data collected showed evidence of a more reducing environment post injection activities.

Please see attached Table 5 (of injection logbook) for details on injection flow rates and pressures observed.

3DME PRB 5

- Orientation
  - At the request of Patriot, the barrier was broken up into a northern and southern portion. The two transects were orientated from southwest heading northeast.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. Several points needed to be redrilled due to this and were offset 1-3' from the original bore hole.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Temporary wells
      - Temporary wells were not used in this barrier as the RRS team felt confident in the design based on the previous barriers completed.
    - Well data
      - Monitoring wells near the barrier saw noticeable drops in ORP levels indicating a more reducing environment in the subsurface after injections. See attached Groundwater Parameter Log for details.
  - Borings

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- Preliminary Borings
  - Borings were completed throughout the barrier to ascertain the depth of the impermeable clay layer. Treatment intervals were adjusted based on our findings.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
4.09	0.90	4.10	21.7	22.3	12

Table 6: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **7,301 lbs of 3DME, 5,476 lbs ZVI, and 16.91 L of BDI** was mixed and applied as a 5% solution, with a total volume of **18,197 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, Expendable Tips with 2' Lifts
Injection Depth: Injection depth varies point to point based on depth to impermeable clay layer. Please see log for more details.
Number of Injection Points: 62
Deviations from Proposal:

- Expendable tips were used rather than 3-Foot Screens.
- At the request of Patriot, the barrier was broken up into two sections and angled from southwest to northeast.
- Depths varied point to point based on the depth of the clay layer.

General Observations

- Depth to the clay layer deepened as the RRS team moved North throughout the barrier.
- Groundwater data collected showed evidence of a more reducing environment post injection activities.
- Backpressure was much more common in the most northern extent of the barrier than anywhere else on-site.

Please see attached Table 6 (of injection logbook) for details on injection flow rates and pressures observed.

Site Restoration and Clean Up

- Prior to demobilizing offsite, all Regenesis equipment was cleaned up. Rental equipment was called off and returned.
- All piezometers were removed by RRS personnel.

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- All bores were backfilled using bentonite and covered to match the existing ground surface.

RRS appreciates the opportunity to work with Patriot at this site. If you need additional information regarding the application event or have any questions, please feel free to contact Andrew Kavanagh at 574.304.4353, Bill Disselhorst at 630.740.8815 or Seth Benson at 231.638.8222.

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Appendix A

(Injection Logs, Groundwater Parameter Logs, Photo Logs, Maps)

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	11/3/2021	10:47	27-25	100	1.88	0.00	75.34	75.34	667	275	57	0.05		Expendable Tip
	11/3/2021	11:19	25-23	32	3.59	75.34	156.22	80.88				0.05		
	11/3/2021	11:57	23-21	20	4.01	156.22	235.18	78.96				0.05	Saw color in peizometer change from brown to light brown.	
	11/3/2021	12:26	21-19	5	4.40	235.18	317.98	82.80				0.05	Visual confirmation of PS in peizometer after the completion of the interval.	
	11/3/2021	12:54	19-17	18	4.39	317.98	392.47	74.49				0.05		
	11/3/2021	13:20	17-15	12	4.37	392.47	471.13	78.66				0.05		
	11/3/2021	13:50	15-13	12	4.66	471.13	555.01	83.88				0.05		
	11/3/2021	14:26	13-11	12	4.77	555.01	627.89	72.88				0.05		
	11/3/2021	14:43	11-10	12	4.96	627.89	666.83	38.94				0.02		
2	11/4/2021	9:34	27-25	40	4.25	0.00	78.98	78.98	665	274	57	0.05		Expendable Tip
	11/4/2021	9:59	25-23	30	4.20	78.98	156.76	77.78				0.05		
	11/4/2021	10:25	23-21	20	4.18	156.76	235.07	78.31				0.05		
	11/4/2021	11:07	21-19	18	4.60	235.07	312.55	77.48				0.05		
	11/4/2021	11:38	19-17	8	4.76	312.55	391.24	78.69				0.05		
	11/4/2021	12:02	17-15	8	4.80	391.24	468.06	76.82				0.05		
	11/4/2021	12:33	15-13	14	6.41	468.06	546.33	78.27				0.05		
	11/4/2021	12:53	13-11	12	6.42	546.33	624.87	78.54				0.05		
	11/4/2021	13:04	11-10	14	6.18	624.87	664.75	39.88				0.02		
3	11/3/2021	10:46	27-25	28	4.42	0.00	78.61	78.61	668	275	57	0.05		Expendable Tip
	11/3/2021	11:19	25-23	28	3.47	78.61	156.49	77.88				0.05		
	11/3/2021	11:57	23-21	18	3.78	156.49	236.99	80.50				0.05		
	11/3/2021	12:26	21-19	20	4.82	236.99	315.68	78.69				0.05		
	11/3/2021	12:54	19-17	10	4.42	315.68	395.81	80.13				0.05		
	11/3/2021	13:20	17-15	10	4.90	395.81	476.01	80.20				0.05		
	11/3/2021	13:50	15-13	10	4.61	476.01	558.99	82.98				0.05		
	11/3/2021	14:26	13-11	12	4.88	558.99	628.59	69.60				0.05		
	11/3/2021	14:44	11-10	15	4.56	628.59	667.56	38.97				0.02		
4	11/4/2021	9:34	27-25	45	4.50	0.00	78.63	78.63	664	274	57	0.05		Expendable Tip
	11/4/2021	9:59	25-23	25	4.53	78.63	158.90	80.27				0.05		
	11/4/2021	10:25	23-21	20	4.25	158.90	235.08	76.18				0.05		
	11/4/2021	11:06	21-19	18	4.60	235.08	313.06	77.98				0.05		
	11/4/2021	11:37	19-17	8	4.75	313.06	390.45	77.39				0.05		
	11/4/2021	12:02	17-15	8	4.80	390.45	469.53	79.08				0.05		
	11/4/2021	12:33	15-13	14	6.41	469.53	546.23	76.70				0.05		
	11/4/2021	12:53	13-11	12	6.42	546.23	624.72	78.49				0.05		
	11/4/2021	13:04	11-10	14	6.18	624.72	664.35	39.63				0.02		
5	11/3/2021	10:42	27-25	100	2.81	0.00	79.61	79.61	666	274	57	0.05		Expendable Tip
	11/3/2021	11:19	25-23	26	3.28	79.61	157.38	77.77				0.05		
	11/3/2021	11:57	23-21	12	4.78	157.38	237.56	80.18				0.05		
	11/3/2021	12:26	21-19	20	4.80	237.56	314.98	77.42				0.05		
	11/3/2021	12:54	19-17	18	4.33	314.98	393.18	78.20				0.05		
	11/3/2021	13:20	17-15	18	4.26	393.18	469.86	76.68				0.05		
	11/3/2021	13:50	15-13	5	4.14	469.86	548.52	78.66				0.05		
	11/3/2021	14:26	13-11	10	4.18	548.52	627.81	79.29				0.05		
	11/3/2021	14:44	11-10	12	4.70	627.81	665.89	38.08				0.02		
6	11/4/2021	9:34	27-25	40	4.25	0.00	78.56	78.56	665	274	57	0.05		Expendable Tip
	11/4/2021	10:00	25-23	26	4.18	78.56	157.54	78.98				0.05		
	11/4/2021	10:25	23-21	22	4.19	157.54	236.80	79.26				0.05		
	11/4/2021	11:06	21-19	18	4.60	236.80	312.98	76.18				0.05		
	11/4/2021	11:38	19-17	8	4.76	312.98	393.20	80.22				0.05		
	11/4/2021	12:02	17-15	8	4.80	393.20	468.45	75.25				0.05		
	11/4/2021	12:32	15-13	14	6.41	468.45	546.42	77.97				0.05		
	11/4/2021	12:53	13-11	12	6.42	546.42	624.22	77.80				0.05		
	11/4/2021	13:04	11-10	14	6.18	624.22	665.23	41.01				0.02		
7	11/3/2021	10:40	27-25	28	3.57	0.00	79.26	79.26	670	276	57	0.05		Expendable Tip
	11/3/2021	11:18	25-23	10	3.03	79.26	157.20	77.94				0.05		
	11/3/2021	11:57	23-21	15	4.15	157.20	238.48	81.28				0.05		
	11/3/2021	12:26	21-19	10	4.10	238.48	312.76	74.28				0.05		
	11/3/2021	12:54	19-17	15	4.22	312.76	394.56	81.80				0.05		
	11/3/2021	13:20	17-15	15	4.34	394.56	472.68	78.12				0.05		
	11/3/2021	13:50	15-13	12	4.62	472.68	555.84	83.16				0.05		
	11/3/2021	14:26	13-11	15	4.98	555.84	627.19	71.35				0.05		
	11/3/2021	14:44	11-10	18	4.56	627.19	670.20	43.01				0.02		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
8	11/4/2021	9:35	27-25	40	4.35	0.00	78.98	78.98	666	275	57	0.05		Expendable Tip
	11/4/2021	10:01	25-23	42	4.45	78.98	153.95	74.97				0.05		
	11/4/2021	10:26	23-21	24	4.40	153.95	238.56	84.61				0.05		
	11/4/2021	11:06	21-19	18	4.60	238.56	312.65	74.09				0.05		
	11/4/2021	11:38	19-17	8	4.76	312.65	394.30	81.65				0.05		
	11/4/2021	12:02	17-15	8	4.80	394.30	469.53	75.23				0.05		
	11/4/2021	12:32	15-13	14	6.41	469.53	547.30	77.77				0.05		
	11/4/2021	12:52	13-11	12	6.42	547.30	625.66	78.36				0.05		
	11/4/2021	13:04	11-10	14	6.18	625.66	666.32	40.66				0.02		
9	11/9/2021	11:58	27-25	28	4.54	0.00	78.66	78.66	665	274	57	0.05		Expendable Tip
	11/9/2021	12:22	25-23	80	3.33	78.66	158.32	79.66				0.05		
	11/9/2021	12:51	23-21	80	3.45	158.32	235.67	77.35				0.05		
	11/9/2021	13:21	21-19	65	5.13	235.67	313.28	77.61				0.05		
	11/9/2021	13:44	19-17	45	5.23	313.28	391.56	78.28				0.05		
	11/9/2021	14:09	17-15	42	5.00	391.56	470.32	78.76				0.05	Small amount of surfacing out of bore. Sealed and continued.	
	11/9/2021	14:32	15-13	48	5.23	470.32	547.83	77.51				0.05		
	11/9/2021	14:58	13-11	55	4.98	547.83	624.82	76.99				0.05		
	11/9/2021	15:23	11-10	40	5.03	624.82	665.13	40.31				0.02		
10	11/10/2021	14:49	27-25	45	3.47	0.00	77.15	77.15	668	275	57	0.05		Expendable Tip
	11/10/2021	15:25	25-23	38	4.69	77.15	158.91	81.76				0.05		
	11/11/2021	8:11	23-21	38	4.41	158.91	235.92	77.01				0.05		
	11/11/2021	8:32	21-19	22	4.62	235.92	313.51	77.59				0.05		
	11/11/2021	9:02	19-17	20	4.82	313.51	390.15	76.64				0.05		
	11/11/2021	9:30	17-15	15	4.77	390.15	467.82	77.67				0.05		
	11/11/2021	10:02	15-13	10	5.12	467.82	550.31	82.49				0.05		
	11/11/2021	10:27	13-11	10	4.35	550.31	627.12	76.81				0.05		
	11/11/2021	10:49	11-10	30	4.25	627.12	668.06	40.94				0.02		
11	11/9/2021	11:59	27-25	100	2.02	0.00	75.18	75.18	667	275	57	0.05		Expendable Tip
	11/9/2021	12:22	25-23	90	1.99	75.18	150.42	75.24				0.05		
	11/9/2021	12:51	23-21	80	3.16	150.42	234.19	83.77				0.05		
	11/9/2021	13:20	21-19	65	5.32	234.19	313.48	79.29				0.05		
	11/9/2021	13:44	19-17	50	5.11	313.48	390.26	76.78				0.05		
	11/9/2021	14:09	17-15	44	5.06	390.26	467.01	76.75				0.05		
	11/9/2021	14:32	15-13	45	5.15	467.01	546.77	79.76				0.05		
	11/9/2021	14:58	13-11	55	4.68	546.77	625.36	78.59				0.05		
	11/9/2021	15:23	11-10	40	4.97	625.36	666.88	41.52				0.02		
12	11/9/2021	11:59	27-25	10	3.99	0.00	79.61	79.61	665	274	57	0.05		Expendable Tip
	11/9/2021	12:23	25-23	45	4.23	79.61	157.38	77.77				0.05		
	11/9/2021	12:51	23-21	55	4.16	157.38	233.58	76.20				0.05	Small amount of surfacing out of bore. Sealed and continued.	
	11/9/2021	13:20	21-19	25	4.78	233.58	312.47	78.89				0.05		
	11/9/2021	13:44	19-17	10	4.89	312.47	390.91	78.44				0.05		
	11/9/2021	14:09	17-15	28	5.02	390.91	469.92	79.01				0.05		
	11/9/2021	14:32	15-13	5	4.69	469.92	546.30	76.38				0.05		
	11/9/2021	14:58	13-11	5	5.37	546.30	624.18	77.88				0.05		
	11/9/2021	15:23	11-10	5	5.26	624.18	665.28	41.10				0.02		
13	11/8/2021	9:20	27-25	45	3.89	0.00	78.23	78.23	1006	276	57	0.05		Expendable Tip
	11/8/2021	10:02	25-23	25	3.98	78.23	160.78	82.55				0.05		
	11/8/2021	10:43	23-21	8	3.39	160.78	236.58	75.80				0.05		
	11/8/2021	11:20	21-19	22	4.68	236.58	301.25	64.67				0.05		
	11/8/2021	11:40	19-17	38	4.99	301.25	457.35	156.10				0.05	**Design Change:** Doubled total volume to ensure adequate coverage in neighboring points.	
	11/8/2021	12:16	17-15	24	5.64	457.35	615.03	157.68				0.05		
	11/8/2021	12:53	15-13	24	5.16	615.03	772.87	157.84				0.05		
	11/8/2021	13:30	13-11	22	5.36	772.87	930.15	157.28				0.05		
	11/8/2021	14:06	11-10	25	5.27	930.15	1006.09	75.94				0.02		
14	11/9/2021	11:59	27-25	36	4.48	0.00	78.94	78.94	667	275	57	0.05		Expendable Tip
	11/9/2021	12:23	25-23	18	4.06	78.94	160.18	81.24				0.05		
	11/9/2021	12:51	23-21	15	4.18	160.18	235.18	75.00				0.05		
	11/9/2021	13:20	21-19	32	4.48	235.18	314.58	79.40				0.05		
	11/9/2021	13:44	19-17	22	4.57	314.58	392.57	77.99				0.05		
	11/9/2021	14:09	17-15	15	5.13	392.57	469.02	76.45				0.05		
	11/9/2021	14:31	15-13	25	5.16	469.02	547.09	78.07				0.05		
	11/9/2021	14:58	13-11	40	4.59	547.09	625.19	78.10				0.05		
	11/9/2021	15:23	11-10	25	5.37	625.19	667.23	42.04				0.02		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
15	11/8/2021	9:18	27-25	85	2.09	0.00	78.61	78.61	1002	276	57	0.05		Expendable Tip
	11/8/2021	10:02	25-23	85	2.63	78.61	159.67	81.06				0.05		
	11/8/2021	10:43	23-21	22	3.97	159.67	240.31	80.64				0.05		
	11/8/2021	11:20	21-19	20	4.76	240.31	298.67	58.36				0.05		
	11/8/2021	11:40	19-17	10	5.57	298.67	454.95	156.28				0.05	**Design Change:** Doubled total volume to ensure adequate coverage in neighboring points.	
	11/8/2021	12:17	17-15	8	5.23	454.95	613.42	158.47				0.05		
	11/8/2021	12:52	15-13	8	5.79	613.42	769.86	156.44				0.05		
	11/8/2021	13:30	13-11	10	5.34	769.86	926.17	156.31				0.05		
	11/8/2021	14:05	11-10	8	5.19	926.17	1001.80	75.63				0.02		
16	11/4/2021	14:08	27-25	100	4.62	0.00	78.45	78.45	512	211	44	0.05		Expendable Tip
	11/4/2021	14:15	25-23	62	5.26	78.45	156.32	77.87				0.05		
	11/4/2021	14:28	23-21	18	5.86	156.32	234.55	78.23				0.05		
	11/4/2021	14:47	21-19	18	5.34	234.55	312.45	77.90				0.05		
	11/4/2021	15:06	19-17	22	5.32	312.45	390.76	78.31				0.05		
	11/4/2021	15:23	17-15	24	5.50	390.76	468.39	77.63				0.05		
	11/4/2021	15:52	15-13	10	5.25	468.39	512.14	43.75				0.05	**Design Change:** Several lifts were done while lifting more than 2'. To ensure each point received the adequate coverage, the surrounding points were given additional volume.	
17	11/8/2021	9:16	27-25	70	2.92	0.00	79.65	79.65	1008	276	57	0.05		Expendable Tip
	11/8/2021	10:02	25-23	5	2.41	79.65	156.89	77.24				0.05		
	11/8/2021	10:43	23-21	18	3.65	156.89	235.67	78.78				0.05		
	11/8/2021	11:20	21-19	20	4.85	235.67	299.87	64.20				0.05		
	11/8/2021	11:40	19-17	32	5.41	299.87	457.49	157.62				0.05	**Design Change:** Doubled total volume to ensure adequate coverage in neighboring points.	
	11/8/2021	12:17	17-15	20	5.13	457.49	616.81	159.32				0.05		
	11/8/2021	12:52	15-13	15	5.23	616.81	773.69	156.88				0.05		
	11/8/2021	13:30	13-11	22	5.13	773.69	933.98	160.29				0.05		
	11/8/2021	14:05	11-10	18	5.16	933.98	1008.14	74.16				0.02		
18	11/4/2021	14:08	27-25	100	4.62	0.00	78.35	78.35	512	211	44	0.05		Expendable Tip
	11/4/2021	14:15	25-23	62	5.26	78.35	156.56	78.21				0.05		
	11/4/2021	14:29	23-21	18	5.86	156.56	234.66	78.10				0.05		
	11/4/2021	14:46	21-19	18	5.34	234.66	312.87	78.21				0.05		
	11/4/2021	15:06	19-17	22	5.32	312.87	390.28	77.41				0.05		
	11/4/2021	15:23	17-15	24	5.50	390.28	468.25	77.97				0.05		
	11/4/2021	15:52	15-13	10	5.25	468.25	512.14	43.89				0.05	**Design Change:** Several lifts were done while lifting more than 2'. To ensure each point received the adequate coverage, the surrounding points were given additional volume.	
19	11/8/2021	9:16	27-25	95	2.11	0.00	79.13	79.13	1004	276	57	0.05	**Design Change:** Doubled total volume to ensure adequate coverage in neighboring points.	Expendable Tip
	11/8/2021	10:02	25-23	90	2.58	79.13	159.62	80.49				0.05		
	11/8/2021	10:43	23-21	22	3.98	159.62	234.58	74.96				0.05		
	11/8/2021	11:20	21-19	18	4.56	234.58	300.18	65.60				0.05		
	11/8/2021	11:40	19-17	36	5.17	300.18	457.50	157.32				0.05		
	11/8/2021	12:17	17-15	20	5.29	457.50	613.84	156.34				0.05		
	11/8/2021	12:52	15-13	20	5.38	613.84	770.63	156.79				0.05		
	11/8/2021	13:29	13-11	20	4.98	770.63	929.09	158.46				0.05		
	11/8/2021	14:05	11-10	18	5.34	929.09	1004.27	75.18				0.02		
20	11/4/2021	14:09	27-25	100	4.62	0.00	78.20	78.20	512	211	44	0.05		Expendable Tip
	11/4/2021	14:15	25-23	62	5.26	78.20	156.35	78.15				0.05		
	11/4/2021	14:29	23-21	18	5.86	156.35	234.76	78.41				0.05		
	11/4/2021	14:46	21-19	18	5.34	234.76	312.45	77.69				0.05		
	11/4/2021	15:06	19-17	22	5.32	312.45	392.98	80.53				0.05		
	11/4/2021	15:23	17-15	24	5.50	392.98	468.23	75.25				0.05		
	11/4/2021	15:51	15-13	10	5.25	468.23	512.14	43.91				0.05	**Design Change:** Several lifts were done while lifting more than 2'. To ensure each point received the adequate coverage, the surrounding points were given additional volume.	
21	11/8/2021	14:45	27-25	95	4.16	0.00	160.78	160.78	1331	549	114	0.05	**Design Change:** Doubled total volume to ensure adequate coverage in neighboring points.	Expendable Tip
	11/8/2021	15:26	25-23	22	5.79	160.78	314.50	153.72				0.05		
	11/9/2021	7:29	23-21	15	5.54	314.50	470.69	156.19				0.05		
	11/9/2021	8:04	21-19	15	5.13	470.69	628.11	157.42				0.05		
	11/9/2021	8:37	19-17	12	5.29	628.11	785.53	157.42				0.05		
	11/9/2021	9:11	17-15	12	5.41	785.53	942.92	157.39				0.05		
	11/9/2021	9:46	15-13	12	5.46	942.92	1099.72	156.80				0.05		
	11/9/2021	10:21	13-11	12	5.56	1099.72	1256.17	156.45				0.05		
	11/9/2021	10:55	11-10	15	5.48	1256.17	1331.36	75.19				0.02		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
22	11/4/2021	14:09	27-25	100	4.62	0.00	78.10	78.10	512	211	44	0.05		Expendable Tip
	11/4/2021	14:15	25-23	62	5.26	78.10	156.35	78.25				0.05		
	11/4/2021	14:29	23-21	18	5.86	156.35	234.23	77.88				0.05		
	11/4/2021	14:46	21-19	18	5.34	234.23	312.34	78.11				0.04		
	11/4/2021	15:05	19-17	22	5.32	312.34	390.50	78.16				0.04		
	11/4/2021	15:22	17-15	24	5.50	390.50	468.31	77.81				0.04		
	11/4/2021	15:51	15-13	10	5.25	468.31	512.14	43.83				0.04	**Design Change:** Several lifts were done while lifting more than 2'. To ensure each point received the adequate coverage, the surrounding points were given additional volume.	
23	11/8/2021	14:41	27-25	95	4.23	0.00	157.28	157.28	1337	551	115	0.04	**Design Change:** Doubled total volume to ensure adequate coverage in neighboring points. Received additonal product mass from neighboring points.	Expendable Tip
	11/8/2021	15:27	25-23	15	5.36	157.28	315.61	158.33				0.04		
	11/9/2021	7:29	23-21	12	5.51	315.61	473.25	157.64				0.04		
	11/9/2021	8:04	21-19	15	5.39	473.25	631.72	158.47				0.04		
	11/9/2021	8:37	19-17	12	5.34	631.72	789.04	157.32				0.04		
	11/9/2021	9:11	17-15	12	5.48	789.04	947.30	158.26				0.04		
	11/9/2021	9:46	15-13	12	5.48	947.30	1105.61	158.31				0.04		
	11/9/2021	10:21	13-11	15	5.39	1105.61	1262.84	157.23				0.04		
	11/9/2021	10:55	11-10	15	5.16	1262.84	1337.07	74.23				0.04		
24	11/10/2021	9:25	29-27	80	3.02	0.00	68.32	68.32	666	274	57	0.04		Expendable Tip
	11/10/2021	9:58	27-25	15	5.23	68.32	141.09	72.77				0.05		
	11/10/2021	11:42	25-23	26	4.89	141.09	211.57	70.48				0.05		
	11/10/2021	12:03	23-21	18	5.34	211.57	281.74	70.17				0.04		
	11/10/2021	12:25	21-19	35	4.65	281.74	352.91	71.17				0.04		
	11/10/2021	12:43	19-17	34	4.71	352.91	425.73	72.82				0.04		
	11/10/2021	13:09	17-15	28	4.69	425.73	493.11	67.38				0.04		
	11/10/2021	13:28	15-13	18	5.06	493.11	562.49	69.38				0.04		
	11/10/2021	13:51	13-11	35	4.98	562.49	631.05	68.56				0.04		
	11/10/2021	14:11	11-10	42	4.65	631.05	665.55	34.50				0.04		
25	11/10/2021	14:47	29-27	100	2.89	0.00	70.31	70.31	666	274	57	0.05		Expendable Tip
	11/10/2021	15:36	27-25	90	2.79	70.31	139.58	69.27				0.05	Heave in rod preventing flow at the start of the interval. Lifting up and redrilling 2' E.	
	11/11/2021	8:12	25-23	35	4.19	139.58	210.46	70.88				0.05		
	11/11/2021	8:32	23-21	20	4.59	210.46	281.60	71.14				0.04		
	11/11/2021	9:02	21-19	15	4.69	281.60	352.48	70.88				0.04		
	11/11/2021	9:31	19-17	15	4.65	352.48	423.05	70.57				0.04		
	11/11/2021	10:03	17-15	10	5.14	423.05	491.24	68.19				0.04		
	11/11/2021	10:26	15-13	12	5.26	491.24	562.81	71.57				0.04		
	11/11/2021	10:49	13-11	30	4.86	562.81	630.59	67.78				0.04		
	11/11/2021	11:17	11-10	30	5.02	630.59	666.17	35.58				0.04		
26	11/10/2021	9:24	29-27	80	2.68	0.00	68.93	68.93	664	274	57	0.05		Expendable Tip
	11/10/2021	9:58	27-25	15	4.68	68.93	140.19	71.26				0.05		
	11/10/2021	11:42	25-23	25	5.31	140.19	210.36	70.17				0.05		
	11/10/2021	12:03	23-21	18	4.59	210.36	281.64	71.28				0.04		
	11/10/2021	12:25	21-19	35	4.86	281.64	354.65	73.01				0.04		
	11/10/2021	12:43	19-17	32	4.96	354.65	423.68	69.03				0.04		
	11/10/2021	13:09	17-15	28	5.03	423.68	493.55	69.87				0.04		
	11/10/2021	13:28	15-13	15	4.99	493.55	563.74	70.19				0.04		
	11/10/2021	13:51	13-11	30	4.56	563.74	633.66	69.92				0.04		
	11/10/2021	14:11	11-10	38	4.69	633.66	664.08	30.42				0.04		
27	11/10/2021	14:49	29-27	90	3.16	0.00	72.51	72.51	668	275	57	0.05		Expendable Tip
	11/10/2021	15:25	27-25	35	4.58	72.51	145.67	73.16				0.05		
	11/11/2021	8:12	25-23	35	4.26	145.67	211.26	65.59				0.05		
	11/11/2021	8:32	23-21	20	4.67	211.26	284.55	73.29				0.04		
	11/11/2021	9:02	21-19	15	4.81	284.55	351.69	67.14				0.04		
	11/11/2021	9:31	19-17	15	4.69	351.69	422.33	70.64				0.04		
	11/11/2021	10:03	17-15	12	5.03	422.33	493.62	71.29				0.04		
	11/11/2021	10:26	15-13	10	5.12	493.62	567.55	73.93				0.04		
	11/11/2021	10:49	13-11	30	5.08	567.55	632.08	64.53				0.04		
	11/11/2021	11:16	11-10	25	5.06	632.08	667.83	35.75				0.04		
28	11/10/2021	9:21	29-27	60	3.21	0.00	70.16	70.16	665	274	57	0.05		Expendable Tip
	11/10/2021	9:58	27-25	15	4.67	70.16	143.67	73.51				0.05		
	11/10/2021	11:43	25-23	38	4.88	143.67	212.48	68.81				0.05		
	11/10/2021	12:03	23-21	15	4.98	212.48	282.56	70.08				0.04		
	11/10/2021	12:25	21-19	35	4.76	282.56	352.55	69.99				0.04		
	11/10/2021	12:44	19-17	28	5.16	352.55	421.62	69.07				0.04		
	11/10/2021	13:09	17-15	24	4.19	421.62	495.60	73.98				0.04		
	11/10/2021	13:28	15-13	12	5.26	495.60	563.28	67.68				0.04		
	11/10/2021	13:51	13-11	25	5.33	563.28	632.29	69.01				0.04		
	11/10/2021	14:10	11-10	12	5.34	632.29	665.37	33.08				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
29	11/11/2021	12:13	29-27	85	3.87	0.00	72.36	72.36	669	276	57	0.05		Expendable Tip
	11/11/2021	12:42	27-25	20	5.47	72.36	140.59	68.23				0.05		
	11/11/2021	13:07	25-23	30	4.56	140.59	210.61	70.02				0.05		
	11/11/2021	13:24	23-21	35	4.62	210.61	284.50	73.89				0.04		
	11/11/2021	13:47	21-19	20	4.88	284.50	350.88	66.38				0.04		
	11/11/2021	14:10	19-17	35	4.76	350.88	423.15	72.27				0.04		
	11/11/2021	14:31	17-15	35	4.82	423.15	492.61	69.46				0.04		
	11/11/2021	14:52	15-13	32	4.76	492.61	563.09	70.48				0.04		
	11/11/2021	15:29	13-11	30	5.49	563.09	633.55	70.46				0.04		
	11/11/2021	15:56	11-10	30	5.61	633.55	669.28	35.73				0.04		
30	11/10/2021	9:19	29-27	65	3.14	0.00	71.50	71.50	664	274	57	0.05		Expendable Tip
	11/10/2021	9:58	27-25	15	4.35	71.50	141.35	69.85				0.05		
	11/10/2021	11:43	25-23	42	5.01	141.35	212.22	70.87				0.05		
	11/10/2021	12:03	23-21	20	4.88	212.22	281.36	69.14				0.04		
	11/10/2021	12:26	21-19	30	4.69	281.36	351.68	70.32				0.04		
	11/10/2021	12:44	19-17	32	5.01	351.68	422.18	70.50				0.04		
	11/10/2021	13:09	17-15	30	4.88	422.18	491.26	69.08				0.04		
	11/10/2021	13:28	15-13	10	5.13	491.26	561.34	70.08				0.04		
	11/10/2021	13:51	13-11	35	4.88	561.34	632.08	70.74				0.04		
	11/10/2021	14:10	11-10	40	4.99	632.08	664.31	32.23				0.04		
31	11/11/2021	12:13	29-27	85	3.56	0.00	52.37	52.37	671	276	57	0.05	Fair amount of surfacing out of bore. Unable to seal. Will redistribute remaining volume into the next interval.	Expendable Tip
	11/11/2021	12:42	27-25	20	5.43	52.37	138.62	86.25				0.05		
	11/11/2021	13:07	25-23	32	4.68	138.62	212.34	73.72				0.05		
	11/11/2021	13:24	23-21	35	4.74	212.34	282.70	70.36				0.04		
	11/11/2021	13:47	21-19	22	4.73	282.70	351.09	68.39				0.04		
	11/11/2021	14:10	19-17	35	4.99	351.09	421.68	70.59				0.04		
	11/11/2021	14:31	17-15	34	4.85	421.68	493.66	71.98				0.04		
	11/11/2021	14:52	15-13	30	4.85	493.66	562.41	68.75				0.04		
	11/11/2021	15:28	13-11	25	5.78	562.41	633.02	70.61				0.04		
	11/11/2021	15:56	11-10	30	5.42	633.02	670.85	37.83				0.04		
32	11/11/2021	12:13	29-27	85	3.74	0.00	72.53	72.53	665	274	57	0.05		Expendable Tip
	11/11/2021	12:42	27-25	20	5.18	72.53	141.37	68.84				0.05		
	11/11/2021	13:07	25-23	32	4.71	141.37	210.74	69.37				0.05		
	11/11/2021	13:24	23-21	35	4.68	210.74	283.77	73.03				0.04		
	11/11/2021	13:47	21-19	22	4.84	283.77	351.64	67.87				0.04		
	11/11/2021	14:11	19-17	35	4.93	351.64	422.18	70.54				0.04		
	11/11/2021	14:32	17-15	32	5.01	422.18	494.07	71.89				0.04		
	11/11/2021	14:52	15-13	30	5.05	494.07	562.78	68.71				0.04		
	11/11/2021	15:29	13-11	25	5.83	562.78	632.45	69.67				0.04		
	11/11/2021	15:56	11-10	30	5.88	632.45	665.29	32.84				0.04		
33	11/12/2021	9:19	29-27	65	3.16	0.00	70.65	70.65	665	274	57	0.05		Expendable Tip
	11/12/2021	9:57	27-25	18	5.13	70.65	141.09	70.44				0.05		
	11/12/2021	10:18	25-23	22	5.16	141.09	211.74	70.65				0.05		
	11/12/2021	10:37	23-21	20	5.15	211.74	282.56	70.82				0.04		
	11/12/2021	10:59	21-19	18	5.15	282.56	353.62	71.06				0.04		
	11/12/2021	11:18	19-17	18	5.19	353.62	421.57	67.95				0.04		
	11/12/2021	11:38	17-15	18	5.15	421.57	492.31	70.74				0.04		
	11/12/2021	11:56	15-13	15	5.20	492.31	561.34	69.03				0.04		
	11/12/2021	12:20	13-11	15	5.32	561.34	632.18	70.84				0.04		
	11/12/2021	12:31	11-10	18	5.29	632.18	665.29	33.11				0.04		
34	11/12/2021	13:01	29-27	68	3.98	0.00	70.25	70.25	666	274	57	0.05		Expendable Tip
	11/12/2021	13:22	27-25	68	5.98	70.25	140.65	70.40				0.05		
	11/12/2021	13:38	25-23	32	6.59	140.65	211.06	70.41				0.05		
	11/12/2021	13:55	23-21	55	7.01	211.06	281.48	70.42				0.04		
	11/12/2021	14:07	21-19	35	7.68	281.48	351.28	69.80				0.04		
	11/12/2021	14:16	19-17	32	7.42	351.28	422.60	71.32				0.04		
	11/12/2021	14:29	17-15	34	7.86	422.60	491.08	68.48				0.04		
	11/12/2021	14:42	15-13	34	7.88	491.08	562.37	71.29				0.04		
	11/12/2021	15:00	13-11	40	7.92	562.37	631.05	68.68				0.04		
	11/12/2021	15:13	11-10	42	7.85	631.05	665.71	34.66				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
35	11/12/2021	9:19	29-27	70	3.29	0.00	71.49	71.49	667	275	57	0.05		Expendable Tip
	11/12/2021	9:57	27-25	18	4.89	71.49	142.58	71.09				0.05		
	11/12/2021	10:18	25-23	22	5.10	142.58	211.36	68.78				0.05		
	11/12/2021	10:37	23-21	20	5.14	211.36	283.47	72.11				0.04		
	11/12/2021	10:59	21-19	18	5.10	283.47	353.27	69.80				0.04		
	11/12/2021	11:18	19-17	18	5.12	353.27	421.06	67.79				0.04		
	11/12/2021	11:38	17-15	16	5.19	421.06	491.37	70.31				0.04		
	11/12/2021	11:56	15-13	15	5.23	491.37	561.88	70.51				0.04		
	11/12/2021	12:20	13-11	15	5.42	561.88	633.59	71.71				0.04		
	11/12/2021	12:31	11-10	18	5.51	633.59	666.71	33.12				0.04		
36	11/16/2021	13:20	30-28	21	6.60	0.00	66.00	66.00	776	320	66	0.05		Expendable Tip
	11/16/2021	13:57	28-26	5	4.50	66.00	133.00	67.00				0.05		
	11/16/2021	14:19	26-24	16	4.00	133.00	199.00	66.00				0.05		
	11/16/2021	14:51	24-22	19	3.70	199.00	266.00	67.00				0.04		
	11/16/2021	15:10	22-20	9	4.30	266.00	332.00	66.00				0.04		
	11/17/2021	8:06	20-18	20	5.90	0.00	66.00	66.00				0.04		
	11/17/2021	8:33	18-16	5	3.70	66.00	133.00	67.00				0.04		
	11/17/2021	8:56	16-14	3	2.60	133.00	199.00	66.00				0.04		
	11/17/2021	9:17	14-12	25	4.60	199.00	266.00	67.00				0.04		
	11/17/2021	9:47	12-10	3	1.60	266.00	444.00	178.00				0.04	Received additional volume due to abandining IP-39	
37	11/16/2021	13:22	30-28	61	5.50	0.00	66.00	66.00	791	326	68	0.05		Expendable Tip
	11/16/2021	13:57	28-26	7	4.00	66.00	133.00	67.00				0.05		
	11/16/2021	14:19	26-24	17	4.30	133.00	199.00	66.00				0.05		
	11/16/2021	14:51	24-22	16	3.90	199.00	266.00	67.00				0.04		
	11/16/2021	15:10	22-20	10	4.20	266.00	332.00	66.00				0.04		
	11/17/2021	8:10	20-18	5	4.20	0.00	66.00	66.00				0.04		
	11/17/2021	8:33	18-16	5	3.30	66.00	133.00	67.00				0.04		
	11/17/2021	8:56	16-14	2	2.50	133.00	199.00	66.00				0.04		
	11/17/2021	9:17	14-12	9	3.30	199.00	256.00	57.00				0.04	Surfacing from bore hole. Flow slowed and bore hole repacked. Surfacing uncontrolable. Interval abandoned	
	11/17/2021	9:47	12-10	4	2.80	256.00	459.00	203.00				0.04	Received additional volume due to abandining IP-39	
38	11/16/2021	9:05	30-28	71	6.20	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/16/2021	9:40	28-26	10	5.50	66.00	133.00	67.00				0.05		
	11/16/2021	9:58	26-24	8	3.10	133.00	199.00	66.00				0.05		
	11/16/2021	10:17	24-22	9	5.70	199.00	266.00	67.00				0.04		
	11/16/2021	10:37	22-20	13	3.60	266.00	332.00	66.00				0.04		
	11/16/2021	10:54	20-18	31	5.70	332.00	398.00	66.00				0.04		
	11/16/2021	11:12	18-16	11	3.10	398.00	465.00	67.00				0.04	minor surfacing from more hole	
	11/16/2021	11:33	16-14	8	5.50	465.00	531.00	66.00				0.04		
	11/16/2021	11:52	14-12	5	2.60	531.00	598.00	67.00				0.04		
	11/16/2021	12:15	12-10	8	6.00	598.00	664.00	66.00				0.04		
39	11/16/2021	13:25	30-28	115	3.40	0.00	44.00	44.00	257	106	22	0.04	Unable to establish reliable flow. Point redriven 1' SE	Expendable Tip
	11/17/2021	8:28	28-26	120	2.00	0.00	6.00	6.00				0.00	surfacing immediately. Sent trip rods down to push out point to no avail. Interval abandoned	
	11/17/2021	8:29	26-23	110	1.50	6.00	178.00	172.00				0.10		
	11/17/2021	10:22	23-22	160	2.50	178.00	180.00	2.00				0.04	surfacing from borehole. Bore hole repacked interval abandoned	
	11/17/2021	10:25	22-20	160	1.40	180.00	190.00	10.00				0.04	unable to establish reliable flowinterval abandoned	
	11/17/2021	10:28	20-18	150	2.00	190.00	212.00	22.00				0.04	unable to establish reliable flowinterval abandoned	
	11/17/2021	10:54	18-16	0	0.00	212.00	212.00	0.00				0.00	upon lift, surfacing occurred immediately	
	11/17/2021	10:54	16-14	0	0.00	212.00	213.00	1.00				0.04	Could not establish flow. Interval abandoned	
	11/17/2021	10:54	14-12	0	0.00	213.00	213.00	0.00				0.00	Could not establish flow. Interval abandoned	
	11/17/2021	10:54	12-10	0	0.00	213.00	213.00	0.00				0.00	Could not establish flow. Point abandoned	
40	11/16/2021	9:09	30-28	12	5.00	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/16/2021	9:40	28-26	8	4.60	66.00	133.00	67.00				0.05		
	11/16/2021	9:58	26-24	8	3.60	133.00	199.00	66.00				0.05		
	11/16/2021	10:17	24-22	9	5.00	199.00	266.00	67.00				0.04		
	11/16/2021	10:37	22-20	10	3.80	266.00	333.00	67.00				0.04		
	11/16/2021	10:54	20-18	7	4.50	333.00	398.00	65.00				0.04		
	11/16/2021	11:12	18-16	8	3.90	398.00	465.00	67.00				0.04		
	11/16/2021	11:33	16-14	8	4.60	465.00	531.00	66.00				0.04		
	11/16/2021	11:52	14-12	8	4.20	531.00	599.00	68.00				0.04		
	11/16/2021	12:15	12-10	0	4.80	599.00	664.00	65.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
41	11/16/2021	13:28	30-28	70	4.00	0.00	66.00	66.00	788	325	68	0.05		Expendable Tip
	11/16/2021	13:57	28-26	1	4.50	66.00	133.00	67.00				0.05		
	11/16/2021	14:19	26-24	8	4.50	133.00	199.00	66.00				0.05		
	11/16/2021	14:52	24-22	6	5.10	199.00	266.00	67.00				0.04		
	11/16/2021	15:11	22-20	20	4.00	266.00	332.00	66.00				0.04		
	11/17/2021	8:11	20-18	18	4.50	0.00	66.00	66.00				0.04		
	11/17/2021	8:33	18-16	0	3.10	66.00	133.00	67.00				0.04		
	11/17/2021	8:56	16-14	0	4.00	133.00	199.00	66.00				0.04		
	11/17/2021	9:17	14-12	0	2.00	199.00	266.00	67.00				0.04		
	11/17/2021	9:47	12-10	0	2.60	266.00	456.00	190.00				0.04	Received additional volume due to abandining IP-39	
42	11/16/2021	9:13	30-28	55	5.00	0.00	67.00	67.00	664	274	57	0.05		Expendable Tip
	11/16/2021	9:40	28-26	19	3.80	67.00	134.00	67.00				0.05		
	11/16/2021	9:58	26-24	13	3.80	134.00	199.00	65.00				0.05		
	11/16/2021	10:17	24-22	9	4.00	199.00	268.00	69.00				0.04		
	11/16/2021	10:36	22-20	11	4.80	268.00	332.00	64.00				0.04		
	11/16/2021	10:54	20-18	8	3.80	332.00	398.00	66.00				0.04		
	11/16/2021	11:12	18-16	10	5.00	398.00	465.00	67.00				0.04		
	11/16/2021	11:33	16-14	12	3.90	465.00	531.00	66.00				0.04		
	11/16/2021	11:52	14-12	9	4.70	531.00	599.00	68.00				0.04		
	11/16/2021	12:15	12-10	16	4.20	599.00	664.00	65.00				0.04		
43	11/15/2021	13:24	30-28	62	5.30	0.00	66.00	66.00	664	274	57	0.05	surfacing from Bore hole. Flow slowed	Expendable Tip
	11/15/2021	13:45	28-26	19	5.40	66.00	133.00	67.00				0.05		
	11/15/2021	14:06	26-24	8	5.60	133.00	199.00	66.00				0.05		
	11/15/2021	14:21	24-22	9	4.10	199.00	267.00	68.00				0.04		
	11/15/2021	14:41	22-20	30	5.60	267.00	332.00	65.00				0.04		
	11/15/2021	14:57	20-18	9	4.10	332.00	399.00	67.00				0.04		
	11/15/2021	15:11	18-16	8	5.50	399.00	465.00	66.00				0.04		
	11/15/2021	15:27	16-14	9	4.50	465.00	531.00	66.00				0.04		
	11/15/2021	15:43	14-12	11	5.80	531.00	598.00	67.00				0.04		
	11/15/2021	16:00	12-10	16	3.50	598.00	664.00	66.00				0.04		
44	11/16/2021	9:17	30-28	68	4.80	0.00	68.00	68.00	664	274	57	0.05		Expendable Tip
	11/16/2021	9:40	28-26	10	3.00	68.00	135.00	67.00				0.05	minor surfacing near borehole. Point repacked with benseal	
	11/16/2021	9:58	26-24	9	5.20	135.00	200.00	65.00				0.05		
	11/16/2021	10:17	24-22	6	2.60	200.00	266.00	66.00				0.04		
	11/16/2021	10:36	22-20	6	5.10	266.00	332.00	66.00				0.04		
	11/16/2021	10:54	20-18	2	3.60	332.00	398.00	66.00				0.04		
	11/16/2021	11:12	18-16	3	5.30	398.00	465.00	67.00				0.04		
	11/16/2021	11:33	16-14	3	3.40	465.00	531.00	66.00				0.04		
	11/16/2021	11:52	14-12	5	5.00	531.00	598.00	67.00				0.04		
	11/16/2021	12:15	12-10	35	2.20	598.00	664.00	66.00				0.04		
45	11/15/2021	13:26	30-28	20	5.80	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/15/2021	13:45	28-26	10	4.70	66.00	133.00	67.00				0.05		
	11/15/2021	14:05	26-24	13	4.80	133.00	198.00	65.00				0.04		
	11/15/2021	14:20	24-22	15	4.60	198.00	266.00	68.00				0.04		
	11/15/2021	14:41	22-20	10	4.70	266.00	332.00	66.00				0.04		
	11/15/2021	14:57	20-18	12	5.40	332.00	398.00	66.00				0.04		
	11/15/2021	15:11	18-16	17	4.90	398.00	465.00	67.00				0.04		
	11/15/2021	15:26	16-14	10	4.80	465.00	531.00	66.00				0.04		
	11/15/2021	15:43	14-12	16	4.80	531.00	598.00	67.00				0.04		
	11/15/2021	16:00	12-10	10	5.50	598.00	664.00	66.00				0.04		
46	11/12/2021	8:57	30-28	105	2.00	0.00	10.00	10.00	664	274	57	0.05	unable to establish reliable flow. Interval abandoned	Expendable Tip
	11/12/2021	9:37	28-26	52	5.20	10.00	133.00	123.00				0.05		
	11/12/2021	10:01	26-24	10	3.60	133.00	199.00	66.00				0.04		
	11/12/2021	10:17	24-22	5	1.60	199.00	266.00	67.00				0.04		
	11/12/2021	10:40	22-20	8	3.40	266.00	332.00	66.00				0.04		
	11/12/2021	10:58	20-18	15	4.80	332.00	398.00	66.00				0.04		
	11/12/2021	11:22	18-16	5	4.30	398.00	465.00	67.00				0.04		
	11/12/2021	11:48	16-14	5	5.20	465.00	531.00	66.00				0.04		
	11/12/2021	12:23	14-12	4	3.10	531.00	598.00	67.00				0.04		
	11/12/2021	12:47	12-10	6	4.70	598.00	664.00	66.00				0.04		
47	11/15/2021	13:28	30-28	10	5.80	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/15/2021	13:46	28-26	0	4.20	66.00	133.00	67.00				0.05		
	11/15/2021	14:05	26-24	5	4.40	133.00	199.00	66.00				0.04		
	11/15/2021	14:20	24-22	29	5.80	199.00	268.00	69.00				0.04		
	11/15/2021	14:43	22-20	8	4.30	268.00	332.00	64.00				0.04		
	11/15/2021	14:57	20-18	4	5.30	332.00	398.00	66.00				0.04		
	11/15/2021	15:11	18-16	1	4.40	398.00	466.00	68.00				0.04		
	11/15/2021	15:26	16-14	5	5.40	466.00	531.00	65.00				0.04		
	11/15/2021	15:42	14-12	5	4.20	531.00	598.00	67.00				0.04		
	11/15/2021	16:00	12-10	5	5.50	598.00	664.00	66.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
48	11/12/2021	8:59	30-28	58	5.10	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/12/2021	9:37	28-26	4	4.60	66.00	133.00	67.00				0.05		
	11/12/2021	10:01	26-24	18	3.80	133.00	199.00	66.00				0.04		
	11/12/2021	10:17	24-22	2	4.20	199.00	266.00	67.00				0.04		
	11/12/2021	10:39	22-20	10	4.00	266.00	332.00	66.00				0.04		
	11/12/2021	10:58	20-18	10	4.50	332.00	398.00	66.00				0.04		
	11/12/2021	11:22	18-16	5	3.80	398.00	465.00	67.00				0.04		
	11/12/2021	11:48	16-14	5	4.80	465.00	531.00	66.00				0.04		
	11/12/2021	12:23	14-12	7	3.80	531.00	598.00	67.00				0.04		
	11/12/2021	12:46	12-10	7	3.70	598.00	664.00	66.00				0.04		
49	11/15/2021	9:27	30-28	28	5.60	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/15/2021	10:01	28-26	8	5.20	66.00	133.00	67.00				0.05		
	11/15/2021	10:21	26-24	11	3.50	133.00	199.00	66.00				0.04		
	11/15/2021	10:37	24-22	35	6.50	199.00	266.00	67.00				0.04		
	11/15/2021	10:54	22-20	8	3.50	266.00	332.00	66.00				0.04		
	11/15/2021	11:13	20-18	10	5.80	332.00	398.00	66.00				0.04		
	11/15/2021	11:32	18-16	0	5.00	398.00	465.00	67.00				0.04		
	11/15/2021	11:55	16-14	11	4.60	465.00	532.00	67.00				0.04		
	11/15/2021	12:15	14-12	9	5.30	532.00	598.00	66.00				0.04		
	11/15/2021	12:33	12-10	5	4.60	598.00	664.00	66.00				0.04		
50	11/12/2021	9:03	30-28	10	5.60	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/12/2021	9:37	28-26	2	3.80	66.00	134.00	68.00				0.05		
	11/12/2021	10:01	26-24	19	4.10	134.00	199.00	65.00				0.04		
	11/12/2021	10:17	24-22	30	2.60	199.00	266.00	67.00				0.04		
	11/12/2021	10:39	22-20	7	4.60	266.00	332.00	66.00				0.04		
	11/12/2021	10:58	20-18	5	4.10	332.00	398.00	66.00				0.04		
	11/12/2021	11:22	18-16	5	4.50	398.00	465.00	67.00				0.04		
	11/12/2021	11:48	16-14	4	4.30	465.00	531.00	66.00				0.04		
	11/12/2021	12:24	14-12	5	4.50	531.00	598.00	67.00				0.04		
	11/12/2021	12:46	12-10	5	4.80	598.00	664.00	66.00				0.04		
51	11/15/2021	9:30	30-28	68	4.70	0.00	66.00	66.00	666	274	57	0.05		Expendable Tip
	11/15/2021	10:01	28-26	8	4.50	66.00	133.00	67.00				0.05		
	11/15/2021	10:21	26-24	32	3.90	133.00	199.00	66.00				0.04		
	11/15/2021	10:37	24-22	11	4.90	199.00	266.00	67.00				0.04		
	11/15/2021	10:54	22-20	10	4.00	266.00	332.00	66.00				0.04		
	11/15/2021	11:12	20-18	10	5.40	332.00	398.00	66.00				0.04		
	11/15/2021	11:32	18-16	0	4.80	398.00	465.00	67.00				0.04		
	11/15/2021	11:55	16-14	10	4.60	465.00	532.00	67.00				0.04		
	11/15/2021	12:15	14-12	15	4.00	532.00	598.00	66.00				0.04		
	11/15/2021	12:33	12-10	0	4.60	598.00	666.00	68.00				0.04		
52	11/12/2021	9:07	30-28	8	5.60	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/12/2021	9:37	28-26	0	3.40	66.00	133.00	67.00				0.05		
	11/12/2021	10:00	26-24	2	5.40	133.00	199.00	66.00				0.04		
	11/12/2021	10:17	24-22	9	3.70	199.00	266.00	67.00				0.04		
	11/12/2021	10:39	22-20	2	5.10	266.00	332.00	66.00				0.04		
	11/12/2021	10:58	20-18	0	3.40	332.00	398.00	66.00				0.04		
	11/12/2021	11:21	18-16	0	4.80	398.00	465.00	67.00				0.04		
	11/12/2021	11:48	16-14	0	3.50	465.00	531.00	66.00				0.04		
	11/12/2021	12:23	14-12	0	4.70	531.00	598.00	67.00				0.04		
	11/12/2021	12:46	12-10	0	4.30	598.00	664.00	66.00				0.04		
53	11/11/2021	9:51	30-28	80	5.60	0.00	66.00	66.00	666	274	57	0.05		Expendable Tip
	11/11/2021	10:29	28-26	9	4.90	66.00	133.00	67.00				0.05		
	11/11/2021	10:52	26-24	8	3.50	133.00	199.00	66.00				0.04		
	11/11/2021	11:11	24-22	8	5.00	199.00	266.00	67.00				0.04		
	11/11/2021	11:34	22-20	7	3.60	266.00	332.00	66.00				0.04		
	11/11/2021	11:53	20-18	7	5.10	332.00	398.00	66.00				0.04		
	11/11/2021	12:20	18-16	5	3.10	398.00	465.00	67.00				0.04		
	11/11/2021	12:45	16-14	8	5.80	465.00	531.00	66.00				0.04		
	11/11/2021	13:16	14-12	8	3.50	531.00	598.00	67.00				0.04		
	11/11/2021	13:43	12-10	15	5.00	598.00	666.00	68.00				0.04		
54	11/11/2021	14:09	30-28	40	5.00	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/11/2021	14:20	28-26	21	6.30	66.00	133.00	67.00				0.05		
	11/11/2021	14:33	26-24	6	5.60	133.00	199.00	66.00				0.04		
	11/11/2021	14:46	24-22	8	6.30	199.00	267.00	68.00				0.04		
	11/11/2021	14:59	22-20	6	6.20	267.00	332.00	65.00				0.04		
	11/11/2021	15:11	20-18	6	6.40	332.00	398.00	66.00				0.04		
	11/11/2021	15:20	18-16	6	6.30	398.00	465.00	67.00				0.04		
	11/11/2021	15:33	16-14	5	6.40	465.00	531.00	66.00				0.04		
	11/11/2021	15:44	14-12	2	6.30	531.00	598.00	67.00				0.04		
	11/11/2021	15:57	12-10	2	6.20	598.00	664.00	66.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
55	11/11/2021	9:54	30-28	120	3.40	0.00	66.00	66.00	663	273	57	0.05		Expendable Tip
	11/11/2021	10:29	28-26	22	4.50	66.00	133.00	67.00				0.05		
	11/11/2021	10:52	26-24	8	4.00	133.00	199.00	66.00				0.04		
	11/11/2021	11:11	24-22	8	4.60	199.00	266.00	67.00				0.04		
	11/11/2021	11:34	22-20	30	4.00	266.00	332.00	66.00				0.04		
	11/11/2021	11:53	20-18	8	4.40	332.00	398.00	66.00				0.04		
	11/11/2021	12:20	18-16	8	3.10	398.00	465.00	67.00				0.04		
	11/11/2021	12:44	16-14	8	4.90	465.00	531.00	66.00				0.04		
	11/11/2021	13:16	14-12	8	4.10	531.00	598.00	67.00				0.04		
	11/11/2021	13:43	12-10	12	4.40	598.00	663.00	65.00				0.04		
56	11/15/2021	9:35	30-28	55	5.70	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/15/2021	10:01	28-26	9	4.10	66.00	133.00	67.00				0.05		
	11/15/2021	10:20	26-24	29	4.50	133.00	199.00	66.00				0.04		
	11/15/2021	10:38	24-22	29	3.70	199.00	266.00	67.00				0.04		
	11/15/2021	10:54	22-20	9	4.90	266.00	334.00	68.00				0.04		
	11/15/2021	11:12	20-18	9	3.60	334.00	399.00	65.00				0.04		
	11/15/2021	11:33	18-16	7	4.50	399.00	465.00	66.00				0.04		
	11/15/2021	11:55	16-14	9	4.70	465.00	532.00	67.00				0.04		
	11/15/2021	12:15	14-12	12	3.50	532.00	599.00	67.00				0.04		
	11/15/2021	12:33	12-10	10	4.10	599.00	664.00	65.00				0.04		
57	11/11/2021	9:56	30-28	18	6.90	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	11/11/2021	10:29	28-26	9	3.60	66.00	133.00	67.00				0.05	minor surfacing from rod connection	
	11/11/2021	10:52	26-24	28	4.30	133.00	199.00	66.00				0.04		
	11/11/2021	11:11	24-22	8	3.80	199.00	266.00	67.00				0.04		
	11/11/2021	11:34	22-20	5	4.60	266.00	332.00	66.00				0.04		
	11/11/2021	11:53	20-18	6	4.00	332.00	398.00	66.00				0.04		
	11/11/2021	12:20	18-16	10	4.70	398.00	465.00	67.00				0.04		
	11/11/2021	12:44	16-14	5	3.40	465.00	531.00	66.00				0.04		
	11/11/2021	13:16	14-12	8	4.30	531.00	598.00	67.00				0.04		
	11/11/2021	13:43	12-10	6	3.80	598.00	664.00	66.00				0.04		
58	11/15/2021	9:40	30-28	8	6.20	0.00	66.00	66.00	662	273	57	0.05		Expendable Tip
	11/15/2021	10:01	28-26	2	3.60	66.00	133.00	67.00				0.05		
	11/15/2021	10:20	26-24	10	5.40	133.00	199.00	66.00				0.04		
	11/15/2021	10:38	24-22	15	2.30	199.00	266.00	67.00				0.04		
	11/15/2021	10:54	22-20	2	5.60	266.00	334.00	68.00				0.04		
	11/15/2021	11:12	20-18	3	3.10	334.00	398.00	64.00				0.04		
	11/15/2021	11:33	18-16	0	4.80	398.00	465.00	67.00				0.04		
	11/15/2021	11:55	16-14	5	4.50	465.00	532.00	67.00				0.04		
	11/15/2021	12:15	14-12	0	5.40	532.00	598.00	66.00				0.04		
	11/15/2021	12:33	12-10	0	4.20	598.00	662.00	64.00				0.04		
59	11/11/2021	10:01	32-30	50	6.70	0.00	66.00	66.00	663	273	57	0.05	minor surfacing from rod connection	Expendable Tip
	11/11/2021	10:29	30-28	5	2.90	66.00	134.00	68.00				0.05		
	11/11/2021	10:52	28-26	10	5.00	134.00	199.00	65.00				0.04		
	11/11/2021	11:11	26-24	58	3.20	199.00	266.00	67.00				0.04		
	11/11/2021	11:34	24-22	15	5.10	266.00	332.00	66.00				0.04		
	11/11/2021	11:52	22-20	8	3.60	332.00	398.00	66.00				0.04		
	11/11/2021	12:19	20-18	8	5.70	398.00	465.00	67.00				0.04		
	11/11/2021	12:44	18-16	5	3.10	465.00	531.00	66.00				0.04		
	11/11/2021	13:15	16-14	5	4.80	531.00	598.00	67.00				0.04		
	11/11/2021	13:43	14-12	2	3.20	598.00	663.00	65.00				0.04		
60	10/27/2021	13:17	25-23	50	5.00	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/27/2021	13:32	23-21	2	2.30	66.00	133.00	67.00				0.05		
	10/27/2021	13:51	21-19	16	6.20	133.00	199.00	66.00				0.04		
	10/27/2021	14:08	19-17	20	3.50	199.00	266.00	67.00				0.04		
	10/27/2021	14:22	17-15	35	5.40	266.00	332.00	66.00				0.04		
	10/27/2021	14:43	15-13	6	4.60	332.00	398.00	66.00				0.04		
	10/27/2021	14:58	13-11	16	6.10	398.00	465.00	67.00				0.04		
	10/27/2021	15:17	11-9	5	4.20	465.00	543.00	78.00				0.04		
	10/27/2021	15:30	9-7	30	6.00	543.00	571.00	28.00				0.04	surfacing from borehole, flow slowed	
	10/27/2021	15:48	7-5	6	3.50	571.00	663.50	92.50				0.04		
61	10/14/2021	12:42	30-28	2	3.60	0.00	67.00	67.00	664	274	57	0.06		3-Foot Screen
	10/14/2021	13:06	28-25	3	3.60	67.00	165.00	98.00				0.06		
	10/14/2021	13:52	25-22	24	3.20	165.00	266.00	101.00				0.06		
	10/14/2021	14:32	22-19	6	3.30	266.00	365.00	99.00				0.06		
	10/14/2021	15:07	19-16	10	3.70	365.00	465.00	100.00				0.06		
	10/14/2021	16:14	16-13	5	3.00	465.00	565.00	100.00				0.06		
	10/14/2021	16:21	13-10	8	3.10	565.00	663.90	98.90				0.06		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
62	10/14/2021	12:31	30-28	54	3.20	0.00	66.00	66.00	664	274	57	0.06		3-Foot Screen
	10/14/2021	13:06	28-25	3	3.60	66.00	165.00	99.00				0.06		
	10/14/2021	13:53	25-22	16	3.40	165.00	266.00	101.00				0.06		
	10/14/2021	14:32	22-19	5	3.50	266.00	365.00	99.00				0.06		
	10/14/2021	15:07	19-16	8	3.90	365.00	457.00	92.00				0.06	Surfacing from borehole, flow slowed to 1.5 gpm. Volume redistributed to next interv	
	10/14/2021	16:18	16-13	22	3.50	457.00	563.00	106.00				0.06	Surfacing from borehole continued, point redrilled.	
	10/14/2021	16:59	13-10	8	3.40	563.00	664.10	101.10				0.06		
63	10/14/2021	12:25	30-28	39	3.20	0.00	68.00	68.00	664	274	57	0.06		3-Foot Screen
	10/14/2021	13:06	28-25	0	3.60	68.00	165.00	97.00				0.06	Surfacing from borehole, flow slowed to 1.4 gpm.	
	10/14/2021	13:53	25-22	9	3.60	165.00	266.00	101.00				0.06		
	10/14/2021	14:32	22-19	0	3.60	266.00	365.00	99.00				0.06		
	10/14/2021	15:33	19-16	60	3.60	365.00	465.00	100.00				0.06	Surfacing from borehole before establishing flow. Point redrilled.	
	10/14/2021	16:18	16-13	0	3.50	465.00	565.00	100.00				0.06		
	10/14/2021	17:05	13-10	11	3.30	565.00	664.10	99.10				0.06		
64	10/27/2021	13:02	29-27	102	2.40	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/27/2021	13:32	27-25	110	3.90	66.00	133.00	67.00				0.05		
	10/27/2021	13:51	25-23	78	4.10	133.00	199.00	66.00				0.04		
	10/27/2021	14:08	23-21	38	4.40	199.00	266.00	67.00				0.04		
	10/27/2021	14:22	21-19	59	4.80	266.00	332.00	66.00				0.04		
	10/27/2021	14:43	19-17	35	5.40	332.00	398.00	66.00				0.04		
	10/27/2021	14:58	17-15	36	5.40	398.00	465.00	67.00				0.04		
	10/27/2021	15:17	15-13	17	5.30	465.00	534.00	69.00				0.04		
	10/27/2021	15:30	13-11	20	5.40	534.00	600.00	66.00				0.04		
	10/27/2021	15:48	11-9	16	5.00	600.00	663.50	63.50				0.04		
65	10/27/2021	12:50	35-33	49	4.70	0.00	66.00	66.00	665	274	57	0.05		Expendable Tip
	10/27/2021	13:32	33-31	19	6.30	66.00	142.00	76.00				0.05		
	10/27/2021	13:51	31-29	0	3.50	142.00	199.00	57.00				0.04		
	10/27/2021	14:08	39-27	13	6.40	199.00	266.00	67.00				0.04		
	10/27/2021	14:22	27-25	12	3.80	266.00	332.00	66.00				0.04		
	10/27/2021	14:43	25-23	14	6.00	332.00	398.00	66.00				0.04		
	10/27/2021	14:58	23-21	10	4.50	398.00	465.00	67.00				0.04		
	10/27/2021	15:17	21-19	45	6.00	465.00	532.00	67.00				0.04		
	10/27/2021	15:30	19-17	0	4.40	532.00	599.00	67.00				0.04		
	10/27/2021	15:48	17-15	9	5.30	599.00	665.00	66.00				0.04		
66	10/15/2021	10:59	32-30	50	3.60	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/15/2021	11:16	30-28	7	4.00	66.00	135.00	69.00				0.05		
	10/15/2021	11:41	28-26	8	3.90	135.00	199.00	64.00				0.04		
	10/15/2021	12:11	26-24	5	2.80	199.00	267.00	68.00				0.04		
	10/15/2021	12:42	24-22	9	3.20	267.00	332.00	65.00				0.04		
	10/15/2021	13:10	22-20	5	3.60	332.00	398.00	66.00				0.04		
	10/15/2021	13:37	20-18	8	4.20	398.00	465.00	67.00				0.04		
	10/15/2021	14:04	18-16	7	4.00	465.00	531.00	66.00				0.04		
	10/15/2021	14:27	16-14	10	5.00	531.00	598.00	67.00				0.04		
	10/15/2021	14:48	14-12	10	4.90	598.00	663.50	65.50				0.04		
67	10/15/2021	10:34	32-30	48	3.40	0.00	66.00	66.00	665	274	57	0.05		Expendable Tip
	10/15/2021	11:01	30-28	4	3.30	66.00	133.00	67.00				0.05		
	10/15/2021	11:41	28-26	42	0.70	133.00	197.00	64.00				0.04		
	10/15/2021	12:38	26-24	80	2.00	197.00	266.00	69.00				0.04		
	10/15/2021	13:05	24-22	8	4.20	266.00	332.00	66.00				0.04		
	10/15/2021	13:16	22-20	18	6.50	332.00	398.00	66.00				0.04		
	10/15/2021	13:37	20-18	8	3.60	398.00	465.00	67.00				0.04	Surfacing from borehole, flow slowed	
	10/15/2021	14:04	18-16	5	3.90	465.00	531.00	66.00				0.04		
	10/15/2021	14:26	16-14	12	5.00	531.00	598.00	67.00				0.04		
	10/15/2021	14:48	14-12	13	4.90	598.00	664.50	66.50				0.04		
68	10/15/2021	10:25	32-30	82	3.20	0.00	66.00	66.00	665	274	57	0.05		Expendable Tip
	10/15/2021	11:01	30-28	6	3.20	66.00	133.00	67.00				0.05		
	10/15/2021	11:41	28-26	42	4.00	133.00	199.00	66.00				0.04		
	10/15/2021	12:11	26-24	4	2.80	199.00	266.00	67.00				0.04		
	10/15/2021	13:04	24-22	12	4.20	266.00	332.00	66.00				0.04		
	10/15/2021	13:10	22-20	18	3.20	332.00	398.00	66.00				0.04		
	10/15/2021	13:37	20-18	8	4.70	398.00	465.00	67.00				0.04		
	10/15/2021	14:04	18-16	7	3.70	465.00	532.00	67.00				0.04		
	10/15/2021	14:26	16-14	13	5.00	532.00	598.00	66.00				0.04		
	10/15/2021	14:48	14-12	12	4.70	598.00	664.50	66.50				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
69	10/15/2021	10:17	32-30	16	3.80	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/15/2021	11:00	30-28	0	3.40	66.00	133.00	67.00				0.05		
	10/15/2021	11:40	28-26	0	3.90	133.00	199.00	66.00				0.04		
	10/15/2021	12:11	26-24	0	3.80	199.00	266.00	67.00				0.04		
	10/15/2021	12:42	24-22	0	3.70	266.00	332.00	66.00				0.04		
	10/15/2021	13:07	22-20	9	5.00	332.00	398.00	66.00				0.04		
	10/15/2021	13:37	20-18	11	4.50	398.00	465.00	67.00				0.04		
	10/15/2021	14:04	18-16	0	4.10	465.00	530.00	65.00				0.04		
	10/15/2021	14:26	16-14	8	4.90	530.00	598.00	68.00				0.04		
	10/15/2021	14:48	14-12	9	5.20	598.00	663.50	65.50				0.04		
70	10/18/2021	15:57	42-40	60	3.30	0.00	66.00	66.00	665	274	57	0.05		Expendable Tip
	10/18/2021	17:11	40-38	9	4.70	66.00	133.00	67.00				0.05		
	10/18/2021	17:39	38-36	8	3.70	133.00	165.51	32.51				0.04		
	10/19/2021	8:49	38-36	11	4.10	165.51	199.00	33.49				0.04		
	10/19/2021	9:15	36-34	12	4.10	199.00	266.00	67.00				0.04		
	10/19/2021	9:42	34-32	21	4.60	266.00	332.00	66.00				0.04		
	10/19/2021	10:01	32-30	18	4.7	332.00	398.00	66.00				0.04		
	10/19/2021	10:29	30-28	12	4.20	398.00	465.00	67.00				0.04		
	10/19/2021	10:50	28-26	10	4.70	465.00	532.00	67.00				0.04		
	10/19/2021	11:06	26-24	8	4.30	532.00	598.00	66.00				0.04		
	10/19/2021	11:34	24-22	9	4.70	598.00	665.49	67.49				0.04		
71	10/18/2021	16:00	42-40	62	3.20	0.00	66.00	66.00	665	274	57	0.05		Expendable Tip
	10/18/2021	17:10	40-38	9	4.60	66.00	133.00	67.00				0.05		
	10/18/2021	17:38	38-36	8	4.00	133.00	165.51	32.51				0.04		
	10/19/2021	8:49	38-36	8	4.10	165.51	199.00	33.49				0.04		
	10/19/2021	9:14	36-34	12	4.00	199.00	266.00	67.00				0.04		
	10/19/2021	9:42	34-32	14	4.80	266.00	332.00	66.00				0.04		
	10/19/2021	10:01	32-30	9	4.80	332.00	398.00	66.00				0.04		
	10/19/2021	10:30	30-28	18	4.20	398.00	465.00	67.00				0.04		
	10/19/2021	10:47	28-26	8	4.40	465.00	531.00	66.00				0.04		
	10/19/2021	11:06	26-24	6	4.30	531.00	598.00	67.00				0.04		
	10/19/2021	11:34	24-22	15	4.70	598.00	665.49	67.49				0.04		
72	10/18/2021	16:01	42-40	61	3.90	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/18/2021	17:23	40-38	8	4.40	66.00	133.00	67.00				0.05		
	10/18/2021	17:37	38-36	7	4.20	133.00	166.17	33.17				0.04		
	10/19/2021	9:14	38-36	10	4.20	166.17	199.00	32.83				0.04		
	10/19/2021	9:14	36-34	12	4.10	199.00	266.00	67.00				0.04		
	10/19/2021	9:42	34-32	14	4.80	266.00	332.00	66.00				0.04		
	10/19/2021	10:01	32-30	18	4.1	332.00	398.00	66.00				0.04		
	10/19/2021	10:30	30-28	60	4.20	398.00	466.00	68.00				0.04		
	10/19/2021	10:46	28-26	8	4.40	466.00	531.00	65.00				0.04		
	10/19/2021	11:07	26-24	8	4.10	531.00	598.00	67.00				0.04		
	10/19/2021	11:32	24-22	10	4.70	598.00	663.50	65.50				0.04		
73	10/18/2021	16:04	39-37	52	3.30	0.00	66.00	66.00	662	273	57	0.05		Expendable Tip
	10/18/2021	17:10	37-35	0	4.50	66.00	133.00	67.00				0.05		
	10/18/2021	17:37	35-33	0	4.60	133.00	166.17	33.17				0.05		
	10/19/2021	8:48	35-33	0	4.00	166.17	199.00	32.83				0.05		
	10/19/2021	9:14	33-31	0	4.10	199.00	266.00	67.00				0.04		
	10/19/2021	9:42	31-29	44	4.60	266.00	332.00	66.00				0.04		
	10/19/2021	10:02	29-27	15	4.5	332.00	399.00	67.00				0.04		
	10/19/2021	10:30	27-25	67	4.10	399.00	465.00	66.00				0.04		
	10/19/2021	10:44	25-23	0	4.40	465.00	532.00	67.00				0.04		
	10/19/2021	11:09	23-21	0	4.50	532.00	598.00	66.00				0.04		
	10/19/2021	11:32	21-19	0	4.60	598.00	661.52	63.52				0.04		
74	10/19/2021	12:47	42-40	62	4.30	0.00	66.00	66.00	665	274	57	0.05		Expendable Tip
	10/19/2021	13:10	40-38	7	4.00	66.00	133.00	67.00				0.05		
	10/19/2021	13:33	38-36	8	4.50	133.00	199.00	66.00				0.05		
	10/19/2021	14:02	36-34	14	3.00	199.00	266.00	67.00				0.05		
	10/19/2021	15:01	34-32	7	3.40	266.00	332.00	66.00				0.04		
	10/19/2021	15:40	32-30	10	4.00	332.00	398.00	66.00				0.04		
	10/19/2021	16:16	30-28	22	4.00	398.00	468.00	70.00				0.04		
	10/19/2021	16:34	28-26	12	4.60	468.00	531.00	63.00				0.04		
	10/19/2021	17:40	26-24	12	4.50	531.00	598.00	67.00				0.04		
	10/19/2021	17:40	24-22	12	4.50	598.00	665.00	67.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
75	10/19/2021	12:43	43-41	20	4.10	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/19/2021	13:10	41-39	20	3.60	66.00	133.00	67.00				0.05		
	10/19/2021	13:32	39-37	8	4.40	133.00	199.00	66.00				0.05		
	10/19/2021	14:02	37-35	12	3.40	199.00	266.00	67.00				0.05		
	10/19/2021	15:01	35-33	8	3.50	266.00	332.00	66.00				0.04		
	10/19/2021	15:40	33-31	53	4.00	332.00	398.00	66.00				0.04		
	10/19/2021	16:16	31-29	28	4.70	398.00	465.00	67.00				0.04		
	10/19/2021	16:34	29-27	10	5.20	465.00	531.00	66.00				0.04		
	10/19/2021	17:40	27-25	12	4.70	531.00	598.00	67.00				0.04		
	10/19/2021	17:40	25-23	12	4.70	598.00	664.00	66.00				0.04		
76	10/19/2021	12:41	41-39	64	4.20	0.00	66.00	66.00	661	272	57	0.05		Expendable Tip
	10/19/2021	13:11	39-37	8	4.30	66.00	133.00	67.00				0.05		
	10/19/2021	13:31	37-35	7	4.60	133.00	199.00	66.00				0.05		
	10/19/2021	14:02	35-33	8	2.80	199.00	266.00	67.00				0.05		
	10/19/2021	14:57	33-31	6	3.40	266.00	336.00	70.00				0.04		
	10/19/2021	15:40	31-29	9	4.10	336.00	398.00	62.00				0.04		
	10/19/2021	16:16	29-27	26	4.40	398.00	465.00	67.00				0.04		
	10/19/2021	16:34	27-25	10	5.20	465.00	531.00	66.00				0.04		
	10/19/2021	17:40	25-23	42	4.40	531.00	598.00	67.00				0.04		
	10/19/2021	17:41	23-21	42	4.40	598.00	661.00	63.00				0.04		
77	10/19/2021	12:39	44-42	16	4.20	0.00	67.00	67.00	666	274	57	0.05		Expendable Tip
	10/19/2021	13:11	42-40	0	4.50	67.00	133.00	66.00				0.05		
	10/19/2021	13:31	40-38	0	4.70	133.00	199.00	66.00				0.05		
	10/19/2021	14:02	38-36	79	2.90	199.00	256.00	57.00				0.05		
	10/19/2021	14:57	36-34	115	2.30	256.00	312.00	56.00				0.04	Interval abandonded, volume redistributed to next interval	
	10/19/2021	15:40	34-32	23	4.00	312.00	398.00	86.00				0.04		
	10/19/2021	16:16	32-30	14	4.90	398.00	465.00	67.00				0.04		
	10/19/2021	16:34	30-28	10	4.70	465.00	531.00	66.00				0.04		
	10/19/2021	17:40	28-26	10	4.60	531.00	598.00	67.00				0.04		
	10/19/2021	17:42	26-24	10	4.60	598.00	666.00	68.00				0.04		
78	10/20/2021	9:27	44-42	7	4.30	0.00	72.00	72.00	664	274	57	0.05		Expendable Tip
	10/20/2021	9:45	42-40	8	4.30	72.00	136.00	64.00				0.05		
	10/20/2021	10:04	40-38	10	4.00	136.00	198.00	62.00				0.05		
	10/20/2021	10:15	38-36	19	5.50	198.00	268.00	70.00				0.05		
	10/20/2021	10:39	36-34	17	5.60	268.00	332.00	64.00				0.04		
	10/20/2021	10:56	34-32	10	4.30	332.00	400.00	68.00				0.04		
	10/20/2021	11:09	32-30	30	3.50	400.00	465.00	65.00				0.04		
	10/20/2021	11:27	30-28	18	4.10	465.00	531.00	66.00				0.04		
	10/20/2021	11:45	28-26	18	5.30	531.00	598.00	67.00				0.04		
	10/20/2021	12:04	26-24	10	3.80	598.00	664.00	66.00				0.04		
79	10/20/2021	9:22	44-42	5	4.20	0.00	64.00	64.00	664	274	57	0.05		Expendable Tip
	10/20/2021	9:41	42-40	8	4.00	64.00	134.00	70.00				0.05		
	10/20/2021	10:03	40-38	8	4.00	134.00	201.00	67.00				0.05		
	10/20/2021	10:15	38-36	24	5.30	201.00	264.00	63.00				0.05		
	10/20/2021	10:39	36-34	13	5.20	264.00	332.00	68.00				0.04		
	10/20/2021	10:56	34-32	10	3.60	332.00	398.00	66.00				0.04		
	10/20/2021	11:08	32-30	10	5.30	398.00	467.00	69.00				0.04		
	10/20/2021	11:27	30-28	17	4.60	467.00	531.00	64.00				0.04		
	10/20/2021	11:44	28-26	10	4.60	531.00	598.00	67.00				0.04		
	10/20/2021	12:04	26-24	8	4.70	598.00	664.00	66.00				0.04		
80	10/20/2021	9:19	40-38	5	3.70	0.00	71.00	71.00	664	274	57	0.05		Expendable Tip
	10/20/2021	9:38	38-36	11	4.80	71.00	133.00	62.00				0.05		
	10/20/2021	10:02	36-34	12	5.00	133.00	197.00	64.00				0.05		
	10/20/2021	10:17	34-32	35	4.80	197.00	256.00	59.00				0.05		
	10/20/2021	10:40	32-30	34	4.10	256.00	331.00	75.00				0.04		
	10/20/2021	10:56	30-28	18	3.90	331.00	396.00	65.00				0.04		
	10/20/2021	11:08	28-26	18	4.30	396.00	465.00	69.00				0.04		
	10/20/2021	11:27	26-24	18	4.90	465.00	531.00	66.00				0.04		
	10/20/2021	11:43	24-22	12	5.00	531.00	598.00	67.00				0.04		
	10/20/2021	12:04	22-20	8	4.10	598.00	664.00	66.00				0.04		
81	10/20/2021	9:15	42-40	28	4.40	0.00	71.00	71.00	664	274	57	0.05		Expendable Tip
	10/20/2021	9:32	40-38	10	4.90	71.00	134.00	63.00				0.05		
	10/20/2021	10:02	38-36	12	5.20	134.00	202.00	68.00				0.05		
	10/20/2021	10:19	36-34	15	5.10	202.00	266.00	64.00				0.05		
	10/20/2021	10:40	34-32	0	4.00	266.00	335.00	69.00				0.04		
	10/20/2021	10:56	32-30	15	5.80	335.00	398.00	63.00				0.04		
	10/20/2021	11:08	30-28	20	4.20	398.00	465.00	67.00				0.04		
	10/20/2021	11:26	28-26	10	5.20	465.00	531.00	66.00				0.04		
	10/20/2021	11:49	26-24	12	5.30	531.00	598.00	67.00				0.04		
	10/20/2021	12:04	24-22	0	2.70	598.00	664.00	66.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
82	10/20/2021	13:18	41-39	10	4.30	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/20/2021	13:57	39-37	8	4.40	66.00	142.00	76.00				0.05		
	10/20/2021	14:19	37-35	10	4.90	142.00	203.00	61.00				0.05		
	10/20/2021	14:35	35-33	5	2.50	203.00	266.00	63.00				0.05		
	10/20/2021	15:01	33-31	18	5.40	266.00	334.00	68.00				0.04		
	10/20/2021	15:21	31-29	10	4.40	334.00	398.00	64.00				0.04		
	10/20/2021	15:42	29-27	38	5.70	398.00	465.00	67.00				0.04		
	10/20/2021	15:58	27-25	10	4.40	465.00	531.00	66.00				0.04		
	10/20/2021	16:22	25-23	31	5.10	531.00	599.00	68.00				0.04		
	10/20/2021	16:43	23-21	58	4.10	599.00	664.00	65.00				0.04		
83	10/20/2021	13:44	38-36	18	5.50	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/20/2021	13:57	36-34	7	4.30	66.00	138.00	72.00				0.05		
	10/20/2021	14:18	34-32	9	4.70	138.00	202.00	64.00				0.05		
	10/20/2021	14:35	32-30	21	2.30	202.00	265.00	63.00				0.05		
	10/20/2021	15:01	30-28	80	3.80	265.00	330.00	65.00				0.04		
	10/20/2021	15:21	38-26	6	4.40	330.00	398.00	68.00				0.04		
	10/20/2021	15:42	26-24	12	5.40	398.00	465.00	67.00				0.04		
	10/20/2021	15:58	24-22	10	4.40	465.00	531.00	66.00				0.04		
	10/20/2021	16:22	22-20	18	5.00	531.00	599.00	68.00				0.04		
	10/20/2021	16:42	20-18	62	4.50	599.00	664.00	65.00				0.04		
84	10/20/2021	13:37	44-42	10	4.50	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/20/2021	13:58	42-40	10	4.20	66.00	137.00	71.00				0.05		
	10/20/2021	14:18	40-38	10	4.50	137.00	204.00	67.00				0.05		
	10/20/2021	14:35	38-36	5	2.30	204.00	266.00	62.00				0.05		
	10/20/2021	15:01	36-34	10	3.90	266.00	334.00	68.00				0.04		
	10/20/2021	15:23	34-32	19	4.60	334.00	398.00	64.00				0.04		
	10/20/2021	15:42	32-30	22	4.40	398.00	465.00	67.00				0.04		
	10/20/2021	15:58	30-28	12	5.00	465.00	531.00	66.00				0.04		
	10/20/2021	16:22	28-26	10	4.50	531.00	598.00	67.00				0.04		
	10/20/2021	16:42	26-24	21	3.70	598.00	664.00	66.00				0.04		
85	10/20/2021	13:34	45-43	14	5.50	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/20/2021	14:01	43-41	14	5.20	66.00	133.00	67.00				0.05		
	10/20/2021	14:18	41-39	56	3.00	133.00	199.00	66.00				0.05		
	10/20/2021	14:39	39-37	89	4.40	199.00	265.00	66.00				0.05		
	10/20/2021	15:01	37-35	8	3.40	265.00	335.00	70.00				0.04		
	10/20/2021	15:23	35-33	10	5.40	335.00	398.00	63.00				0.04		
	10/20/2021	15:42	33-31	8	3.50	398.00	465.00	67.00				0.04		
	10/20/2021	15:58	31-29	13	5.30	465.00	531.00	66.00				0.04		
	10/20/2021	16:22	29-27	0	3.80	531.00	595.00	64.00				0.04		
	10/20/2021	16:42	27-25	45	4.20	595.00	664.00	69.00				0.04		
86	10/21/2021	10:01	44-42	18	4.70	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/21/2021	10:16	42-40	8	3.70	66.00	133.00	67.00				0.05		
	10/21/2021	10:34	40-38	12	5.20	133.00	196.00	63.00				0.05		
	10/21/2021	10:52	38-36	18	5.50	196.00	269.00	73.00				0.05		
	10/21/2021	11:11	36-34	12	3.80	269.00	332.00	63.00				0.04		
	10/21/2021	11:31	34-32	39	5.30	332.00	398.00	66.00				0.04		
	10/21/2021	11:47	32-30	21	3.80	398.00	465.00	67.00				0.04		
	10/21/2021	12:04	30-28	32	5.50	465.00	531.00	66.00				0.04		
	10/21/2021	12:24	38-26	9	3.40	531.00	598.00	67.00				0.04		
	10/21/2021	12:51	26-24	14	4.60	598.00	663.75	65.75				0.04		
87	10/21/2021	9:57	50-48	20	5.60	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	10/21/2021	10:16	48-46	18	4.30	66.00	133.00	67.00				0.05		
	10/21/2021	10:33	46-44	20	5.30	133.00	196.00	63.00				0.05		
	10/21/2021	10:53	44-42	16	5.10	196.00	273.00	77.00				0.05		
	10/21/2021	11:11	42-40	11	4.10	273.00	332.00	59.00				0.04		
	10/21/2021	11:31	40-38	33	4.70	332.00	398.00	66.00				0.04		
	10/21/2021	11:47	38-36	31	4.20	398.00	466.00	68.00				0.04		
	10/21/2021	12:04	36-34	38	4.60	466.00	531.00	65.00				0.04		
	10/21/2021	12:24	34-32	29	4.50	531.00	598.00	67.00				0.04		
	10/21/2021	12:51	32-30	18	4.60	598.00	663.75	65.75				0.04		
88	10/21/2021	9:55	50-48	30	4.50	0.00	67.00	67.00	664	274	57	0.05		Expendable Tip
	10/21/2021	10:16	48-46	16	4.50	67.00	133.00	66.00				0.05		
	10/21/2021	10:33	46-44	10	4.30	133.00	200.00	67.00				0.05		
	10/21/2021	10:53	44-42	11	4.50	200.00	269.00	69.00				0.05		
	10/21/2021	11:11	42-40	11	4.40	269.00	332.00	63.00				0.04		
	10/21/2021	11:31	40-38	29	4.30	332.00	398.00	66.00				0.04		
	10/21/2021	11:47	38-36	31	4.70	398.00	466.00	68.00				0.04		
	10/21/2021	12:04	36-34	38	4.10	466.00	530.00	64.00				0.04		
	10/21/2021	12:24	34-32	40	4.70	530.00	598.00	68.00				0.04		
	10/21/2021	12:51	32-30	15	4.60	598.00	664.25	66.25				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
89	10/21/2021	9:53	49-47	33	5.20	0.00	68.00	68.00	664	273	57	0.05		Expendable Tip
	10/21/2021	10:16	47-45	32	5.10	68.00	133.00	65.00				0.05		
	10/21/2021	10:32	45-43	101	2.00	133.00	199.00	66.00				0.05		
	10/21/2021	10:53	43-41	16	3.80	199.00	265.00	66.00				0.05		
	10/21/2021	11:10	41-39	47	5.20	265.00	333.00	68.00				0.04		
	10/21/2021	11:31	39-37	18	3.80	333.00	398.00	65.00				0.04		
	10/21/2021	11:47	37-35	38	5.40	398.00	466.00	68.00				0.04		
	10/21/2021	12:04	35-33	14	3.70	466.00	532.00	66.00				0.04		
	10/21/2021	12:23	33-31	38	5.50	532.00	598.00	66.00				0.04		
	10/21/2021	12:51	31-29	31	4.60	598.00	663.75	65.75				0.04		
90	10/21/2021	14:33	47-45	50	5.00	0.00	67.00	67.00	665	274	57	0.05		Expendable Tip
	10/21/2021	14:53	45-43	38	3.90	67.00	133.00	66.00				0.05		
	10/21/2021	15:09	43-41	35	5.10	133.00	199.00	66.00				0.05		
	10/21/2021	15:30	41-39	10	2.90	199.00	267.00	68.00				0.05		
	10/21/2021	16:00	39-37	45	5.00	267.00	332.00	65.00				0.04		
	10/21/2021	16:20	37-35	50	3.10	332.00	398.00	66.00				0.04		
	10/21/2021	16:44	35-33	78	4.60	398.00	465.00	67.00				0.04		
	10/21/2021	17:01	33-31	50	3.80	465.00	531.00	66.00				0.04		
	10/21/2021	17:21	31-29	16	5.40	531.00	598.00	67.00				0.04		
	10/21/2021	17:40	39-27	10	4.40	598.00	664.74	66.74				0.04		
91	10/21/2021	14:31	50-48	62	4.00	0.00	64.00	64.00	664	273	57	0.05		Expendable Tip
	10/21/2021	14:52	48-46	10	4.30	64.00	133.00	69.00				0.05		
	10/21/2021	15:09	46-44	12	4.80	133.00	199.00	66.00				0.05		
	10/21/2021	15:30	44-42	5	3.20	199.00	266.00	67.00				0.05		
	10/21/2021	16:00	42-40	88	3.60	266.00	332.00	66.00				0.04		
	10/21/2021	16:20	40-38	12	4.10	332.00	398.00	66.00				0.04		
	10/21/2021	16:44	38-36	18	4.20	398.00	466.00	68.00				0.04		
	10/21/2021	17:01	36-34	20	4.20	466.00	531.00	65.00				0.04		
	10/21/2021	17:21	34-32	16	4.90	531.00	599.00	68.00				0.04		
	10/21/2021	17:40	32-30	16	4.90	599.00	663.75	64.75				0.04		
92	10/21/2021	14:17	48-46	16	5.00	0.00	65.00	65.00	663	273	57	0.05		Expendable Tip
	10/21/2021	14:52	46-44	11	4.50	65.00	133.00	68.00				0.05		
	10/21/2021	15:09	44-42	11	4.40	133.00	199.00	66.00				0.05		
	10/21/2021	15:30	42-40	88	3.70	199.00	258.00	59.00				0.05		
	10/21/2021	16:00	40-38	6	2.60	258.00	332.00	74.00				0.04		
	10/21/2021	16:20	38-36	18	5.00	332.00	398.00	66.00				0.04		
	10/21/2021	16:44	36-34	10	3.90	398.00	465.00	67.00				0.04		
	10/21/2021	17:01	34-32	20	4.50	465.00	531.00	66.00				0.04		
	10/21/2021	17:22	32-30	22	4.10	531.00	598.00	67.00				0.04		
	10/21/2021	17:40	30-28	24	4.50	598.00	662.76	64.76				0.04		
93	10/21/2021	14:15	44-42	17	5.10	0.00	69.00	69.00	665	274	57	0.05		Expendable Tip
	10/21/2021	14:52	42-40	18	5.20	69.00	133.00	64.00				0.05		
	10/21/2021	15:10	40-38	13	4.00	133.00	199.00	66.00				0.05		
	10/21/2021	15:30	38-36	16	5.10	199.00	266.00	67.00				0.05		
	10/21/2021	16:00	36-34	8	2.80	266.00	333.00	67.00				0.04		
	10/21/2021	16:20	34-32	46	5.60	333.00	399.00	66.00				0.04		
	10/21/2021	16:44	32-30	58	3.40	399.00	465.00	66.00				0.04		
	10/21/2021	17:01	30-28	25	5.10	465.00	531.00	66.00				0.04		
	10/21/2021	17:22	28-26	0	3.90	531.00	599.00	68.00				0.04		
	10/21/2021	17:41	26-24	11	4.90	599.00	664.74	65.74				0.04		
94	10/22/2021	10:29	44-42	120	0.00	0.00	5.00	5.00	664	274	57	0.04	Interval abandonded, volume redistributed at 38'	Expendable Tip
	10/22/2021	10:29	42-40	0	0.00	5.00	5.00	0.00				0.00	Interval abandonded, volume redistributed at 38'	
	10/22/2021	10:29	40-38	20	3.90	5.00	199.00	194.00				0.08		
	10/22/2021	11:39	38-36	18	4.60	199.00	268.00	69.00				0.04		
	10/22/2021	12:04	36-34	30	5.70	268.00	335.00	67.00				0.04		
	10/22/2021	12:26	34-32	10	3.30	335.00	390.00	55.00				0.04		
	10/22/2021	12:40	32-30	20	5.20	390.00	472.00	82.00				0.04		
	10/22/2021	13:06	30-28	22	4.00	472.00	536.00	64.00				0.04		
	10/22/2021	13:33	28-26	60	5.80	536.00	598.00	62.00				0.04	High pressures due to heaving. Trip rods sent down.Reliable flow rate reestablished	
	10/22/2021	14:00	26-24	6	3.10	598.00	664.00	66.00				0.04		
95	10/22/2021	10:13	39-37	60	3.20	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/22/2021	10:54	37-35	130	2.10	66.00	133.00	67.00				0.05	High pressures due to heaving. Trip rods sent down.Reliable flow rate reestablished	
	10/22/2021	11:14	35-33	40	4.30	133.00	199.00	66.00				0.04		
	10/22/2021	11:40	33-31	18	4.80	199.00	266.00	67.00				0.04		
	10/22/2021	12:04	31-29	20	5.30	266.00	333.00	67.00				0.04		
	10/22/2021	12:27	29-27	60	3.50	333.00	380.00	47.00				0.04		
	10/22/2021	12:41	27-25	52	5.50	380.00	468.00	88.00				0.04		
	10/22/2021	13:06	25-23	30	4.60	468.00	535.00	67.00				0.04		
	10/22/2021	13:29	23-21	20	5.70	535.00	598.00	63.00				0.04		
	10/22/2021	14:00	21-19	6	3.10	598.00	664.00	66.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
96	10/22/2021	10:13	44-42	32	2.10	0.00	67.00	67.00	664	274	57	0.05		Expendable Tip
	10/22/2021	10:55	42-40	58	2.70	67.00	133.00	66.00				0.05		
	10/22/2021	11:14	40-38	44	3.70	133.00	199.00	66.00				0.04		
	10/22/2021	11:40	38-36	18	3.20	199.00	265.00	66.00				0.04		
	10/22/2021	12:05	36-34	38	3.10	265.00	332.00	67.00				0.04		
	10/22/2021	12:27	34-32	44	4.60	332.00	400.00	68.00				0.04		
	10/22/2021	12:41	32-30	18	3.50	400.00	468.00	68.00				0.04		
	10/22/2021	13:07	30-28	32	4.50	468.00	541.00	73.00				0.04		
	10/22/2021	13:29	28-26	36	5.90	541.00	599.00	58.00				0.04		
	10/22/2021	14:00	26-24	42	5.20	599.00	664.00	65.00				0.04		
97	10/22/2021	10:13	45-43	35	1.80	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/22/2021	10:55	43-41	108	2.80	66.00	133.00	67.00				0.05		
	10/22/2021	11:15	41-39	104	2.70	133.00	199.00	66.00				0.04	High pressures due to heaving. Trip rods sent down.Reliable flow rate reestablished	
	10/22/2021	11:46	39-37	18	5.60	199.00	266.00	67.00				0.04		
	10/22/2021	12:05	37-35	12	3.80	266.00	332.00	66.00				0.04		
	10/22/2021	12:27	35-33	27	5.30	332.00	399.00	67.00				0.04		
	10/22/2021	12:41	33-31	0	3.00	399.00	468.00	69.00				0.04		
	10/22/2021	13:07	31-29	16	5.50	468.00	533.00	65.00				0.04		
	10/22/2021	13:28	29-27	16	5.50	533.00	599.00	66.00				0.04		
	10/22/2021	14:00	27-25	25	6.30	599.00	664.00	65.00				0.04		
98	10/25/2021	11:18	45-43	128	3.80	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/25/2021	11:36	43-41	72	5.40	66.00	134.00	68.00				0.05		
	10/25/2021	11:52	41-39	54	5.20	134.00	200.00	66.00				0.04		
	10/25/2021	12:08	39-37	19	5.40	200.00	266.00	66.00				0.04		
	10/25/2021	12:20	37-35	16	5.50	266.00	332.00	66.00				0.04		
	10/25/2021	12:34	35-33	24	5.60	332.00	398.00	66.00				0.04		
	10/25/2021	12:55	33-31	16	5.40	398.00	465.00	67.00				0.04		
	10/25/2021	13:08	31-29	14	5.30	465.00	531.00	66.00				0.04		
	10/25/2021	13:23	29-27	15	5.30	531.00	598.00	67.00				0.04		
	10/25/2021	13:39	27-25	16	5.40	598.00	664.00	66.00				0.04		
99	10/26/2021	9:31	45-43	128	1.90	0.00	69.00	69.00	664	274	57	0.05		Expendable Tip
	10/26/2021	10:05	43-41	26	5.80	69.00	133.00	64.00				0.05		
	10/26/2021	10:26	41-39	37	4.70	133.00	199.00	66.00				0.04		
	10/26/2021	10:42	39-37	16	3.50	199.00	266.00	67.00				0.04		
	10/26/2021	11:05	37-35	62	6.00	266.00	333.00	67.00				0.04		
	10/26/2021	11:21	35-33	12	4.10	333.00	398.00	65.00				0.04		
	10/26/2021	11:42	33-31	39	5.50	398.00	465.00	67.00				0.04		
	10/26/2021	12:00	31-29	30	4.20	465.00	531.00	66.00				0.04		
	10/26/2021	12:19	29-27	30	5.50	531.00	597.00	66.00				0.04		
	10/26/2021	12:39	27-25	70	3.90	597.00	664.00	67.00				0.04		
100	10/26/2021	9:30	45-43	68	1.80	0.00	67.00	67.00	664	274	57	0.05		Expendable Tip
	10/26/2021	10:01	43-41	6	3.40	67.00	134.00	67.00				0.05		
	10/26/2021	10:26	41-39	31	4.30	134.00	199.00	65.00				0.04		
	10/26/2021	10:42	39-37	60	3.50	199.00	266.00	67.00				0.04		
	10/26/2021	11:05	37-35	70	4.60	266.00	333.00	67.00				0.04		
	10/26/2021	11:22	35-33	10	4.40	333.00	399.00	66.00				0.04		
	10/26/2021	11:43	33-31	18	4.90	399.00	465.00	66.00				0.04		
	10/26/2021	12:01	31-29	22	4.70	465.00	531.00	66.00				0.04		
	10/26/2021	12:19	29-27	42	4.70	531.00	599.00	68.00				0.04		
	10/26/2021	12:39	27-25	52	4.60	599.00	664.00	65.00				0.04		
101	10/26/2021	9:20	45-43	93	0.90	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/26/2021	10:01	43-41	6	3.60	66.00	133.00	67.00				0.05		
	10/26/2021	10:26	41-39	22	5.60	133.00	200.00	67.00				0.04		
	10/26/2021	10:43	39-37	32	5.50	200.00	266.00	66.00				0.04		
	10/26/2021	11:06	37-35	28	2.90	266.00	332.00	66.00				0.04		
	10/26/2021	11:22	35-33	22	5.20	332.00	398.00	66.00				0.04		
	10/26/2021	11:43	33-31	22	4.40	398.00	465.00	67.00				0.04		
	10/26/2021	12:01	31-29	17	5.20	465.00	531.00	66.00				0.04		
	10/26/2021	12:19	29-27	20	4.40	531.00	599.00	68.00				0.04		
	10/26/2021	12:39	27-25	23	4.60	599.00	664.00	65.00				0.04		
102	10/26/2021	14:32	45-43	92	1.80	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/26/2021	15:27	43-41	25	5.70	66.00	133.00	67.00				0.05		
	10/26/2021	15:39	41-39	64	5.70	133.00	199.00	66.00				0.04		
	10/26/2021	15:59	39-37	66	3.80	199.00	267.00	68.00				0.04		
	10/26/2021	16:22	37-35	27	5.70	267.00	332.00	65.00				0.04		
	10/26/2021	16:40	35-33	40	6.60	332.00	404.00	72.00				0.04		
	10/26/2021	16:54	33-31	31	5.50	404.00	467.00	63.00				0.04		
	10/26/2021	17:08	31-29	30	6.40	467.00	531.00	64.00				0.04		
	10/26/2021	17:23	29-27	33	5.60	531.00	601.00	70.00				0.04		
	10/26/2021	17:41	27-25	33	6.10	601.00	664.00	63.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
103	10/26/2021	9:17	45-43	86	1.80	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/26/2021	10:01	43-41	6	3.10	66.00	133.00	67.00				0.05		
	10/26/2021	10:27	41-39	21	5.50	133.00	199.00	66.00				0.04		
	10/26/2021	10:43	39-37	24	5.20	199.00	267.00	68.00				0.04		
	10/26/2021	11:06	37-35	19	2.90	267.00	332.00	65.00				0.04		
	10/26/2021	11:22	35-33	30	5.70	332.00	399.00	67.00				0.04		
	10/26/2021	11:43	33-31	22	4.00	399.00	465.00	66.00				0.04		
	10/26/2021	12:01	31-29	26	5.60	465.00	531.00	66.00				0.04		
	10/26/2021	12:20	29-27	11	4.10	531.00	597.00	66.00				0.04		
	10/26/2021	12:39	27-25	25	5.30	597.00	664.00	67.00				0.04		
104	10/27/2021	10:08	47-45	45	5.80	0.00	74.00	74.00	664	274	57	0.05		Expendable Tip
	10/27/2021	10:18	45-43	26	6.00	74.00	135.00	61.00				0.05		
	10/27/2021	10:30	43-41	26	6.00	135.00	199.00	64.00				0.04		
	10/27/2021	10:44	41-39	30	6.30	199.00	266.00	67.00				0.04		
	10/27/2021	10:57	39-37	34	6.40	266.00	332.00	66.00				0.04		
	10/27/2021	11:09	37-35	29	6.40	332.00	398.00	66.00				0.04		
	10/27/2021	11:24	35-33	34	6.80	398.00	465.00	67.00				0.04		
	10/27/2021	11:36	33-31	34	6.70	465.00	531.00	66.00				0.04		
	10/27/2021	11:49	31-29	47	6.70	531.00	598.00	67.00				0.04		
	10/27/2021	12:01	29-27	34	6.70	598.00	664.00	66.00				0.04		
105	10/26/2021	14:52	52-50	58	3.50	0.00	66.00	66.00	664	274	57	0.05		Expendable Tip
	10/26/2021	15:25	50-48	26	5.90	66.00	133.00	67.00				0.05		
	10/26/2021	15:39	48-46	18	4.80	133.00	199.00	66.00				0.04		
	10/26/2021	15:51	46-44	20	3.50	199.00	266.00	67.00				0.04		
	10/26/2021	16:24	44-42	68	5.10	266.00	332.00	66.00				0.04		
	10/26/2021	16:40	42-40	38	6.10	332.00	410.00	78.00				0.04		
	10/26/2021	16:56	40-38	49	6.00	410.00	465.00	55.00				0.04		
	10/26/2021	17:08	38-36	45	5.70	465.00	531.00	66.00				0.04		
	10/26/2021	17:24	36-34	110	5.70	531.00	598.00	67.00				0.04		
	10/26/2021	17:41	34-32	36	6.80	598.00	664.00	66.00				0.04		
106	11/10/2021	12:31	47-45	102	4.90	0.00	113.84	113.84	461	190	39	0.05	Received additional volume due to abandoning IPs 131 and 133	Expendable Tip
	11/10/2021	13:16	45-43	10	3.93	0.00	66.48	66.48				0.05		
	11/10/2021	13:40	43-41	20	4.84	66.48	132.79	66.31				0.04		
	11/10/2021	14:00	41-39	110	5.33	132.79	199.24	66.45				0.04		
	11/10/2021	14:46	39-37	110	2.00	199.24	210.60	11.36				0.04	minor surfacing. Flow rate slowed. Surfacing uncontrollable. Interval abandoned	
	11/10/2021	14:51	37-35	0	0.00	210.60	210.68	0.08				0.04	surfacing immediately. Interval abandoned	
	11/10/2021	15:21	35-33	100	1.31	0.00	4.84	4.84				0.04	surfacing uncontrolabale. Interval abandoned	
	11/10/2021	16:06	33-31	98	0.25	0.00	0.50	0.50				0.04	unable to establish flow. Interval abandoned. Point redriven 2' N of old bore hole	
	11/10/2021	16:41	31-29	100	3.93	0.00	66.45	66.45				0.04		
	11/10/2021	17:00	29-27	38	1.65	0.00	64.63	64.63				0.04		
107	11/10/2021	12:37	47-45	25	6.68	0.00	113.87	113.87	872	359	75	0.05	moved 3'W of marked out location, Received additional volume due to abandoning IPs 131 and 133	Expendable Tip
	11/10/2021	13:16	45-43	35	4.22	0.00	66.43	66.43				0.05		
	11/10/2021	13:40	43-41	25	4.22	66.43	132.88	66.45				0.04		
	11/10/2021	14:04	41-39	40	3.73	132.88	199.28	66.40				0.04		
	11/10/2021	14:32	39-37	20	4.20	199.28	265.60	66.32				0.04		
	11/10/2021	14:53	37-35	25	5.65	265.60	401.49	135.89				0.04		
	11/10/2021	15:21	35-33	110	3.92	0.00	124.32	124.32				0.04		
	11/10/2021	16:06	33-31	95	6.32	0.00	99.54	99.54				0.04		
	11/10/2021	16:29	31-29	25	4.78	0.00	66.43	66.43				0.04		
	11/10/2021	17:00	29-27	40	5.74	0.00	66.03	66.03				0.04		
107-B	11/10/2021	12:41	50-48	65	5.56	0.00	113.93	113.93	801	330	69	0.05	Received additional volume due to abandoning IPs 131 and 133	Expendable Tip
	11/10/2021	13:19	48-46	30	4.94	0.00	66.53	66.53				0.05		
	11/10/2021	13:41	46-44	31	3.70	66.53	132.83	66.30				0.04		
	11/10/2021	14:01	44-42	38	3.30	132.83	199.30	66.47				0.04		
	11/10/2021	14:32	42-40	25	3.46	199.30	269.20	69.90				0.04		
	11/10/2021	14:53	40-38	30	5.18	269.20	329.59	60.39				0.04	surfacing out of borehole and a couple feet east. Flow rate slowed	
	11/10/2021	15:21	38-36	50	1.47	0.00	124.35	124.35				0.04		
	11/10/2021	16:06	36-34	40	7.00	0.00	100.20	100.20				0.04		
	11/10/2021	16:29	34-32	30	4.92	0.00	66.44	66.44				0.04		
	11/10/2021	17:01	32-30	38	3.47	0.00	66.34	66.34				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
108	11/4/2021	12:02	50-48	50	4.64	0.00	119.82	119.82	714	294	61	0.05	Received additional volume due to abandoning IP-129	Expendable Tip
	11/4/2021	12:23	48-46	50	4.03	0.00	66.42	66.42				0.05		
	11/4/2021	12:54	46-44	18	4.94	66.42	132.76	66.34				0.04		
	11/4/2021	13:21	44-42	19	4.72	132.76	199.29	66.53				0.04		
	11/4/2021	13:37	42-40	40	5.76	199.29	265.84	66.55				0.04		
	11/4/2021	13:57	40-38	40	4.94	265.84	332.05	66.21				0.04		
	11/4/2021	14:16	38-36	20	5.20	332.05	398.56	66.51				0.04		
	11/4/2021	14:29	36-34	10	4.72	398.56	464.95	66.39				0.04		
	11/4/2021	14:52	34-32	20	4.74	464.95	531.26	66.31				0.04		
	11/4/2021	15:16	32-30	25	3.39	531.26	594.00	62.74				0.04		
109	11/4/2021	11:53	50-48	85	5.44	0.00	119.76	119.76	720	297	62	0.05	Received additional volume due to abandoning IP-129	Expendable Tip
	11/4/2021	12:40	48-46	48	4.66	0.00	66.50	66.50				0.05		
	11/4/2021	12:54	46-44	20	4.92	66.50	132.79	66.29				0.04		
	11/4/2021	13:21	44-42	20	4.82	132.79	199.62	66.83				0.04	small amount of surfacing pulled up to breakpoint and surfacing stopped	
	11/4/2021	13:36	42-40	40	5.63	199.62	265.72	66.10				0.04		
	11/4/2021	13:57	40-38	40	4.80	265.72	332.34	66.62				0.04		
	11/4/2021	14:16	38-36	25	5.27	332.34	398.46	66.12				0.04		
	11/4/2021	14:38	36-34	36	5.28	398.46	464.85	66.39				0.04		
	11/4/2021	15:01	34-32	12	5.56	464.85	531.47	66.62				0.04		
	11/4/2021	15:16	32-30	25	5.44	531.47	600.00	68.53				0.04		
110	10/28/2021	11:22	47-45	28	3.55	0.00	66.00	66.00	719	296	62	0.05	Switched to external manifold with mechanical flow meters due to accessibility	Expendable Tip
	11/4/2021	11:50	45-43	20	5.52	0.00	119.86	119.86				0.05	Rig could not get back to point due to slippery slope. Point abandoned for the day; Received additional volume due to abandoning IP-129	
	11/4/2021	12:29	43-41	16	4.68	0.00	66.48	66.48				0.04		
	11/4/2021	12:54	41-39	18	4.66	66.48	132.90	66.42				0.04		
	11/4/2021	13:21	39-37	18	4.19	132.90	200.00	67.10				0.04		
	11/4/2021	13:39	37-35	28	4.17	200.00	265.74	65.74				0.04		
	11/4/2021	13:56	35-33	30	4.82	265.74	332.03	66.29				0.04		
	11/4/2021	14:16	33-31	20	4.84	332.03	398.42	66.39				0.04		
	11/4/2021	14:29	31-29	10	3.96	398.42	464.80	66.38				0.04		
	11/4/2021	14:52	29-27	15	4.77	464.80	533.26	68.46				0.04		
111	10/28/2021	11:20	39-37	50	2.40	0.00	66.00	66.00	708	292	61	0.05	Switched to external manifold with mechanical flow meters due to accessibility	Expendable Tip
	10/28/2021	11:59	37-35	20	5.12	66.00	133.00	67.00				0.05		
	10/28/2021	12:41	35-33	20	5.00	133.00	190.00	57.00				0.04		
	10/28/2021	12:46	33-31	30	4.50	190.00	250.00	60.00				0.04		
	10/28/2021	13:14	31-29	30	1.80	250.00	320.00	70.00				0.04		
	10/28/2021	13:44	29-27	50	5.00	320.00	390.00	70.00				0.04		
	10/28/2021	14:08	27-25	18	3.63	390.00	460.00	70.00				0.04		
	10/28/2021	14:31	25-23	19	4.16	460.00	527.00	67.00				0.04		
	10/28/2021	15:00	23-21	16	3.92	527.00	601.00	74.00				0.04		
	10/28/2021	15:25	21-19	20	3.12	601.00	707.65	106.65				0.04	surfacing, flow rate slowed to 2.91 gpm	
112	1/0/1900	11:16	45-43	140	3.23	0.00	66.00	66.00	620	256	53	0.05	Switched to external manifold with mechanical flow meters due to accessibility	Expendable Tip
	1/0/1900	11:59	43-41	18	4.39	66.00	133.32	67.32				0.05		
	10/28/2021	12:41	41-39	18	4.00	133.32	199.32	66.00				0.04		
	10/28/2021	12:45	39-37	18	3.06	199.32	265.60	66.28				0.04		
	10/28/2021	13:14	37-35	28	4.34	265.60	332.35	66.75				0.04		
	10/28/2021	13:41	35-33	45	6.40	332.35	398.24	65.89				0.04		
	10/28/2021	14:08	33-31	17	4.94	398.24	464.98	66.74				0.04		
	10/28/2021	14:31	31-29	19	4.78	464.98	531.24	66.26				0.04		
	10/28/2021	15:00	29-27	19	4.56	531.24	595.49	64.25				0.04		
	10/28/2021	15:25	27-25	20	4.13	595.49	620.35	24.86				0.04	surfacing, flow rate slowed to 2.37 gpm, surfacing uncontrollable volume redistribute	
113	1/0/1900	11:14	46-44	50	2.72	0.00	85.40	85.40	664	274	57	0.05	Switched to external manifold with mechanical flow meters due to accessibility	Expendable Tip
	1/0/1900	11:59	44-42	8	3.13	85.40	132.85	47.45				0.05		
	10/28/2021	12:41	42-40	8	3.00	132.85	199.20	66.35				0.04		
	10/28/2021	12:46	40-38	23	5.00	199.20	260.00	60.80				0.04		
	10/28/2021	13:14	38-36	25	6.26	260.00	320.00	60.00				0.04		
	10/28/2021	13:43	36-34	105	4.00	320.00	390.00	70.00				0.04		
	10/28/2021	14:08	34-32	10	5.13	390.00	460.00	70.00				0.04		
	10/28/2021	14:31	32-30	18	4.66	460.00	527.00	67.00				0.04		
	10/28/2021	15:01	30-28	10	5.72	527.00	602.00	75.00				0.04		
	10/28/2021	15:25	28-26	20	6.25	602.00	664.00	62.00				0.04	surfacing, flow rate slowed to 1 gpm	
114	10/29/2021	9:55	42-40	20	3.40	0.00	66.40	66.40	664	274	57	0.05		Expendable Tip
	10/29/2021	10:00	40-38	20	4.50	66.40	132.80	66.40				0.05		
	10/29/2021	10:08	38-36	20	5.00	132.80	199.20	66.40				0.04		
	11/1/2021	9:47	36-34	20	4.50	199.20	265.60	66.40				0.04		
	11/1/2021	9:47	34-32	20	4.50	265.60	332.00	66.40				0.04		
	11/1/2021	9:47	32-30	30	4.50	332.00	398.00	66.00				0.04		
	11/1/2021	9:47	30-28	20	4.50	398.00	465.00	67.00				0.04		
	11/1/2021	9:47	28-26	20	4.80	465.00	531.00	66.00				0.04		
	11/1/2021	9:47	26-24	20	4.50	531.00	598.00	67.00				0.04		
	11/1/2021	9:47	24-22	20	5.00	598.00	664.00	66.00				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
115	10/29/2021	9:55	43-41	80	3.00	0.00	66.40	66.40	664	274	57	0.05		Expendable Tip
	10/29/2021	10:00	41-39	70	4.50	66.40	132.80	66.40				0.05		
	10/29/2021	10:16	39-37	20	5.00	132.80	199.20	66.40				0.04		
	11/1/2021	9:47	37-35	30	4.50	199.20	265.60	66.40				0.04		
	11/1/2021	9:47	35-33	38	4.00	265.60	332.00	66.40				0.04		
	11/1/2021	9:47	33-31	35	4.50	332.00	398.00	66.00				0.04		
	11/1/2021	9:47	31-29	20	4.50	398.00	465.00	67.00				0.04		
	11/1/2021	9:47	29-27	20	4.80	465.00	531.00	66.00				0.04		
	11/1/2021	9:47	27-25	20	5.00	531.00	598.00	67.00				0.04		
	11/1/2021	9:47	25-23	20	5.00	598.00	664.00	66.00				0.04		
116	10/29/2021	9:04	38-36	75	4.50	0.00	66.40	66.40	664	274	57	0.05		Expendable Tip
	10/29/2021	10:00	36-34	70	4.50	66.40	132.80	66.40				0.05		
	10/29/2021	10:16	34-32	20	5.00	132.80	199.20	66.40				0.04		
	11/1/2021	9:47	32-30	60	5.00	199.20	265.60	66.40				0.04		
	11/1/2021	9:47	30-28	65	5.00	265.60	332.00	66.40				0.04	Lots of back pressure on this interval	
	11/1/2021	9:47	28-26	35	4.50	332.00	398.00	66.00				0.04		
	11/1/2021	9:47	26-24	15	4.50	398.00	465.00	67.00				0.04		
	11/1/2021	9:47	24-22	20	4.80	465.00	531.00	66.00				0.04		
	11/1/2021	9:47	22-20	20	5.00	531.00	598.00	67.00				0.04		
	11/1/2021	9:47	20-18	20	5.00	598.00	664.00	66.00				0.04		
117	11/1/2021	9:50	37-35	60	4.80	0.00	66.78	66.78	625	258	54	0.05		Expendable Tip
	11/1/2021	10:18	35-33	20	3.95	66.78	132.76	65.98				0.05		
	11/1/2021	10:44	33-31	10	4.40	132.76	200.68	67.92				0.04		
	11/1/2021	11:21	31-29	21	4.39	200.68	265.75	65.07				0.04		
	11/1/2021	11:38	29-27	10	4.80	265.75	332.01	66.26				0.04		
	11/1/2021	11:59	27-25	23	4.50	332.01	399.58	67.57				0.04		
	11/1/2021	12:25	25-23	10	4.70	399.58	465.11	65.53				0.04		
	11/1/2021	12:45	23-21	15	4.80	465.11	531.61	66.50				0.04		
	11/1/2021	13:02	21-29	10	4.26	531.61	596.83	65.22				0.04		
	11/1/2021	13:37	19-17	8	1.05	596.83	625.32	28.49				0.04	Surface out of bore hole. Flow stopped and hole repacked with benseal. Surafcing uncontrolable. Point abandoned	
118	11/1/2021	9:50	36-34	110	4.20	0.00	66.47	66.47	665	274	57	0.05		Expendable Tip
	11/1/2021	10:17	34-32	40	4.39	66.47	132.75	66.28				0.05		
	11/1/2021	10:44	32-30	20	4.70	132.75	199.49	66.74				0.04		
	11/1/2021	11:21	30-28	20	4.26	199.49	265.60	66.11				0.04		
	11/1/2021	11:37	28-26	19	4.40	265.60	333.19	67.59				0.04		
	11/1/2021	11:59	26-24	22	4.00	333.19	399.12	65.93				0.04		
	11/1/2021	12:25	24-22	19	4.30	399.12	465.08	65.96				0.04		
	11/1/2021	12:45	22-20	20	4.60	465.08	531.69	66.61				0.04		
	11/1/2021	13:02	20-18	20	5.35	531.69	598.42	66.73				0.04		
	11/1/2021	13:27	18-16	22	4.60	598.42	664.88	66.46				0.04		
119	11/1/2021	9:50	37-35	100	5.50	0.00	66.48	66.48	665	274	57	0.05		Expendable Tip
	11/1/2021	10:17	35-33	90	3.73	66.48	132.76	66.28				0.05		
	11/1/2021	10:44	33-31	80	4.50	132.76	199.79	67.03				0.04		
	11/1/2021	11:21	31-29	39	3.80	199.79	265.64	65.85				0.04		
	11/1/2021	11:37	29-27	42	4.40	265.64	332.15	66.51				0.04		
	11/1/2021	11:59	27-25	30	4.70	332.15	398.55	66.40				0.04		
	11/1/2021	12:25	25-23	15	4.10	398.55	465.44	66.89				0.04		
	11/1/2021	12:45	23-21	20	4.20	465.44	531.09	65.65				0.04		
	11/1/2021	13:04	21-29	22	5.25	531.09	555.01	23.92				0.04	Surfacing around bore hole. Flow slowed to 2 gal/min	
	11/1/2021	13:27	19-17	25	4.40	555.01	664.55	109.54				0.04		
120	11/1/2021	9:48	36-34	120	4.20	0.00	68.33	68.33	665	274	57	0.05		Expendable Tip
	11/1/2021	10:17	34-32	85	3.22	68.33	132.86	64.53				0.05	High pressure, low flow. Pull cap hit with hammer to jostle blockage	
	11/1/2021	10:44	32-30	80	2.40	132.86	199.28	66.42				0.04		
	11/1/2021	11:20	30-28	35	4.38	199.28	266.10	66.82				0.04		
	11/1/2021	11:38	28-26	45	3.10	266.10	332.22	66.12				0.04		
	11/1/2021	11:59	26-24	29	4.20	332.22	399.37	67.15				0.04		
	11/1/2021	12:25	24-22	11	4.60	399.37	464.82	65.45				0.04		
	11/1/2021	12:46	22-20	20	4.20	464.82	530.00	65.18				0.04		
	11/1/2021	13:05	20-18	25	5.74	530.00	598.21	68.21				0.04		
	11/1/2021	13:27	18-16	25	4.30	598.21	664.59	66.38				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
121	11/1/2021	14:34	35-33	18	5.29	0.00	76.88	76.88	763	314	65	0.05	Received 10 extra gallons from abandoning IP-117	Expendable Tip
	11/1/2021	14:52	33-31	10	4.50	76.88	146.38	69.50				0.05		
	11/1/2021	15:15	31-29	90	3.50	146.38	210.07	63.69				0.04		
	11/1/2021	15:42	29-27	18	4.10	210.07	275.00	64.93				0.04		
	11/1/2021	16:04	27-25	80	1.50	275.00	342.56	67.56				0.04	High pressure, low flow. Pull cap hit with hammer to jostle blockage. GPM raised to 4	
	11/2/2021	10:28	25-23	15	5.60	0.00	66.96	66.96				0.04	surfacing at borehole. Borehole repacked with benseal and volume slowed	
	11/2/2021	10:51	23-21	10	4.40	66.96	132.89	65.93				0.04		
	11/2/2021	11:20	21-19	38	3.70	132.89	184.34	51.45				0.04	Surfacing from PZ-7 bore hole. Flow reduced; Surfacing uncontrolable. Interval abar	
	11/2/2021	12:13	19-17	10	2.21	184.34	314.23	129.89				0.04	received additional volume due to surfacing arounf PZ-7 borehole	
	11/2/2021	12:58	17-15	20	4.47	314.23	420.62	106.39				0.04	received additional volume due to surfacing arounf PZ-7 borehole	
122	11/1/2021	14:31	34-32	80	5.26	0.00	76.67	76.67	702	289	60	0.05	Received 10 extra gallons from abandoning IP-117	Expendable Tip
	11/1/2021	14:52	32-30	21	4.70	76.67	149.06	72.39				0.05		
	11/1/2021	15:15	30-28	20	4.10	149.06	209.40	60.34				0.04		
	11/1/2021	15:42	28-26	21	4.60	209.40	275.96	66.56				0.04		
	11/1/2021	16:04	26-24	30	4.60	275.96	341.96	66.00				0.04		
	11/2/2021	10:26	24-22	20	5.57	0.00	66.00	66.00				0.04		
	11/2/2021	10:51	22-20	80	3.00	66.00	134.70	68.70				0.04		
	11/2/2021	11:19	20-18	20	4.20	134.70	183.67	48.97				0.04	Surfacing from PZ-7 bore hole. Flow reduced; Surfacing uncontrolable. Interval abar	
	11/2/2021	12:13	18-16	20	2.50	183.67	310.04	126.37				0.04	received additional volume due to surfacing arounf PZ-7 borehole	
	11/2/2021	12:57	16-14	22	4.65	310.04	360.09	50.05				0.04	received additional volume due to surfacing arounf PZ-7 borehole	
123	11/1/2021	14:29	34-32	30	5.56	0.00	76.47	76.47	525	216	45	0.05	Received 10 extra gallons from abandoning IP-117	Expendable Tip
	11/1/2021	14:52	32-30	15	4.60	76.47	143.13	66.66				0.05		
	11/1/2021	15:15	30-28	70	3.80	143.13	209.52	66.39				0.04		
	11/1/2021	15:42	28-26	21	4.60	209.52	275.76	66.24				0.04		
	11/1/2021	16:04	26-24	90	4.20	275.76	342.12	66.36				0.04		
	11/2/2021	10:27	24-22	30	6.05	0.00	58.84	58.84				0.04	Surfacing at bore hole. Hole packed with benseal and volume slowed. Surfacing uncontrolable, volume redistributed to next interval	
	11/2/2021	10:50	22-20	100	4.06	58.84	132.83	73.99				0.04	surfacing at borehole. Borehole repacked with benseal and volume slowed	
	11/2/2021	11:19	20-18	30	4.00	132.83	174.90	42.07				0.04	Surfacing from PZ-7 bore hole. Flow reduced; Surfacing uncontrolable. Interval abandoned	
	11/2/2021	12:34	18-16	17	1.04	174.90	177.20	2.30				0.04	Surfacing uncontrolable around borehole for PZ-7. volume redistributed to adjacent points	
	11/2/2021	12:44	16-14	22	0.64	177.20	182.45	5.25				0.04	Surfacing uncontrolable around borehole for PZ-7. volume redistributed to adjacent points	
124	11/1/2021	14:27	34-32	15	5.77	0.00	76.46	76.46	535	220	46	0.05	Received 10 extra gallons from abandoning IP-117	Expendable Tip
	11/1/2021	14:52	32-30	12	4.50	76.46	146.00	69.54				0.05		
	11/1/2021	15:15	30-28	95	4.40	146.00	209.60	63.60				0.04		
	11/1/2021	15:42	28-26	21	4.80	209.60	275.54	65.94				0.04		
	11/1/2021	16:03	26-24	80	5.30	275.54	344.56	69.02				0.04		
	11/2/2021	10:22	24-22	38	5.26	0.00	66.58	66.58				0.04		
	11/2/2021	10:50	22-20	100	4.40	66.58	132.86	66.28				0.04		
	11/2/2021	11:19	20-18	40	4.30	132.86	179.62	46.76				0.04	Surfacing from PZ-7 bore hole. Flow reduced; Surfacing uncontrolable. Interval abandoned	
	11/2/2021	12:34	18-16	12	0.64	179.62	188.46	8.84				0.04	Surfacing uncontrolable around borehole for PZ-7. volume redistributed to adjacent points	
	11/2/2021	12:44	16-14	22	0.26	188.46	189.98	1.52				0.04	Surfacing uncontrolable around borehole for PZ-7. volume redistributed to adjacent points	
125	11/2/2021	14:20	34.5-32.5	30	5.42	0.00	71.36	71.36	660	272	57	0.04	received additional volume due to abandoning IPs 121-124	Expendable Tip
	11/2/2021	15:06	32.5-30.5	10	3.86	71.36	145.25	73.89				0.04		
	11/2/2021	15:31	30.5-28.5	10	4.75	145.25	214.22	68.97				0.04		
	11/2/2021	15:55	28.5-26.5	10	4.10	214.22	285.64	71.42				0.04		
	11/2/2021	9:35	26.5-24.5	30	4.72	285.64	353.00	67.36				0.05		
	11/3/2021	10:11	24.5-22.5	23	4.66	0.00	66.83	66.83				0.04		
	11/3/2021	10:36	22.5-20.5	25	5.03	66.83	133.10	66.27				0.04	generator broken, shut down production for day	
	11/4/2021	9:39	22.5-20.5	25	5.03	133.10	133.10	0.00				0.00		
	11/4/2021	10:00	20.5-18.5	25	4.96	0.00	70.38	70.38				0.04		
	11/4/2021	10:29	18.5-16.5	30	4.20	0.00	66.58	66.58				0.04		
	11/4/2021	10:34	16.5-14.5	30	4.78	0.00	37.00	37.00				0.04		
126	11/9/2021	8:09	35-33	30	5.09	0.00	66.41	66.41	651	268	56	0.05		Expendable Tip
	11/9/2021	9:43	33-31	10	2.84	66.41	132.82	66.41				0.05		
	11/9/2021	10:21	31-29	15	2.42	132.82	200.71	67.89				0.04		
	11/9/2021	11:13	29-27	10	4.06	200.71	265.63	64.92				0.04		
	11/9/2021	11:43	27-25	21	2.36	265.63	332.01	66.38				0.04		
	11/9/2021	12:16	25-23	18	3.50	332.01	398.25	66.24				0.04		
	11/9/2021	12:43	23-21	18	3.10	398.25	464.82	66.57				0.04		
	11/9/2021	13:17	21-19	19	3.58	464.82	531.25	66.43				0.04		
	11/9/2021	13:46	19-17	10	3.56	531.25	597.68	66.43				0.04		
	11/9/2021	14:09	17-15	10	3.98	597.68	651.02	53.34				0.04	surfacing uncontrolable. Volume redistributed to adjacent points	

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
127	11/2/2021	14:15	34-32	50	5.21	0.00	74.19	74.19	702	289	60	0.04	received additional volume due to abandoning IPs 121-124	Expendable Tip
	11/2/2021	15:06	32-30	21	4.48	74.19	143.17	68.98				0.04		
	11/2/2021	15:31	30-28	25	3.50	143.17	214.59	71.42				0.04		
	11/2/2021	15:55	28-26	22	3.60	214.59	285.83	71.24				0.04		
	11/2/2021	9:35	26-24	20	3.87	285.83	369.00	83.17				0.04		
	11/3/2021	9:57	24-22	18	4.40	0.00	67.44	67.44				0.05		
	11/3/2021	10:36	22-19	25	4.72	67.44	132.72	65.28				0.05		
	11/3/2021	10:58	19-18	21	5.00	132.72	165.82	33.10				0.05	generator broken, shut down production for day	
	11/4/2021	9:40	19-18	35	5.00	0.00	34.80	34.80				0.05		
	11/4/2021	10:00	18-16	20	4.40	34.80	99.00	64.20				0.05		
	11/4/2021	10:29	16-14	20	4.40	0.00	67.96	67.96				0.05		
128	11/2/2021	14:14	34-32	80	4.62	0.00	71.66	71.66	744	307	64	0.05	received additional volume due to abandoning IPs 121-124	Expendable Tip
	11/2/2021	15:13	32-30	50	3.42	71.66	156.02	84.36				0.05		
	11/2/2021	15:31	30-28	20	4.50	156.02	214.09	58.07				0.05		
	11/2/2021	15:55	28-26	20	4.18	214.09	285.90	71.81				0.05		
	11/2/2021	9:35	26-24	40	3.78	285.90	362.00	76.10				0.04		
	11/3/2021	10:00	24-22	19	4.76	0.00	119.34	119.34				0.05	Received additional volume due to abandoning IP129	
	11/3/2021	10:58	22-20	45	5.75	119.34	140.96	21.62				0.05	Received additional volume due to abandoning IP129; generator broken, shut down	
	11/4/2021	9:40	22-20	50	5.00	0.00	98.06	98.06				0.05	Received additional volume due to abandoning IP129	
	11/4/2021	10:00	20-18	50	4.70	0.00	66.00	66.00				0.05	Received additional volume due to abandoning IP129	
	11/4/2021	10:29	18-16	20	4.64	66.00	123.01	57.01				0.05	Received additional volume due to abandoning IP129	
	11/4/2021	10;29	16-14	20	4.64	123.01	143.00	19.99				0.05		
129	11/2/2021	14:13	34-32	70	4.34	0.00	71.51	71.51	390	161	33	0.05	received additional volume due to abandoning IPs 121-124	Expendable Tip
	11/2/2021	15:06	32-30	70	3.75	71.51	142.93	71.42				0.05		
	11/2/2021	15:31	30-28	20	4.40	142.93	214.25	71.32				0.05		
	11/2/2021	15:55	28-26	20	4.20	214.25	285.66	71.41				0.05		
	11/2/2021	9:35	26-24	39	4.00	285.66	368.00	82.34				0.04		
	11/3/2021	10:16	24-22	130	1.50	0.00	13.48	13.48				0.04	surfacing at borehole, flow slowed. Surfacing uncontrolable, volume redistributed to IP 128	
	11/3/2021	10:30	22-20	130	1.50	13.48	17.36	3.88				0.04	surfacing at borehole, flow slowed. Surfacing uncontrolable, volume redistributed to IP 128	
	11/4/2021	9:40	22-20	90	2.15	0.00	3.82	3.82				0.04		
	11/4/2021	10:02	20-18	90	2.15	3.82	5.00	1.02				0.04		
	11/4/2021	10:02	18-16	0	0.00	5.00	0.00	0.00				0.04		
	11/4/2021	10:02	16-14	0	0.00	0.00	0.00	0.00				0.00		
130	11/9/2021	8:25	35-33	80	4.16	0.00	66.46	66.46	646	266	55	0.05		Expendable Tip
	11/9/2021	9:43	33-31	45	2.48	66.46	132.82	66.36				0.05		
	11/9/2021	10:46	31-29	100	0.05	132.82	199.33	66.51				0.05	Unable to establish reliable flow. 10 gallons injected. Point redrilled 3' E. new flow rate and pressure 4.7 gpm and 30 psi respectively.	
	11/9/2021	11:14	29-27	30	3.98	199.33	265.64	66.31				0.05		
	11/9/2021	11:44	27-25	20	2.74	265.64	332.05	66.41				0.04		
	11/9/2021	12:16	25-23	30	3.14	332.05	398.32	66.27				0.04		
	11/9/2021	12:43	23-21	30	2.54	398.32	464.73	66.41				0.04		
	11/9/2021	13:17	21-19	32	3.00	464.73	532.98	68.25				0.04		
	11/9/2021	13:46	19-17	22	3.79	532.98	597.61	64.63				0.04		
	11/9/2021	14:08	17-15	22	4.24	597.61	645.75	48.14				0.04	surfacing uncontrolable. Volume redistributed to adjacent points	
131	11/9/2021	15:25	30-28	10	3.61	0.00	97.79	97.79	676	279	58	0.05	Received additional volume due to abandoning 126 and 130	Expendable Tip
	11/9/2021	15:55	28-26	10	3.89	0.00	95.01	95.01				0.05		
	11/9/2021	16:18	26-24	10	4.82	0.00	91.22	91.22				0.05		
	11/9/2021	17:00	24-22	21	3.36	0.00	85.04	85.04				0.04		
	11/9/2021	17:34	22-20	10	3.14	0.00	66.10	66.10				0.04		
	11/10/2021	8:09	20-18	21	4.23	0.00	66.44	66.44				0.04		
	11/10/2021	9:16	18-16	10	2.00	66.44	132.80	66.36				0.04	minor surfacing from multiple points in 1' radius from bore hole. Flow rate slowed	
	11/10/2021	9:14	16-14	10	2.92	132.80	219.36	86.56				0.04	received additional volume due to abaondoning interval in IP 133	
	11/10/2021	9:40	14-12	19	3.68	219.36	238.88	19.52				0.04	Surfacing out of borehole. Packed with benseal. Surfacing 6" east of borehole. Interval abandoned	
	11/10/2021	10:27	12-10	40	1.00	238.88	241.33	2.45				0.04	surfacing 2" E of borehole. Flow rate slowed. Surfacing uncontrollable. Point abandoned	
132	11/9/2021	8:39	30-28	90	4.40	0.00	66.47	66.47	667	275	57	0.05		Expendable Tip
	11/9/2021	9:44	28-26	60	2.37	66.47	132.90	66.43				0.05		
	11/9/2021	10:22	26-24	18	2.30	132.90	199.24	66.34				0.05		
	11/9/2021	11:14	24-22	40	3.94	199.24	266.69	67.45				0.04		
	11/9/2021	11:44	22-20	50	2.07	266.69	332.00	65.31				0.04		
	11/9/2021	12:16	20-18	35	3.24	332.00	398.36	66.36				0.04		
	11/9/2021	12:43	18-16	25	2.43	398.36	464.92	66.56				0.04		
	11/9/2021	13:17	16-14	34	2.30	464.92	531.21	66.29				0.04		
	11/9/2021	13:47	14-12	38	3.12	531.21	597.77	66.56				0.04		
	11/9/2021	14:06	12-10	15	4.66	597.77	667.12	69.35				0.04		

Patriot Engineering -Houghland Canning

PlumeStop Injection Summary Log

On-Site PlumeStop Barrier

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of PlumeStop Injected			Total Gallons Per Location	Pounds of PlumeStop Injected Per Location	Pounds of S-Micro ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
133	11/9/2021	15:05	29-27	80	3.96	0.00	5.26	5.26	484	198	41	0.05	uncontrollable surfacing. Interval abandoned. Volume redistributed to next interval and IP 135	Expendable Tip
	11/9/2021	15:55	27-25	20	3.17	5.26	100.03	94.77				0.05		
	11/9/2021	16:12	25-23	25	3.92	0.00	91.28	91.28				0.05		
	11/9/2021	16:38	23-21	25	3.74	0.00	85.06	85.06				0.05		
	11/9/2021	17:00	21-19	22	3.60	0.00	58.45	58.45				0.04		
	11/10/2021	17:34	19-17	38	4.86	0.00	66.40	66.40				0.04	minor surfacing from multiple points in 1' radius from bore hole. Flow rate slowed	
	11/10/2021	9:17	17-15	20	2.00	66.40	119.32	52.92				0.04	minor surfacing from multiple points in 1' radius from bore hole. Flow rate slowed. Surfacing uncontrollable. Interval abandoned	
	11/10/2021	9:16	15-13	20	1.72	119.32	139.12	19.80				0.04	surfacing around point. Flow rate slowed to 0.5 gal/min. Surfacing uncontrollable. Interval abaondoned.volume redistributed to other points	
	11/10/2021	10:16	13-11	10	1.00	139.12	145.61	6.49				0.04	surfacing around point. Flowrate slowed to 0.5 gal/min	
	11/10/2021	10:24	11-9	30	1.72	145.61	149.20	3.59				0.04	surfacing. Flow rate slowed to 0.5 gal/min. surfacing uncontrollable. Point abandoned	
134	11/9/2021	10:22	30-28	0	0.00	0.00	0.00	0.00	531	218	46	0.00	Could not estalish flow. Volume redirected to IPs 133	Expendable Tip
	11/9/2021	10:22	28-26	0	0.00	0.00	0.00	0.00				0.00	Could not estalish flow. Volume redirected to IPs 133	
	11/9/2021	8:51	26-24	85	4.66	0.00	66.47	66.47				0.04		
	11/9/2021	9:44	24-22	12	3.69	66.47	132.89	66.42				0.04		
	11/9/2021	10:22	22-20	80	1.09	132.89	203.22	70.33				0.04		
	11/9/2021	11:14	20-18	30	2.41	203.22	265.80	62.58				0.04		
	11/9/2021	11:44	18-16	25	3.86	265.80	332.21	66.41				0.04		
	11/9/2021	12:16	16-14	18	3.30	332.21	398.93	66.72				0.04		
	11/9/2021	12:43	14-12	12	3.02	398.93	464.83	65.90				0.04		
	11/9/2021	13:17	12-10	10	3.98	464.83	531.30	66.47				0.04		
135	11/9/2021	15:03	25-23	90	4.34	0.00	73.06	73.06	689	283	59	0.05	Received additional volume due to abandoning 126, 130, and 134	Expendable Tip
	11/9/2021	15:56	23-21	30	1.92	0.00	29.48	29.48				0.05		
	11/9/2021	16:26	21-19	10	2.30	0.00	91.22	91.22				0.05		
	11/9/2021	17:00	19-17	30	3.15	0.00	85.16	85.16				0.04		
	11/9/2021	17:34	17-15	28	3.24	0.00	66.73	66.73				0.04		
	11/10/2021	8:02	15-13	20	4.70	0.00	66.42	66.42				0.04	minor surfacing from multiple points in 1' radius from bore hole. Flow rate slowed	
	11/10/2021	9:17	13-11	18	4.00	66.42	133.67	67.25				0.04		
	11/10/2021	9:16	11-9	17	3.45	133.67	219.32	85.65				0.04	received additional volume due to abaondoning interval in IP 133	
	11/10/2021	9:41	9-7	20	4.51	219.32	319.46	100.14				0.04	Surfacing near root system. Flow slowed	
	11/10/2021	10:28	7-5	15	1.68	319.46	343.05	23.59				0.04	minor surfacing around point. Flow slowed to 0.7 gpm. Surfacing uncontrollable. Point abandoned	
136	11/9/2021	8:59	30-28	52	2.66	0.00	66.00	66.00	664	273	57	0.05		Expendable Tip
	11/9/2021	9:44	28-26	35	1.93	66.00	150.00	84.00				0.05		
	11/9/2021	10:22	26-24	25	1.86	0.00	46.82	46.82				0.05		
	11/9/2021	11:14	24-22	35	4.72	0.00	66.47	66.47				0.04		
	11/9/2021	11:44	22-20	25	3.38	66.47	134.95	68.48				0.04		
	11/9/2021	12:17	20-18	15	3.22	134.95	201.20	66.25				0.04		
	11/9/2021	12:44	18-16	10	3.31	0.00	66.55	66.55				0.04		
	11/9/2021	13:25	16-14	40	4.52	66.55	132.99	66.44				0.04	Uncontrolable surfacing from bore hole. Point redriven 3' E of hole	
	11/9/2021	13:47	14-12	8	3.52	132.99	199.44	66.45				0.04		
	11/9/2021	14:11	12-10	10	3.87	199.44	265.74	66.30				0.04		
137	11/9/2021	14:59	29-27	75	4.73	0.00	37.88	37.88	826	339	71	0.05	surfacing around borehole. Surfacing uncontrollable. Interval abandoned	Expendable Tip
	11/9/2021	15:56	27-25	30	3.08	0.00	95.38	95.38				0.05		
	11/9/2021	16:27	25-23	15	2.80	0.00	91.66	91.66				0.05		
	11/9/2021	17:00	23-21	35	3.40	0.00	85.06	85.06				0.04		
	11/9/2021	17:34	21-19	28	3.24	0.00	63.72	63.72				0.04		
	11/10/2021	8:00	19-17	20	4.64	0.00	66.44	66.44				0.04		
	11/10/2021	9:17	17-15	10	3.20	0.00	66.40	66.40				0.04		
	11/10/2021	9:16	15-13	8	2.85	0.00	87.58	87.58				0.04	received additional volume due to abaondoning interval in IP 133	
	11/10/2021	9:41	13-11	10	4.33	0.00	140.71	140.71				0.04		
	11/10/2021	10:28	11-9	12	4.22	0.00	90.93	90.93				0.04		

Total Gallons:	Total Lbs. PlumeStop	Total Lbs. of S-Micro ZVI	Total Litres of BDI:
93577	38000	7900	58.00

Patriot Engineering-Houghland Canning

3DME Injection Summary Log

3DME PRB 1

Table 2

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	9/28/2021	12:54	20-17	5	3.08	0.00	91.90	91.90	320	129	97	0.08	Retractable screen did not deploy. Offset 1' N and redriving. Reufsal at 20' bgs.	3-Foot Screen
	9/28/2021	13:40	17-14	5	2.99	91.90	180.28	88.38				0.08	Small amount of surfacing out of bore. Sealed and continued.	
	9/28/2021	14:30	14-11	5	3.10	180.28	274.22	93.94				0.08	Small amount of surfacing out of bore. Sealed and continued.	
	9/28/2021	15:00	11-10	15	3.56	274.22	319.67	45.45				0.03		
2	9/29/2021	11:31	19-16	15	3.70	0.00	104.47	104.47	303	123	92	0.08	Refusal at 19' bgs.	3-Foot Screen
	9/29/2021	12:05	16-13	40	4.55	104.47	201.79	97.32				0.08		
	9/29/2021	13:11	13-10	35	3.48	201.79	302.78	100.99				0.08		
3	9/28/2021	12:40	20-17	24	2.79	0.00	89.98	89.98	322	130	98	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/28/2021	13:40	17-14	22	4.10	89.98	179.93	89.95				0.08		
	9/28/2021	14:30	14-11	21	3.58	179.93	270.90	90.97				0.08		
	9/28/2021	15:00	11-10	30	4.00	270.90	321.87	50.97				0.03		
4	9/29/2021	11:28	19-16	60	1.38	0.00	98.43	98.43	302	122	92	0.08	Refusal at 19' bgs.	3-Foot Screen
	9/29/2021	12:23	16-13	65	2.19	98.43	115.67	17.24				0.08	Surfacing from bore and root system surrounding it. Unable to seal. Pulling up and redriving 2' East.	
	9/29/2021	12:40	16-13	45	3.02	115.67	207.98	92.31				-		
	9/29/2021	13:11	13-10	45	2.78	207.98	301.98	94.00				0.08		
5	9/28/2021	12:41	20-17	5	2.96	0.00	94.67	94.67	319	129	97	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/28/2021	13:40	17-14	15	3.12	94.67	182.99	88.32				0.08		
	9/28/2021	14:31	14-11	10	3.38	182.99	272.02	89.03				0.08	Small amount of surfacing out of bore. Sealed and continued.	
	9/28/2021	14:57	11-10	20	4.10	272.02	319.24	47.22				0.03		
6	9/29/2021	11:26	20-17	20	3.64	0.00	91.70	91.70	302	122	92	0.08	Refusal at 20' bgs. Small amount of surfacing out of bore. Sealed and continued.	3-Foot Screen
	9/29/2021	12:02	17-14	40	4.38	91.70	109.25	17.55				-	Surfacing from root system within 1' all around bore. Unable to seal. Pulling out and redriving 2' East.	
	9/29/2021	12:20	17-14	20	3.02	109.25	190.32	81.07				0.08		
	9/29/2021	12:43	14-11	25	3.75	190.32	275.36	85.04				0.08		
	9/29/2021	13:11	11-10	25	3.09	275.36	301.59	26.23				0.03		
7	9/28/2021	12:43	20-17	10	3.18	0.00	92.00	92.00	246	100	75	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/28/2021	13:53	17-14	10	3.85	92.00	181.06	89.06				0.08		
	9/28/2021	14:31	14-11	10	2.96	181.06	224.57	43.51				0.08	Surfacing out of bore. Unable to seal. Pulling up and redriving.	
	9/28/2021	14:54	11-10	10	2.81	224.57	245.66	21.09				0.03	Surfacing continued. Remaining volume to be redistributed.	
8	9/29/2021	11:23	20-17	15	3.24	0.00	90.94	90.94	299	121	91	0.08	Refusal at 20' bgs. Small amount of surfacing out of bore. Sealed and continued.	3-Foot Screen
	9/29/2021	12:09	17-14	8	3.14	90.94	183.94	93.00				0.08		
	9/29/2021	12:49	14-11	10	3.24	183.94	273.46	89.52				0.08		
	9/29/2021	13:11	11-10	10	3.33	273.46	298.97	25.51				0.03		
9	9/28/2021	16:08	19-16	15	3.16	0.00	94.80	94.80	309	125	94	0.08	Refusal at 19' bgs.	3-Foot Screen
	9/29/2021	9:02	16-13	15	3.81	94.80	199.86	105.06				0.08		
	9/29/2021	9:42	13-10	15	3.68	199.86	308.94	109.08				0.08		
10	9/30/2021	9:40	20-17	10	3.88	0.00	91.18	91.18	304	123	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/30/2021	10:20	17-14	5	4.48	91.18	188.88	97.70				0.08		
	9/30/2021	10:51	14-11	10	2.80	188.88	281.23	92.35				0.08		
	9/30/2021	11:44	11-10	8	2.64	281.23	303.84	22.61				0.03		
11	9/28/2021	16:03	20-17	20	3.74	0.00	96.11	96.11	299	121	91	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/29/2021	9:02	17-14	35	3.08	96.11	187.56	91.45				0.08		
	9/29/2021	9:44	14-11	40	2.99	187.56	275.31	87.75				0.08		
	9/29/2021	10:25	11-10	40	2.86	275.31	299.14	23.83				0.03		
12	9/30/2021	9:39	20-17	25	2.60	0.00	91.53	91.53	308	125	94	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/30/2021	10:20	17-14	12	2.92	91.53	172.98	81.45				0.08		
	9/30/2021	10:51	14-11	12	2.74	172.98	279.13	106.15				0.08		
	9/30/2021	11:43	11-10	12	2.80	279.13	308.00	28.87				0.03		
13	9/28/2021	16:01	21-18	35	2.12	0.00	86.08	86.08	304	123	92	0.07	Refusal at 21' bgs.	3-Foot Screen
	9/29/2021	9:02	18-15	28	2.38	86.08	167.72	81.64				0.07	Small amount of surfacing out of bore. Sealed and continued.	
	9/29/2021	9:42	15-12	22	3.92	167.72	248.57	80.85				0.07		
	9/29/2021	10:16	12-10	14	3.06	248.57	304.13	55.56				0.05		
14	9/30/2021	9:37	25-22	25	2.40	0.00	59.06	59.06	303	123	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	10:20	22-19	25	2.16	59.06	130.92	71.86				0.05	Small amount of surfacing out of bore. Sealed and continued.	
	9/30/2021	10:52	19-16	20	3.12	130.92	181.94	51.02				0.05		
	9/30/2021	11:11	16-13	15	3.04	181.94	240.94	59.00				0.05		
	9/30/2021	11:43	13-10	15	3.48	240.94	302.54	61.60				0.05		
15	9/28/2021	15:57	25-22	25	2.92	0.00	60.03	60.03	303	123	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/29/2021	9:03	22-19	20	3.99	60.03	125.26	65.23				0.05		
	9/29/2021	9:42	19-16	15	4.66	125.26	174.09	48.83				0.05		
	9/29/2021	10:02	16-13	15	3.70	174.09	243.84	69.75				0.05		
	9/29/2021	10:25	13-10	22	3.85	243.84	302.74	58.90				0.05	Small amount of surfacing out of bore. Sealed and continued.	
16	9/30/2021	9:35	25-22	28	2.97	0.00	61.80	61.80	298	121	90	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	10:20	22-19	12	3.32	61.80	127.27	65.47				0.05		
	9/30/2021	10:52	19-16	15	2.94	127.27	182.67	55.40				0.05		
	9/30/2021	11:11	16-13	12	3.08	182.67	247.65	64.98				0.05		
	9/30/2021	11:43	13-10	12	3.38	247.65	297.64	49.99				0.05		
17	9/30/2021	15:46	25-22	15	2.92	0.00	65.42	65.42	302	122	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	16:16	22-19	20	3.54	65.42	119.38	53.96				0.05		
	9/30/2021	16:42	19-16	25	4.73	119.38	163.24	43.86				0.05		
	10/1/2021	8:59	19-16	10	3.54	163.24	183.94	20.70				-		
	10/1/2021	9:11	16-13	15	4.28	183.94	244.74	60.80				0.05		
	10/1/2021	9:36	13-10	8	4.14	244.74	301.98	57.24				0.05		
18	9/30/2021	12:50	25-22	10	3.20	0.00	59.99	59.99	308	125	94	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	13:22	22-19	8	3.38	59.99	121.00	61.01				0.05		
	9/30/2021	14:02	19-16	5	2.20	121.00	180.46	59.46				0.05		
	9/30/2021	14:28	16-13	10	4.43	180.46	239.87	59.41				0.05		
	9/30/2021	14:46	13-10	20	4.78	239.87	308.07	68.20				0.05		
19	9/30/2021	15:45	25-22	30	3.18	0.00	66.64	66.64	302	122	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	16:16	22-19	32	3.41	66.64	130.92	64.28				0.05		
	9/30/2021	16:42	19-16	10	2.33	130.92	160.14	29.22				0.05		
	10/1/2021	8:59	19-16	18	2.49	160.14	180.69	20.55				-		
	10/1/2021	9:11	16-13	28	4.02	180.69	237.50	56.81				0.05		
	10/1/2021	9:36	13-10	15	4.17	237.50	301.75	64.25				0.05		
20	9/30/2021	12:50	25-22	32	2.80	0.00	61.10	61.10	303	123	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	13:22	22-19	18	2.77	61.10	121.52	60.42				0.05		
	9/30/2021	14:02	19-16	20	3.39	121.52	186.33	64.81				0.05		
	9/30/2021	14:27	16-13	20	3.42	186.33	250.49	64.16				0.05		
	9/30/2021	14:46	13-10	18	3.22	250.49	302.95	52.46				0.05		
21	9/30/2021	15:44	25-22	20	3.02	0.00	66.54	66.54	296	120	90	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	16:16	22-19	20	3.38	66.54	126.70	60.16				0.05		
	9/30/2021	16:42	19-16	10	2.57	126.70	154.24	27.54				0.05		
	10/1/2021	8:58	19-16	20	4.14	154.24	181.93	27.69				-		
	10/1/2021	9:11	16-13	15	4.85	181.93	248.69	66.76				0.05		
	10/1/2021	9:36	13-10	15	4.66	248.69	295.64	46.95				0.05		
22	9/30/2021	12:46	25-22	20	2.08	0.00	60.24	60.24	308	125	94	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	13:22	22-19	40	2.43	60.24	123.30	63.06				0.05		
	9/30/2021	14:02	19-16	40	2.78	123.30	187.48	64.18				0.05		
	9/30/2021	14:28	16-13	20	4.07	187.48	244.58	57.10				0.05		
	9/30/2021	14:46	13-10	30	5.16	244.58	307.82	63.24				0.05		
23	9/30/2021	15:40	25-22	20	3.50	0.00	64.22	64.22	305	123	93	0.05	Refusal at 25' bgs.	3-Foot Screen
	9/30/2021	16:17	22-19	12	3.41	64.22	123.31	59.09				0.05		
	9/30/2021	16:42	19-16	20	4.56	123.31	180.26	56.95				0.05		
	10/1/2021	8:58	16-13	12	3.00	180.26	242.38	62.12				0.05		
	10/1/2021	9:14	13-10	10	3.59	242.38	304.58	62.20				0.05		
24	9/30/2021	12:46	20-17	10	3.41	0.00	92.74	92.74	301	122	91	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/30/2021	13:22	17-14	15	3.90	92.74	184.40	91.66				0.08		
	9/30/2021	14:02	14-11	12	3.60	184.40	281.36	96.96				0.08		
	9/30/2021	14:31	11-10	10	3.42	281.36	300.94	19.58				0.03		
25	10/1/2021	10:55	20-17	20	4.53	0.00	96.40	96.40	301	122	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	10/1/2021	11:20	17-14	25	5.68	96.40	184.16	87.76				0.08		
	10/1/2021	11:45	14-11	30	5.64	184.16	276.85	92.69				0.08		
	10/1/2021	12:05	11-10	30	5.23	276.85	301.46	24.61				0.03		
26	10/1/2021	10:55	25-22	40	3.28	0.00	63.47	63.47	306	124	93	0.05	Refusal at 25' bgs.	3-Foot Screen
	10/1/2021	11:10	22-19	35	4.39	63.47	120.78	57.31				0.05		
	10/1/2021	11:35	19-16	35	5.01	120.78	182.34	61.56				0.05		
	10/1/2021	12:02	16-13	55	7.01	182.34	249.68	67.34				0.05		
	10/1/2021	12:11	13-10	40	4.89	249.68	305.94	56.26				0.05		
27	10/4/2021	9:52	25-22	10	2.48	0.00	54.32	54.32	300	121	91	0.05	Refusal at 25' bgs.	3-Foot Screen
	10/4/2021	10:14	22-19	15	3.08	54.32	125.64	71.32				0.05		
	10/4/2021	10:35	19-16	10	2.74	125.64	181.34	55.70				0.05		
	10/4/2021	11:12	16-13	12	3.26	181.34	242.88	61.54				0.05		
	10/4/2021	11:40	13-10	12	3.09	242.88	299.65	56.77				0.05		
28	10/4/2021	16:01	25-22	34	3.27	0.00	60.00	60.00	306	124	93	0.05	Refusal at 25' bgs.	3-Foot Screen
	10/4/2021	16:27	22-19	18	3.12	60.00	117.26	57.26				0.05		
	10/4/2021	16:52	19-16	22	3.04	117.26	144.12	26.86				0.05		
	10/5/2021	9:11	19-16	20	3.59	144.12	183.34	39.22				-		
	10/5/2021	9:32	16-13	22	3.04	183.34	239.65	56.31				0.05		
	10/5/2021	9:55	13-10	30	3.46	239.65	305.87	66.22				0.05		
29	10/4/2021	9:49	25-22	30	3.27	0.00	61.70	61.70	302	123	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	10/4/2021	10:14	22-19	15	3.84	61.70	118.73	57.03				0.05		
	10/4/2021	10:35	19-16	5	3.78	118.73	180.56	61.83				0.05		
	10/4/2021	11:12	16-13	10	3.94	180.56	242.00	61.44				0.05		
	10/4/2021	11:40	13-10	5	3.38	242.00	302.45	60.45				0.05		
30	10/4/2021	16:02	25-22	20	3.48	0.00	61.32	61.32	302	122	92	0.05	Refusal at 25' bgs.	3-Foot Screen
	10/4/2021	16:28	22-19	20	4.30	61.32	126.84	65.52				0.05		
	10/4/2021	16:52	19-16	15	4.20	126.84	164.23	37.39				0.05		
	10/5/2021	9:11	19-16	15	4.42	164.23	186.42	22.19				-		
	10/5/2021	9:32	16-13	15	4.20	186.42	242.34	55.92				0.05		
	10/5/2021	9:55	13-10	15	4.70	242.34	301.54	59.20				0.05		

	10/4/2021	9:49	25-22	12	3.64	0.00	60.36	60.36				0.05	Refusal at 25' bgs.	
	10/4/2021	10:14	22-19	15	3.98	60.36	122.45	62.09				0.05		
31	10/4/2021	10:35	19-16	12	3.46	122.45	181.95	59.50	301	122	91	0.05		3-Foot Screen
	10/4/2021	11:13	16-13	12	3.88	181.95	244.24	62.29				0.05		
	10/4/2021	11:40	13-10	12	3.78	244.24	300.75	56.51				0.05		
	10/4/2021	16:02	25-22	12	4.59	0.00	62.93	62.93				0.05	Refusal at 25' bgs.	
	10/4/2021	16:28	22-19	15	4.00	62.93	121.34	58.41				0.05		
32	10/4/2021	16:52	19-16	15	3.87	121.34	152.31	30.97	301	122	91	0.05		3-Foot Screen
	10/5/2021	9:11	19-16	18	3.60	152.31	187.69	35.38				-		
	10/5/2021	9:31	16-13	15	4.38	187.69	241.54	53.85				0.05		
	10/5/2021	9:54	13-10	15	4.50	241.54	300.64	59.10				0.05		
	10/4/2021	9:45	25-22	20	3.98	0.00	59.81	59.81				0.05	Refusal at 25' bgs.	
	10/4/2021	10:14	22-19	20	3.62	59.81	121.98	62.17				0.05		
33	10/4/2021	10:35	19-16	20	4.62	121.98	184.34	62.36	301	122	91	0.05		3-Foot Screen
	10/4/2021	11:12	16-13	12	3.58	184.34	244.98	60.64				0.05		
	10/4/2021	11:40	13-10	15	4.56	244.98	300.89	55.91				0.05		
	10/5/2021	11:25	30-27	24	4.24	0.00	47.14	47.14				0.04		
	10/5/2021	11:41	27-24	12	3.92	47.14	91.78	44.64				0.04		
	10/5/2021	12:26	24-21	20	3.24	91.78	141.46	49.68				0.04		
34	10/5/2021	12:50	21-18	20	4.13	141.46	181.56	40.10	300	121	91	0.04		3-Foot Screen
	10/5/2021	13:11	18-15	15	4.32	181.56	226.34	44.78				0.04		
	10/5/2021	13:27	15-12	15	4.32	226.34	275.31	48.97				0.04		
	10/5/2021	13:43	12-10	15	4.05	275.31	299.64	24.33				0.03		
	10/4/2021	13:06	30-27	15	3.90	0.00	41.42	41.42				0.04		
	10/4/2021	13:30	27-24	8	2.78	41.42	86.84	45.42				0.04		
	10/4/2021	13:48	24-21	10	3.44	86.84	132.89	46.05				0.04		
35	10/4/2021	14:08	21-18	10	3.68	132.89	176.20	43.31	300	121	91	0.04		3-Foot Screen
	10/4/2021	14:27	18-15	25	3.20	176.20	218.64	42.44				0.04		
	10/4/2021	14:46	15-12	25	3.68	218.64	271.64	53.00				0.04		
	10/4/2021	15:05	12-10	25	3.12	271.64	299.54	27.90				0.03		
	10/5/2021	11:25	30-27	10	3.43	0.00	45.65	45.65				0.04		
	10/5/2021	11:41	27-24	10	3.69	45.65	91.44	45.79				0.04		
	10/5/2021	12:26	24-21	5	3.90	91.44	136.07	44.63				0.04		
36	10/5/2021	12:50	21-18	10	3.99	136.07	183.85	47.78	299	121	91	0.04		3-Foot Screen
	10/5/2021	13:11	18-15	10	3.78	183.85	225.14	41.29				0.04		
	10/5/2021	13:27	15-12	15	3.88	225.14	273.65	48.51				0.04		
	10/5/2021	13:43	12-10	15	4.00	273.65	299.47	25.82				0.03		
	10/4/2021	13:04	30-27	18	3.19	0.00	45.42	45.42				0.04		
	10/4/2021	13:30	27-24	18	3.44	45.42	89.71	44.29				0.04		
	10/4/2021	13:49	24-21	12	3.48	89.71	136.13	46.42				0.04		
37	10/4/2021	14:08	21-18	5	3.39	136.13	188.74	52.61	299	121	91	0.04		3-Foot Screen
	10/4/2021	14:27	18-15	15	4.56	188.74	231.33	42.59				0.04		
	10/4/2021	14:46	15-12	12	4.42	231.33	270.46	39.13				0.04		
	10/4/2021	15:04	12-10	12	3.92	270.46	299.41	28.95				0.03		
	10/5/2021	11:25	29-26	15	3.52	0.00	50.43	50.43				0.04	Refusal at 29' bgs.	
	10/5/2021	11:41	26-23	15	3.65	50.43	95.72	45.29				0.04		
	10/5/2021	12:26	23-20	12	4.24	95.72	143.95	48.23				0.04		
38	10/5/2021	12:50	20-17	12	4.03	143.95	190.65	46.70	299	121	91	0.04	Small amount of surfacing out of bore. Sealed and continued.	3-Foot Screen
	10/5/2021	13:12	17-14	15	4.05	190.65	240.65	50.00				0.04		
	10/5/2021	13:26	14-11	15	4.12	240.65	275.31	34.66				0.04		
	10/5/2021	13:43	11-10	15	4.03	275.31	298.65	23.34				0.01		
	10/4/2021	13:03	30-27	15	4.22	0.00	41.66	41.66				0.04		
	10/4/2021	13:30	27-24	12	4.57	41.66	92.60	50.94				0.04		
	10/4/2021	13:49	24-21	12	4.08	92.60	140.32	47.72				0.04		
39	10/4/2021	14:08	21-18	12	3.99	140.32	193.38	53.06	302	122	92	0.04		3-Foot Screen
	10/4/2021	14:27	18-15	15	4.30	193.38	232.07	38.69				0.04		
	10/4/2021	14:46	15-12	15	4.28	232.07	276.31	44.24				0.04		
	10/4/2021	15:04	12-10	12	4.01	276.31	301.56	25.25				0.03		
	10/5/2021	11:25	30-27	20	4.42	0.00	51.47	51.47				0.04		
	10/5/2021	11:41	27-24	18	3.82	51.47	97.36	45.89				0.04		
	10/5/2021	12:26	24-21	20	4.23	97.36	137.32	39.96				0.04		
40	10/5/2021	12:50	21-18	15	3.85	137.32	183.65	46.33	300	122	91	0.04		3-Foot Screen
	10/5/2021	13:12	18-15	15	3.74	183.65	229.32	45.67				0.04		
	10/5/2021	13:26	15-12	15	3.84	229.32	280.64	51.32				0.04		
	10/5/2021	13:43	12-10	15	3.99	280.64	300.25	19.61				0.03		
	10/4/2021	13:02	30-27	20	3.58	0.00	42.18	42.18				0.04		
	10/4/2021	13:31	27-24	18	4.18	42.18	91.56	49.38				0.04		
	10/4/2021	13:49	24-21	15	3.80	91.56	136.08	44.52				0.04		
41	10/4/2021	14:08	21-18	15	3.73	136.08	185.42	49.34	308	125	93	0.04		3-Foot Screen
	10/4/2021	14:27	18-15	15	3.50	185.42	224.24	38.82				0.04		
	10/4/2021	14:46	15-12	20	3.12	224.24	271.39	47.15				0.04		
	10/4/2021	15:04	12-10	20	4.40	271.39	307.64	36.25				0.03		
	10/5/2021	14:35	28-25	30	2.02	0.00	50.23	50.23				0.05	Refusal at 28' bgs.	
	10/5/2021	14:56	25-22	60	3.16	50.23	103.45	53.22				0.05		
42	10/5/2021	15:18	22-19	60	3.05	103.45	151.65	48.20	301	122	92	0.05		3-Foot Screen
	10/5/2021	15:30	19-16	60	3.26	151.65	202.31	50.66				0.05		
	10/5/2021	15:40	16-13	60	3.05	202.31	251.96	49.65				0.05		
	10/5/2021	15:53	13-10	60	3.19	251.96	301.23	49.27				0.05		
	10/4/2021	16:05	27-24	15	3.78	0.00	53.67	53.67				0.05	Refusal at 27' bgs.	
	10/4/2021	16:28	24-21	15	4.40	53.67	113.52	59.85				0.05		
43	10/4/2021	16:52	21-18	18	4.38	113.52	157.10	43.58	300	121	91	0.05		3-Foot Screen
	10/5/2021	9:11	18-15	20	4.07	157.10	221.32	64.22				0.05		
	10/5/2021	9:31	15-12	20	4.56	221.32	273.12	51.80				0.05		
	10/5/2021	9:54	12-10	20	3.80	273.12	299.54	26.42				0.03		
	10/5/2021	14:35	29-26	20	3.96	0.00	58.63	58.63				0.04	Refusal at 29' bgs.	
	10/5/2021	14:56	26-23	15	4.45	58.63	105.64	47.01				0.04		
	10/5/2021	15:18	23-20	15	4.65	105.64	143.95	38.31				0.04		
44	10/5/2021	15:30	20-17	15	4.46	143.95	193.65	49.70	299	121	91	0.04		3-Foot Screen
	10/5/2021	15:40	17-14	15	4.31	193.65	240.35	46.70				0.04		
	10/5/2021	15:53	14-11	15	4.32	240.35	290.14	49.79				0.04		
	10/5/2021	16:03	11-10	20	5.32	290.14	299.41	9.27				0.01		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
13288	5382	4037	12.00

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
3DME PRB 2
Table 3

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	9/24/2021	9:24	18-15	60	3.36	0.00	110.85	110.85	304	123	92	0.09	Refusal at 18' bgs.	3-Foot Screen
	9/24/2021	10:04	15-12	22	3.30	110.85	226.62	115.77				0.09	Small amount of surfacing out of bore.	
	9/24/2021	10:51	12-10	12	3.26	226.62	304.18	77.56				0.06		
2	9/23/2021	14:08	18-15	8	2.62	0.00	113.90	113.90	310	125	94	0.09	Refusal at 18' bgs.	3-Foot Screen
	9/23/2021	14:50	15-12	12	4.12	113.90	229.71	115.81				0.09		
	9/23/2021	15:46	12-10	15	4.18	229.71	309.57	79.86				0.06	Sampled MW-11 after completion of injection point.	
3	9/24/2021	9:22	18-15	20	3.50	0.00	116.12	116.12	304	123	92	0.09	Refusal at 18' bgs.	3-Foot Screen
	9/24/2021	10:04	15-12	22	3.72	116.12	224.94	108.82				0.09		
	9/24/2021	10:48	12-10	22	3.87	224.94	304.16	79.22				0.06		
4	9/23/2021	11:22	18-15	8	4.24	0.00	112.84	112.84	306	124	93	0.09	Refusal at 18' bgs.	3-Foot Screen
	9/23/2021	12:43	15-12	10	2.94	112.84	227.07	114.23				0.09		
	9/23/2021	13:36	12-10	20	3.40	227.07	305.67	78.60				0.06		
5	9/24/2021	9:19	20-17	8	3.04	0.00	98.88	98.88	311	126	94	0.08	Refusal at 20' bgs. Small amount of surfacing out of bore. Sealed and continued.	3-Foot Screen
	9/24/2021	10:05	17-14	12	3.30	98.88	114.35	15.47				-	Surfacing continued. Unable to seal. Pulling up, offsetting 2' East and redriving.	
	9/24/2021	10:27	17-14	25	3.42	114.35	178.34	63.99				0.08		
	9/24/2021	10:59	14-11	8	3.30	178.34	270.09	91.75				0.08		
	9/24/2021	11:30	11-10	24	3.81	270.09	310.54	40.45				0.03		
6	9/23/2021	11:11	21-18	48	3.66	0.00	81.29	81.29	305	124	93	0.07	Refusal at 21' bgs.	3-Foot Screen
	9/23/2021	12:43	18-15	32	3.38	81.29	170.88	89.59				0.07	Saw increase in water level and turbidity in PZ3 and PZ4.	
	9/23/2021	13:16	15-12	15	3.68	170.88	247.43	76.55				0.07		
	9/23/2021	13:41	12-10	18	3.36	247.43	305.16	57.73				0.05		
7	9/24/2021	9:16	20-17	65	2.03	0.00	81.96	81.96	303	123	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/24/2021	10:29	17-14	60	1.98	81.96	177.92	95.96				0.08		
	9/24/2021	11:32	14-11	68	2.74	177.92	274.58	96.66				0.08		
	9/24/2021	12:29	11-10	60	2.55	274.58	302.87	28.29				0.03		
8	9/23/2021	13:47	21-18	32	4.00	0.00	90.86	90.86	304	123	92	0.07	Refusal at 22' bgs.	3-Foot Screen
	9/23/2021	14:50	18-15	18	3.59	90.86	177.56	86.70				0.07		
	9/23/2021	15:24	15-12	18	3.72	177.56	246.28	68.72				0.07		
	9/23/2021	15:46	12-10	18	3.45	246.28	304.19	57.91				0.05		
9	9/24/2021	11:42	20-17	32	4.44	0.00	92.80	92.80	302	122	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/24/2021	12:29	17-14	10	3.64	92.80	182.64	89.84				0.08		
	9/24/2021	13:26	14-11	10	3.31	182.64	276.64	94.00				0.08		
	9/24/2021	13:58	11-10	8	3.10	276.64	302.24	25.60				0.03		
10	9/27/2021	9:55	20-17	18	3.23	0.00	104.28	104.28	302	122	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/27/2021	11:05	17-14	10	3.42	104.28	190.47	86.19				0.08		
	9/27/2021	11:57	14-11	15	3.85	190.47	274.86	84.39				0.08		
	9/27/2021	12:22	11-10	15	3.24	274.86	301.74	26.88				0.03		
11	9/24/2021	11:52	20-17	20	3.16	0.00	95.33	95.33	304	123	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	9/24/2021	12:30	17-14	10	3.68	95.33	182.54	87.21				0.08		
	9/24/2021	13:26	14-11	18	4.02	182.54	273.28	90.74				0.08		
	9/24/2021	13:58	11-10	20	3.58	273.28	303.52	30.24				0.03		
12	9/23/2021	11:22	22-19	58	2.10	0.00	46.23	46.23	310	125	94	0.06	Refusal at 22'bgs. High pressure no flow. Offset 2' E and redriving.	3-Foot Screen
	9/23/2021	12:14	19-16	38	3.06	46.23	163.06	116.83				0.06		
	9/23/2021	13:19	16-13	32	3.16	163.06	253.34	90.28				0.06		
	9/23/2021	14:20	13-10	22	2.48	253.34	309.65	56.31				0.06		
13	9/24/2021	12:05	22-19	15	3.45	0.00	72.66	72.66	304	123	92	0.06	Refusal at 22' bgs.	3-Foot Screen
	9/24/2021	12:32	19-16	8	3.66	72.66	153.36	80.70				0.06		
	9/24/2021	13:26	16-13	10	3.27	153.36	230.20	76.84				0.06		
	9/24/2021	13:55	13-10	8	4.05	230.20	304.25	74.05				0.06		
14	9/23/2021	14:35	24-21	35	3.16	0.00	68.37	68.37	306	124	93	0.05	Refusal at 24' bgs.	3-Foot Screen
	9/23/2021	15:10	21-18	55	3.14	68.37	132.44	64.07				0.05		
	9/23/2021	15:26	18-15	55	2.45	132.44	198.05	65.61				0.05		
	9/23/2021	15:45	15-12	55	2.23	198.05	261.38	63.33				0.05		
	9/23/2021	16:01	12-10	58	2.45	261.38	305.74	44.36				0.04		
15	9/24/2021	13:19	24-21	100	2.15	0.00	64.16	64.16	299	121	91	0.05	Refusal at 24' bgs. No flow high pressure. Offset 1' E and redriving.	3-Foot Screen
	9/24/2021	13:54	21-18	100	3.10	64.16	128.56	64.40				0.05		
	9/24/2021	14:37	18-15	100	2.84	128.56	194.37	65.81				0.05		
	9/24/2021	14:58	15-12	100	2.39	194.37	262.47	68.10				0.05		
	9/24/2021	15:24	12-10	100	2.77	262.47	298.78	36.31				0.04		
16	9/27/2021	9:55	25-22	10	3.00	0.00	64.87	64.87	304	123	92	0.05	Refusal at 25' bgs	3-Foot Screen
	9/27/2021	10:40	22-19	20	2.99	64.87	134.88	70.01				0.05		
	9/27/2021	11:45	19-16	18	2.82	134.88	190.45	55.57				0.05		
	9/27/2021	12:09	16-13	20	3.14	190.45	244.51	54.06				0.05		
	9/27/2021	12:39	13-10	20	3.41	244.51	304.17	59.66				0.05		
17	9/27/2021	13:35	25-22	18	3.43	0.00	58.73	58.73	303	123	92	0.05	Refusal at 25' bgs	3-Foot Screen
	9/27/2021	14:19	22-19	18	3.50	58.73	124.57	65.84				0.05		
	9/27/2021	14:51	19-16	20	4.34	124.57	193.56	68.99				0.05		
	9/27/2021	15:17	16-13	18	3.68	193.56	240.87	47.31				0.05		
	9/27/2021	15:47	13-10	15	3.64	240.87	302.58	61.71				0.05		
18	9/27/2021	9:55	25-22	68	1.89	0.00	68.27	68.27	299	121	91	0.05	Refusal at 25' bgs	3-Foot Screen
	9/27/2021	11:05	22-19	70	1.78	68.27	124.67	56.40				0.05		
	9/27/2021	11:45	19-16	35	2.42	124.67	178.98	54.31				0.05		
	9/27/2021	12:09	16-13	55	2.55	178.98	236.21	57.23				0.05		
	9/27/2021	12:39	13-10	55	2.41	236.21	299.41	63.20				0.05		
19	9/27/2021	13:39	30-27	60	1.08	0.00	45.24	45.24	302	122	92	0.04	Refusal at 30' bgs.	3-Foot Screen
	9/27/2021	14:10	27-24	65	1.74	45.24	89.58	44.34				0.04		
	9/27/2021	14:42	24-21	65	2.37	89.58	139.84	50.26				0.04		
	9/27/2021	15:07	21-18	60	2.25	139.84	181.24	41.40				0.04		
	9/27/2021	15:22	18-15	62	2.77	181.24	224.37	43.13				0.04		
	9/27/2021	15:40	15-12	62	2.39	224.37	270.67	46.30				0.04		
	9/27/2021	16:01	12-10	65	2.82	270.67	301.74	31.07				0.03		
20	9/27/2021	9:47	26-23	10	4.08	0.00	62.34	62.34	304	123	92	0.05	Refusal at 26' bgs.	3-Foot Screen
	9/27/2021	10:40	23-20	15	3.87	62.34	127.10	64.76				0.05		
	9/27/2021	11:32	20-17	20	3.58	127.10	178.65	51.55				0.05		
	9/27/2021	11:45	17-14	8	3.18	178.65	231.85	53.20				0.05		
	9/27/2021	12:09	14-11	10	3.45	231.85	285.47	53.62				0.05		
	9/27/2021	12:39	11-10	10	3.78	285.47	303.67	18.20				0.02		
21	9/28/2021	9:14	26-23	15	3.80	0.00	57.84	57.84	302	122	92	0.05	Refusal at 26' bgs.	3-Foot Screen
	9/28/2021	10:29	23-20	10	5.08	57.84	116.72	58.88				0.05		
	9/28/2021	10:52	20-17	15	4.54	116.72	173.29	56.57				0.05		
	9/28/2021	11:13	17-14	10	3.88	173.29	222.49	49.20				0.05		
	9/28/2021	11:33	14-11	10	3.55	222.49	286.74	64.25				0.05		
	9/28/2021	11:50	11-10	10	3.64	286.74	301.52	14.78				0.02		
22	9/27/2021	13:41	25-22	10	4.06	0.00	62.34	62.34	295	120	90	0.05	Refusal at 25' bgs	3-Foot Screen
	9/27/2021	14:18	22-19	22	3.08	62.34	129.16	66.82				0.05	Small amount of surfacing out of bore. Sealed and continued.	
	9/27/2021	14:51	19-16	15	3.41	129.16	188.46	59.30				0.05		
	9/27/2021	15:17	16-13	10	3.72	188.46	251.87	63.41				0.05		
	9/27/2021	15:51	13-10	10	3.75	251.87	295.14	43.27				0.05	Small amount of surfacing out of bore.	
23	9/28/2021	9:17	29-26	20	4.04	0.00	54.18	54.18	305	124	93	0.04	Refusal at 29' bgs.	3-Foot Screen
	9/28/2021	10:29	26-23	22	5.40	54.18	101.94	47.76				0.04		
	9/28/2021	10:52	23-20	22	4.44	101.94	149.32	47.38				0.04		
	9/28/2021	11:13	20-17	20	4.01	149.32	196.34	47.02				0.04		
	9/28/2021	11:34	17-14	15	3.78	196.34	243.09	46.75				0.04		
	9/28/2021	11:47	14-11	15	3.49	243.09	290.17	47.08				0.04		
	9/28/2021	12:02	11-10	15	3.47	290.17	305.37	15.20				0.01		
24	9/27/2021	13:46	28-25	35	3.30	0.00	55.24	55.24	304	123	92	0.04	Refusal at 28' bgs.	3-Foot Screen
	9/27/2021	14:19	25-22	22	3.47	55.24	98.48	43.24				0.04		
	9/27/2021	14:51	22-19	22	3.48	98.48	153.30	54.82				0.04		
	9/27/2021	15:18	19-16	14	3.71	153.30	205.41	52.11				0.04		
	9/27/2021	15:47	16-13	15	3.45	205.41	251.43	46.02				0.04		
	9/27/2021	16:13	13-10	25	4.47	251.43	304.21	52.78				0.04		
25	9/28/2021	9:21	27-24	78	2.26	0.00	53.19	53.19	303	123	92	0.04	Refusal at 27' bgs.	3-Foot Screen
	9/28/2021	10:29	24-21	82	2.41	53.19	103.74	50.55				0.04		
	9/28/2021	10:51	21-18	100	2.90	103.74	160.35	56.61				0.04		
	9/28/2021	11:12	18-15	80	3.38	160.35	218.64	58.29				0.04		
	9/28/2021	11:34	15-12	75	3.05	218.64	268.33	49.69				0.04		
	9/28/2021	11:47	12-10	17	2.99	268.33	302.76	34.43				0.03		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
7593	3076	2307	6.82

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
3DME PRB 3
Table 4

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	10/12/2021	13:12	18-15	30	4.18	0.00	117.48	117.48	311	126	94	0.09	Refusal at 18' bgs.	3-Foot Screen
	10/12/2021	14:10	15-12	18	4.05	117.48	230.04	112.56				0.09		
	10/12/2021	14:47	12-10	35	4.23	230.04	310.98	80.94				0.06		
2	10/12/2021	9:18	19-16	28	3.29	0.00	105.98	105.98	306	124	93	0.08	Refusal at 19' bgs.	3-Foot Screen
	10/12/2021	10:52	16-13	18	4.19	105.98	203.16	97.18				0.08		
	10/12/2021	11:28	13-10	12	4.09	203.16	306.49	103.33				0.08		
3	10/12/2021	13:12	18-15	30	4.03	0.00	115.20	115.20	286	116	87	0.09	Refusal at 18' bgs.	3-Foot Screen
	10/12/2021	14:10	15-12	18	4.11	115.20	234.19	118.99				0.09	Fair amount of surfacing out of bore. Sealed and continued.	
	10/12/2021	14:47	12-10	10	3.86	234.19	285.61	51.42				0.06	Fair amount of surfacing out of bore. Unable to seal. Redistibuting reminaing volume to other points.	
4	10/12/2021	9:18	19-16	30	4.64	0.00	101.37	101.37	302	122	92	0.08	Refusal at 19' bgs.	3-Foot Screen
	10/12/2021	10:52	16-13	15	4.43	101.37	204.79	103.42				0.08		
	10/12/2021	11:28	13-10	8	4.08	204.79	301.94	97.15				0.08		
5	10/12/2021	13:12	20-17	30	3.95	0.00	94.30	94.30	309	125	94	0.08	Refusal at 20' bgs.	3-Foot Screen
	10/12/2021	14:10	17-14	20	3.98	94.30	186.49	92.19				0.08		
	10/12/2021	14:39	14-11	15	4.25	186.49	280.64	94.15				0.08		
	10/12/2021	15:04	11-10	18	4.19	280.64	308.91	28.27				0.03		
6	10/12/2021	9:20	20-17	22	3.48	0.00	95.78	95.78	302	123	92	0.08	Refusal at 20' bgs.	3-Foot Screen
	10/12/2021	10:52	17-14	10	3.99	95.78	183.60	87.82				0.08		
	10/12/2021	11:28	14-11	10	4.01	183.60	278.34	94.74				0.08		
	10/12/2021	11:52	11-10	12	4.17	278.34	302.49	24.15				0.03		
7	10/12/2021	13:12	21-18	30	4.45	0.00	83.67	83.67	306	124	93	0.07	Refusal at 21' bgs.	3-Foot Screen
	10/12/2021	14:10	18-15	15	3.89	83.67	173.98	90.31				0.07		
	10/12/2021	14:35	15-12	22	4.56	173.98	243.68	69.70				0.07		
	10/12/2021	15:04	12-10	15	4.16	243.68	305.64	61.96				0.05		
8	10/12/2021	9:20	22-19	20	3.80	0.00	79.64	79.64	297	120	90	0.06	Refusal at 22' bgs.	3-Foot Screen
	10/12/2021	10:52	19-16	12	3.96	79.64	159.43	79.79				0.06		
	10/12/2021	11:28	16-13	8	4.03	159.43	233.41	73.98				0.06		
	10/12/2021	11:52	13-10	30	4.24	233.41	297.34	63.93				0.06		
9	10/8/2021	14:08	28-25	25	5.54	0.00	48.84	48.84	300	122	91	0.04	Refusal at 28' bgs.	3-Foot Screen
	10/8/2021	14:24	25-22	20	4.78	48.84	103.67	54.83				0.04		
	10/8/2021	14:35	22-19	20	4.78	103.67	149.27	45.60				0.04		
	10/8/2021	14:50	19-16	14	5.37	149.27	202.04	52.77				0.04		
	10/8/2021	15:04	16-13	18	4.87	202.04	253.92	51.88				0.04		
	10/8/2021	15:23	13-10	18	4.92	253.92	300.18	46.26				0.04		
10	10/13/2021	9:58	29-26	10	3.85	0.00	49.39	49.39	304	123	92	0.04		3-Foot Screen
	10/13/2021	10:20	26-23	8	4.58	49.39	96.72	47.33				0.04		
	10/13/2021	10:44	23-20	15	4.64	96.72	144.59	47.87				0.04		
	10/13/2021	11:03	20-17	12	4.72	144.59	198.36	53.77				0.04		
	10/13/2021	11:25	17-14	10	4.26	198.36	241.90	43.54				0.04		
	10/13/2021	11:52	14-11	5	3.86	241.90	290.43	48.53				0.04		
	10/13/2021	12:20	11-10	5	4.12	290.43	303.61	13.18				0.01		
11	10/8/2021	14:07	30-27	45	4.48	0.00	52.61	52.61	300	121	91	0.04	Refusal at 30' bgs.	3-Foot Screen
	10/8/2021	14:23	27-24	30	4.86	52.61	90.34	37.73				0.04		
	10/8/2021	14:35	24-21	30	4.80	90.34	131.65	41.31				0.04		
	10/8/2021	14:50	21-18	26	4.99	131.65	189.06	57.41				0.04		
	10/8/2021	15:04	18-15	28	5.49	189.06	225.54	36.48				0.04		
	10/8/2021	15:22	15-12	35	4.76	225.54	258.81	33.27				0.04		
	10/8/2021	15:34	12-10	35	4.76	258.81	299.64	40.83				0.03		
12	10/11/2021	9:18	31-28	20	3.75	0.00	42.16	42.16	303	123	92	0.04		3-Foot Screen
	10/11/2021	9:38	28-25	5	3.88	42.16	84.34	42.18				0.04		
	10/11/2021	10:02	25-22	10	4.09	84.34	132.99	48.65				0.04		
	10/11/2021	10:27	22-19	22	4.03	132.99	180.89	47.90				0.04		
	10/11/2021	10:50	19-16	12	4.08	180.89	216.79	35.90				0.04		
	10/11/2021	11:20	16-13	18	4.19	216.79	259.64	42.85				0.04		
	10/11/2021	11:44	13-10	12	4.13	259.64	302.91	43.27				0.04		
13	10/8/2021	14:06	30-27	14	4.88	0.00	54.41	54.41	305	123	93	0.04	Refusal at 30' bgs.	3-Foot Screen
	10/8/2021	14:23	27-24	14	5.16	54.41	90.73	36.32				0.04		
	10/8/2021	14:35	24-21	12	5.34	90.73	134.72	43.99				0.04		
	10/8/2021	14:50	21-18	15	5.13	134.72	184.65	49.93				0.04		
	10/8/2021	15:04	18-15	15	5.34	184.65	229.33	44.68				0.04		
	10/8/2021	15:22	15-12	20	5.75	229.33	263.11	33.78				0.04		
	10/8/2021	15:34	12-10	14	4.87	263.11	304.79	41.68				0.03		
14	10/11/2021	9:17	31-28	20	3.68	0.00	47.64	47.64	302	122	92	0.04		3-Foot Screen
	10/11/2021	9:38	28-25	5	3.98	47.64	87.65	40.01				0.04		
	10/11/2021	10:02	25-22	10	4.11	87.65	128.73	41.08				0.04		
	10/11/2021	10:27	22-19	22	4.08	128.73	174.59	45.86				0.04		
	10/11/2021	10:50	19-16	12	4.03	174.59	218.34	43.75				0.04		
	10/11/2021	11:20	16-13	20	4.06	218.34	257.61	39.27				0.04		
	10/11/2021	11:43	13-10	12	4.26	257.61	301.74	44.13				0.04		
15	10/11/2021	12:40	31-28	18	3.90	0.00	43.51	43.51	306	124	93	0.04		3-Foot Screen
	10/11/2021	13:03	28-25	5	3.92	43.51	87.41	43.90				0.04		
	10/11/2021	13:21	25-22	5	4.18	87.41	132.23	44.82				0.04		
	10/11/2021	13:46	22-19	10	4.16	132.23	173.36	41.13				0.04		
	10/11/2021	14:01	19-16	5	4.16	173.36	220.11	46.75				0.04		
	10/11/2021	14:22	16-13	10	4.09	220.11	265.48	45.37				0.04		
	10/11/2021	14:45	13-10	10	4.16	265.48	305.73	40.25				0.04		
16	10/11/2021	9:14	31-28	20	3.83	0.00	42.96	42.96	300	122	91	0.04		3-Foot Screen
	10/11/2021	9:38	28-25	5	4.12	42.96	88.04	45.08				0.04		
	10/11/2021	10:02	25-22	10	4.02	88.04	131.68	43.64				0.04		
	10/11/2021	10:27	22-19	22	4.11	131.68	173.66	41.98				0.04		
	10/11/2021	10:50	19-16	12	3.89	173.66	219.64	45.98				0.04		
	10/11/2021	11:20	16-13	20	3.98	219.64	259.30	39.66				0.04		
	10/11/2021	11:43	13-10	12	4.19	259.30	300.06	40.76				0.04		
17	10/11/2021	12:40	31-28	8	4.40	0.00	44.32	44.32	303	123	92	0.04		3-Foot Screen
	10/11/2021	13:02	28-25	5	3.94	44.32	90.94	46.62				0.04		
	10/11/2021	13:21	25-22	12	3.72	90.94	134.71	43.77				0.04		
	10/11/2021	13:46	22-19	15	3.50	134.71	175.60	40.89				0.04		
	10/11/2021	14:01	19-16	10	3.93	175.60	220.39	44.79				0.04	Small amount of surfacing out of bore. Sealed and continued.	
	10/11/2021	14:22	16-13	10	3.99	220.39	256.79	36.40				0.04		
	10/11/2021	14:45	13-10	10	3.88	256.79	302.64	45.85				0.04		
18	10/11/2021	9:13	31-28	20	3.71	0.00	45.77	45.77	303	123	92	0.04		3-Foot Screen
	10/11/2021	9:37	28-25	8	4.09	45.77	86.92	41.15				0.04		
	10/11/2021	10:02	25-22	10	4.13	86.92	130.68	43.76				0.04		
	10/11/2021	10:27	22-19	22	4.13	130.68	173.96	43.28				0.04		
	10/11/2021	10:50	19-16	12	4.00	173.96	217.69	43.73				0.04		
	10/11/2021	11:20	16-13	20	3.79	217.69	260.10	42.41				0.04	Small amount of surfacing out of bore. Sealed and continued.	
	10/11/2021	11:43	13-10	12	4.25	260.10	302.79	42.69				0.04		
19	10/7/2021	12:54	31-28	20	4.75	0.00	42.34	42.34	300	122	91	0.04		3-Foot Screen
	10/7/2021	13:25	28-25	20	4.27	42.34	91.38	49.04				0.04		
	10/7/2021	13:48	25-22	20	4.21	91.38	127.08	35.70				0.04		
	10/7/2021	14:08	22-19	20	4.03	127.08	179.31	52.23				0.04		
	10/7/2021	14:30	19-16	18	3.88	179.31	215.74	36.43				0.04		
	10/7/2021	14:50	16-13	20	4.34	215.74	255.83	40.09				0.04		
	10/7/2021	15:18	13-10	20	4.08	255.83	300.14	44.31				0.04		
20	10/11/2021	12:48	31-28	18	3.62	0.00	43.18	43.18	302	122	92	0.04		3-Foot Screen
	10/11/2021	13:02	28-25	15	3.86	43.18	86.03	42.85				0.04		
	10/11/2021	13:20	25-22	15	3.80	86.03	128.92	42.89				0.04		
	10/11/2021	13:45	22-19	15	3.94	128.92	172.76	43.84				0.04		
	10/11/2021	14:01	19-16	12	3.66	172.76	219.76	47.00				0.04		
	10/11/2021	14:22	16-13	15	4.16	219.76	263.72	43.96				0.04		
	10/11/2021	14:45	13-10	15	4.26	263.72	301.98	38.26				0.04		
21	10/7/2021	12:59	31-28	0	3.99	0.00	42.97	42.97	302	122	92	0.04		3-Foot Screen
	10/7/2021	13:25	28-25	10	4.06	42.97	89.37	46.40				0.04		
	10/7/2021	13:48	25-22	10	4.09	89.37	128.30	38.93				0.04		
	10/7/2021	14:08	22-19	10	4.03	128.30	179.34	51.04				0.04		
	10/7/2021	14:30	19-16	10	3.99	179.34	218.65	39.31				0.04		
	10/7/2021	14:50	16-13	10	4.11	218.65	260.99	42.34				0.04		
	10/7/2021	15:18	13-10	10	3.46	260.99	301.72	40.73				0.04		
22	10/11/2021	12:48	31-28	22	3.38	0.00	42.96	42.96	291	118	88	0.035714		3-Foot Screen
	10/11/2021	13:02	28-25	20	3.18	42.96	87.32	44.36				0.035714		
	10/11/2021	13:20	25-22	32	3.52	87.32	126.17	38.85				0.035714		
	10/11/2021	13:45	22-19	45	3.08	126.17	172.68	46.51				0.035714		
	10/11/2021	14:00	19-16	50	3.14	172.68	210.34	37.66				0.035714	Small amount of surfacing out of bore. Sealed and continued.	
	10/11/2021	14:22	16-13	50	2.99	210.34	250.73	40.39				0.04	Small amount of surfacing out of bore. Sealed and continued.	
	10/11/2021	14:45	13-10	55	3.12	250.73	290.61	39.88				0.04	Small amount of surfacing out of bore. Sealed and continued.	
23	10/7/2021	13:18	31-28	35	3.01	0.00	41.34	41.34	299	121	91	0.04	Surfacing immediately. Unable to seal. Offsetting 3' East and redriving.	3-Foot Screen
	10/7/2021	13:48	28-25	35	3.16	41.34	90.70	49.36				0.04		
	10/7/2021	14:08	25-22	40	3.45	90.70	130.59	39.89				0.04		
	10/7/2021	14:31	22-19	50	3.18	130.59	173.68	43.09				0.04		
	10/7/2021	14:50	19-16	55	3.47	173.68	222.89	49.21				0.04		
	10/7/2021	15:18	16-13	55	3.64	222.89	264.88	41.99				0.04		
	10/7/2021	15:37	13-10	70	3.98	264.88	299.14	34.26				0.04		

24	10/7/2021	9:39	30-27	15	4.16	0.00	50.37	50.37	304	123	92	0.04		3-Foot Screen
	10/7/2021	10:02	27-24	5	3.67	50.37	89.11	38.74				0.04		
	10/7/2021	10:17	24-21	10	3.24	89.11	130.25	41.14				0.04		
	10/7/2021	10:36	21-18	15	4.58	130.25	190.35	60.10				0.04	Small amount of surfacing. Sealed and continued.	
	10/7/2021	10:50	18-15	12	4.17	190.35	209.56	19.21				0.04	Small amount of surfacing. Unable to seal. Redriving 2' East.	
	10/7/2021	11:14	15-12	10	3.88	209.56	270.68	61.12				0.04		
	10/7/2021	11:42	12-10	10	4.14	270.68	303.74	33.06				0.03		
25	10/7/2021	12:59	31-28	18	3.72	0.00	47.88	47.88	303	123	92	0.04		3-Foot Screen
	10/7/2021	13:24	28-25	20	4.54	47.88	90.93	43.05				0.04		
	10/7/2021	13:48	25-22	20	4.32	90.93	135.68	44.75				0.04		
	10/7/2021	14:08	22-19	20	4.31	135.68	186.62	50.94				0.04		
	10/7/2021	14:31	19-16	20	4.19	186.62	220.92	34.30				0.04		
	10/7/2021	14:50	16-13	25	4.82	220.92	264.31	43.39				0.04		
	10/7/2021	15:18	13-10	24	4.37	264.31	302.50	38.19				0.04		
26	10/7/2021	9:39	30-27	28	3.60	0.00	49.87	49.87	305	123	93	0.0375		3-Foot Screen
	10/7/2021	10:02	27-24	12	3.14	49.87	93.70	43.84				0.0375		
	10/7/2021	10:18	24-21	15	3.68	93.70	139.46	45.76				0.0375		
	10/7/2021	10:36	21-18	5	3.34	139.46	175.65	36.19				0.0375		
	10/7/2021	10:50	18-15	15	4.31	175.65	230.89	55.24				0.0375		
	10/7/2021	11:12	15-12	15	4.49	230.89	272.35	41.46				0.04		
	10/7/2021	11:42	12-10	10	4.01	272.35	304.55	32.20				0.03		
27	10/6/2021	12:45	30-27	30	3.24	0.00	45.90	45.90	305	124	93	0.04		3-Foot Screen
	10/6/2021	13:08	27-24	35	4.36	45.90	90.14	44.24				0.04		
	10/6/2021	13:26	24-21	35	4.06	90.14	135.96	45.82				0.04		
	10/6/2021	13:47	21-18	30	3.52	135.96	179.91	43.95				0.04		
	10/6/2021	14:22	18-15	25	3.20	179.91	226.65	46.74				0.04		
	10/6/2021	14:56	15-12	30	3.68	226.65	275.36	48.71				0.04		
	10/6/2021	15:15	12-10	30	3.79	275.36	305.32	29.96				0.03		
28	10/7/2021	9:41	30-27	15	3.38	0.00	42.50	42.50	301	122	91	0.04		3-Foot Screen
	10/7/2021	10:02	27-24	15	4.34	42.50	100.23	57.73				0.04		
	10/7/2021	10:18	24-21	20	4.29	100.23	141.83	41.60				0.04		
	10/7/2021	10:37	21-18	20	4.26	141.83	180.03	38.20				0.04		
	10/7/2021	10:50	18-15	18	4.11	180.03	227.48	47.45				0.04		
	10/7/2021	11:11	15-12	18	4.30	227.48	280.69	53.21				0.04		
	10/7/2021	11:42	12-10	15	3.98	280.69	301.04	20.35				0.03		
29	10/6/2021	12:31	30-27	20	3.62	0.00	52.36	52.36	280	114	85	0.04	Small amount of surfacing. Sealed and continued.	3-Foot Screen
	10/6/2021	13:08	27-24	45	3.01	52.36	92.34	39.98				0.04		
	10/6/2021	13:26	24-21	45	3.12	92.34	129.64	37.30				0.04		
	10/6/2021	13:47	21-18	45	3.17	129.64	178.31	48.67				0.04	Small amount of surfacing. Sealed and continued.	
	10/6/2021	14:22	18-15	20	2.91	178.31	220.41	42.10				0.04	Small amount of surfacing. Sealed and continued.	
	10/6/2021	14:56	15-12	20	2.88	220.41	255.12	34.71				0.04	Fair amount of surfacing. Unable to seal. Lifting to the next break.	
	10/6/2021	15:14	12-10	20	2.30	255.12	280.31	25.19				0.03		
30	10/7/2021	9:41	30-27	20	3.72	0.00	46.28	46.28	301	122	91	0.04		3-Foot Screen
	10/7/2021	10:02	27-24	15	4.18	46.28	90.25	43.97				0.04		
	10/7/2021	10:18	24-21	20	4.09	90.25	140.65	50.40				0.04		
	10/7/2021	10:37	21-18	18	4.29	140.65	183.67	43.02				0.04		
	10/7/2021	10:50	18-15	18	3.88	183.67	229.41	45.74				0.04		
	10/7/2021	11:12	15-12	20	4.19	229.41	278.34	48.93				0.04		
	10/7/2021	11:42	12-10	20	4.35	278.34	300.76	22.42				0.03		
31	10/6/2021	12:31	30-27	15	4.69	0.00	55.66	55.66	311	126	94	0.04		3-Foot Screen
	10/6/2021	13:08	27-24	15	4.20	55.66	95.80	40.14				0.04		
	10/6/2021	13:26	24-21	15	4.31	95.80	140.37	44.57				0.04		
	10/6/2021	13:47	21-18	15	4.82	140.37	188.82	48.45				0.04		
	10/6/2021	14:22	18-15	15	3.54	188.82	234.67	45.85				0.04		
	10/6/2021	14:56	15-12	15	3.06	234.67	279.64	44.97				0.04		
	10/6/2021	15:15	12-10	15	3.14	279.64	310.59	30.95				0.03		
32	10/6/2021	12:29	30-27	15	4.03	0.00	50.41	50.41	306	124	93	0.04		3-Foot Screen
	10/6/2021	13:07	27-24	15	4.01	50.41	96.15	45.74				0.04		
	10/6/2021	13:26	24-21	15	4.02	96.15	139.47	43.32				0.04		
	10/6/2021	13:47	21-18	15	4.31	139.47	186.60	47.13				0.04		
	10/6/2021	14:22	18-15	15	3.98	186.60	240.75	54.15				0.04		
	10/6/2021	14:55	15-12	15	3.59	240.75	280.27	39.52				0.04		
	10/6/2021	15:15	12-10	15	3.49	280.27	306.13	25.86				0.03		
33	10/8/2021	9:03	31-28	40	4.22	0.00	41.67	41.67	302	122	92	0.04		3-Foot Screen
	10/8/2021	9:17	28-25	20	4.68	41.67	86.94	45.27				0.04		
	10/8/2021	9:46	25-22	20	4.98	86.94	130.49	43.55				0.04		
	10/8/2021	10:05	22-19	18	5.06	130.49	173.64	43.15				0.04		
	10/8/2021	10:19	19-16	22	5.14	173.64	214.76	41.12				0.04		
	10/8/2021	10:41	16-13	15	5.04	214.76	257.93	43.17				0.04		
	10/8/2021	10:58	13-10	15	5.29	257.93	301.65	43.72				0.04		
34	10/8/2021	11:36	31-28	30	5.42	0.00	45.19	45.19	303	123	92	0.04		3-Foot Screen
	10/8/2021	11:52	28-25	15	5.31	45.19	90.46	45.27				0.04		
	10/8/2021	12:07	25-22	20	5.19	90.46	129.50	39.04				0.04		
	10/8/2021	12:20	22-19	15	5.38	129.50	174.64	45.14				0.04		
	10/8/2021	12:36	19-16	15	5.16	174.64	215.13	40.49				0.04		
	10/8/2021	12:55	16-13	18	5.09	215.13	251.42	36.29				0.04		
	10/8/2021	13:08	13-10	18	5.31	251.42	302.54	51.12				0.04		
35	10/8/2021	8:57	31-28	20	4.54	0.00	42.89	42.89	299	121	91	0.04		3-Foot Screen
	10/8/2021	9:18	28-25	18	5.23	42.89	88.77	45.88				0.04		
	10/8/2021	9:46	25-22	14	5.13	88.77	129.36	40.59				0.04		
	10/8/2021	10:04	22-19	20	5.03	129.36	182.60	53.24				0.04		
	10/8/2021	10:19	19-16	14	4.77	182.60	216.04	33.44				0.04		
	10/8/2021	10:41	16-13	20	4.82	216.04	260.84	44.80				0.04		
	10/8/2021	10:58	13-10	15	5.38	260.84	298.76	37.92				0.03		
36	10/8/2021	11:40	31-28	18	4.92	0.00	43.68	43.68	307	124	93	0.04		3-Foot Screen
	10/8/2021	11:52	28-25	15	5.20	43.68	91.37	47.69				0.04		
	10/8/2021	12:06	25-22	22	5.64	91.37	129.78	38.41				0.04		
	10/8/2021	12:20	22-19	10	5.08	129.78	173.34	43.56				0.04		
	10/8/2021	12:36	19-16	22	5.49	173.34	218.68	45.34				0.04		
	10/8/2021	12:55	16-13	18	5.34	218.68	259.61	40.93				0.04		
	10/8/2021	13:08	13-10	15	5.24	259.61	306.98	47.37				0.04		
37	10/8/2021	8:56	31-28	25	4.43	0.00	43.28	43.28	308	125	94	0.04		3-Foot Screen
	10/8/2021	9:18	28-25	10	5.00	43.28	89.90	46.62				0.04		
	10/8/2021	9:47	25-22	16	5.39	89.90	131.34	41.44				0.04		
	10/8/2021	10:04	22-19	10	5.38	131.34	184.94	53.60				0.04		
	10/8/2021	10:19	19-16	26	5.38	184.94	220.26	35.32				0.04		
	10/8/2021	10:41	16-13	22	4.90	220.26	263.10	42.84				0.04		
	10/8/2021	10:58	13-10	20	4.97	263.10	307.89	44.79				0.04		
38	10/8/2021	11:40	31-28	22	5.46	0.00	42.96	42.96	301	122	91	0.04		3-Foot Screen
	10/8/2021	11:52	28-25	15	5.84	42.96	90.45	47.49				0.04		
	10/8/2021	12:06	25-22	18	5.33	90.45	134.71	44.26				0.04		
	10/8/2021	12:20	22-19	10	5.21	134.71	180.37	45.66				0.04		
	10/8/2021	12:37	19-16	22	5.14	180.37	219.32	38.95				0.04		
	10/8/2021	12:55	16-13	18	5.17	219.32	263.47	44.15				0.04		
	10/8/2021	13:08	13-10	15	5.13	263.47	301.19	37.72				0.04		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
11471	4646	3485	10.36

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
3DME PRB 4
Table 5

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BOI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	10/13/2021	9:54	32-29	40	3.48	0.00	41.57	41.57	302	122	92	0.03		3-Foot Screen
	10/13/2021	10:20	29-26	55	3.05	41.57	80.19	38.62				0.03		
	10/13/2021	10:43	26-23	42	3.18	80.19	122.71	42.52				0.03		
	10/13/2021	11:03	23-20	65	3.01	122.71	136.57	13.86				0.03	Fair amount of surfacing. Unable to seal. Lifting to break and continuing.	
	10/13/2021	11:32	20-17	22	3.06	136.57	181.26	44.69				0.03	Still surfacing with high pressure and low flow . Pulling up and redriving.	
	10/13/2021	11:51	17-14	22	3.48	181.26	256.92	75.66				0.03		
	10/13/2021	12:21	14-11	12	3.71	256.92	290.34	33.42				0.03		
	10/13/2021	12:29	11-10	15	5.21	290.34	302.19	11.85				0.01		
2	10/14/2021	13:34	30-27	35	4.08	0.00	51.80	51.80	303	123	92	0.04	Screen did not open on first attempt. Pulling up and offsetting 1' East. Drove to 32' and saw high pressures with no flow . Lifted until flow w as achieved.	3-Foot Screen
	10/14/2021	13:59	27-24	5	5.08	51.80	92.82	41.02				0.04		
	10/14/2021	14:21	24-21	5	4.48	92.82	131.28	38.46				0.04		
	10/14/2021	14:42	21-18	15	5.06	131.28	182.62	51.34				0.04		
	10/14/2021	15:00	18-15	10	4.85	182.62	226.95	44.33				0.04	Small amount of surfacing at the end of the interval.	
	10/14/2021	15:35	15-12	20	5.08	226.95	275.61	48.66				0.04	Surfacing continued immediately. Pulling up and offsetting 2' East.	
	10/14/2021	15:45	12-10	25	5.53	275.61	302.81	27.20				0.04		
3	10/13/2021	9:53	32-29	34	3.89	0.00	43.68	43.68	302	122	92	0.03		3-Foot Screen
	10/13/2021	10:20	29-26	30	4.26	43.68	83.34	39.66				0.03		
	10/13/2021	10:43	26-23	32	3.73	83.34	125.44	42.10				0.03		
	10/13/2021	11:03	23-20	22	4.57	125.44	164.19	38.75				0.03		
	10/13/2021	11:25	20-17	8	4.30	164.19	207.04	42.85				0.03		
	10/13/2021	11:52	17-14	8	4.45	207.04	260.13	53.09				0.03		
	10/13/2021	12:21	14-11	8	4.50	260.13	291.67	31.54				0.03		
	10/13/2021	12:29	11-10	12	4.76	291.67	301.54	9.87				0.01		
4	10/14/2021	11:11	32-29	34	4.38	0.00	42.65	42.65	302	122	92	0.03		3-Foot Screen
	10/14/2021	11:26	29-26	10	4.14	42.65	82.53	39.88				0.03		
	10/14/2021	11:40	26-23	12	4.44	82.53	123.41	40.88				0.03		
	10/14/2021	11:59	23-20	18	4.40	123.41	170.14	46.73				0.03		
	10/14/2021	12:14	20-17	15	4.12	170.14	209.66	39.52				0.03		
	10/14/2021	12:25	17-14	15	4.66	209.66	246.57	36.91				0.03		
	10/14/2021	12:39	14-11	18	4.42	246.57	288.63	42.06				0.03		
	10/14/2021	12:53	11-10	15	4.62	288.63	301.98	13.35				0.01		
5	10/13/2021	9:50	30-27	38	4.16	0.00	41.67	41.67	306	124	93	0.04		3-Foot Screen
	10/13/2021	10:20	27-24	5	4.43	41.67	89.64	47.97				0.04		
	10/13/2021	10:43	24-21	15	4.30	89.64	138.88	49.24				0.04		
	10/13/2021	11:03	21-18	28	3.70	138.88	184.18	45.30				0.04		
	10/13/2021	11:26	18-15	15	4.08	184.18	226.52	42.34				0.04		
	10/13/2021	11:52	15-12	10	4.74	226.52	287.60	61.08				0.04		
	10/13/2021	12:21	12-10	12	5.08	287.60	305.64	18.04				0.03		
6	10/14/2021	11:06	32-29	15	4.76	0.00	41.50	41.50	302	122	92	0.03		3-Foot Screen
	10/14/2021	11:26	29-26	18	4.48	41.50	79.95	38.45				0.03		
	10/14/2021	11:40	26-23	22	4.54	79.95	123.00	43.05				0.03		
	10/14/2021	11:58	23-20	22	4.45	123.00	164.32	41.32				0.03		
	10/14/2021	12:14	20-17	18	5.19	164.32	205.08	40.76				0.03		
	10/14/2021	12:25	17-14	15	4.95	205.08	246.56	41.48				0.03		
	10/14/2021	12:39	14-11	22	5.20	246.56	290.47	43.91				0.03		
	10/14/2021	12:54	11-10	20	4.92	290.47	302.18	11.71				0.01		
7	10/13/2021	13:25	32-29	42	2.92	0.00	42.34	42.34	302	122	92	0.03		3-Foot Screen
	10/13/2021	13:47	29-26	8	4.88	42.34	82.90	40.56				0.03		
	10/13/2021	14:03	26-23	12	4.45	82.90	125.12	42.22				0.03		
	10/13/2021	14:20	23-20	8	4.52	125.12	164.60	39.48				0.03		
	10/13/2021	14:39	20-17	8	4.02	164.60	206.72	42.12				0.03		
	10/13/2021	14:54	17-14	5	3.94	206.72	248.19	41.47				0.03		
	10/13/2021	15:15	14-11	22	4.01	248.19	289.64	41.45				0.03		
	10/13/2021	15:28	11-10	32	4.13	289.64	301.76	12.12				0.01		
8	10/14/2021	11:08	32-29	5	4.28	0.00	43.72	43.72	300	122	91	0.03		3-Foot Screen
	10/14/2021	11:26	29-26	12	5.28	43.72	83.62	39.90				0.03		
	10/14/2021	11:40	26-23	18	4.94	83.62	124.74	41.12				0.03		
	10/14/2021	11:58	23-20	15	5.24	124.74	168.50	43.76				0.03		
	10/14/2021	12:15	20-17	12	5.08	168.50	210.70	42.20				0.03		
	10/14/2021	12:25	17-14	12	4.65	210.70	248.20	37.50				0.03		
	10/14/2021	12:39	14-11	12	4.38	248.20	289.31	41.11				0.03		
	10/14/2021	12:54	11-10	12	5.02	289.31	300.46	11.15				0.01		
9	10/13/2021	13:24	32-29	40	4.12	0.00	44.46	44.46	304	123	92	0.03		3-Foot Screen
	10/13/2021	13:47	29-26	12	4.48	44.46	82.56	38.10				0.03		
	10/13/2021	14:03	26-23	8	4.61	82.56	128.60	46.04				0.03		
	10/13/2021	14:20	23-20	12	4.60	128.60	164.22	35.62				0.03		
	10/13/2021	14:39	20-17	10	4.21	164.22	206.70	42.48				0.03		
	10/13/2021	14:54	17-14	8	4.04	206.70	247.30	40.60				0.03		
	10/13/2021	15:14	14-11	22	4.06	247.30	288.76	41.46				0.03		
	10/13/2021	15:28	11-10	32	4.23	288.76	304.28	15.52				0.01		
10	10/14/2021	13:34	28-25	85	5.00	0.00	44.94	44.94	302	122	92	0.04	Drove to 32'. Saw high pressures and no flow . Lifted until flow w as achieved.	3-Foot Screen
	10/14/2021	13:59	25-22	22	5.38	44.94	100.26	55.32				0.04		
	10/14/2021	14:21	22-19	15	4.98	100.26	152.09	51.83				0.04		
	10/14/2021	14:41	19-16	5	4.16	152.09	199.46	47.37				0.04		
	10/14/2021	15:00	16-13	15	5.14	199.46	250.36	50.90				0.04		
	10/14/2021	15:22	13-10	15	5.16	250.36	301.95	51.59				0.04		
11	10/13/2021	13:24	30-27	10	4.00	0.00	47.82	47.82	305	124	93	0.04		3-Foot Screen
	10/13/2021	13:47	27-24	5	3.55	47.82	89.64	41.82				0.04		
	10/13/2021	14:03	24-21	8	3.93	89.64	136.98	47.34				0.04		
	10/13/2021	14:20	21-18	5	3.92	136.98	182.14	45.16				0.04		
	10/13/2021	14:39	18-15	5	4.21	182.14	225.91	43.77				0.04		
	10/13/2021	14:54	15-12	10	4.54	225.91	273.65	47.74				0.04		
	10/13/2021	15:14	12-10	12	4.64	273.65	305.01	31.36				0.03		
12	10/14/2021	13:34	32-29	0	2.56	0.00	52.02	52.02	302	122	92	0.03		3-Foot Screen
	10/14/2021	13:59	29-26	8	4.70	52.02	90.36	38.34				0.03		
	10/14/2021	14:21	26-23	8	5.30	90.36	132.70	42.34				0.03		
	10/14/2021	14:41	23-20	12	5.38	132.70	165.98	33.28				0.03		
	10/14/2021	15:00	20-17	5	4.02	165.98	205.64	39.66				0.03		
	10/14/2021	15:22	17-14	10	4.65	205.64	246.98	41.34				0.03		
	10/14/2021	15:38	14-11	15	5.23	246.98	289.61	42.63				0.03		
	10/14/2021	15:49	11-10	20	5.68	289.61	302.14	12.53				0.01		
13	10/13/2021	13:24	31-28	8	4.22	0.00	48.58	48.58	302	122	92	0.04		3-Foot Screen
	10/13/2021	13:47	28-25	5	4.29	48.58	86.82	38.24				0.04		
	10/13/2021	14:04	25-22	5	4.14	86.82	129.50	42.68				0.04		
	10/13/2021	14:21	22-19	10	4.16	129.50	172.95	43.45				0.04		
	10/13/2021	14:39	19-16	5	4.16	172.95	217.63	44.68				0.04		
	10/13/2021	14:54	16-13	5	4.28	217.63	260.18	42.55				0.04		
	10/13/2021	15:14	13-10	15	4.12	260.18	302.17	41.99				0.04		
14	10/14/2021	16:32	32-29	16	5.28	0.00	45.56	45.56	304	123	92	0.03		3-Foot Screen
	10/14/2021	16:44	29-26	15	5.20	45.56	82.66	37.10				0.03		
	10/14/2021	17:00	26-23	20	5.60	82.66	125.32	42.66				0.03		
	10/14/2021	17:14	23-20	20	5.04	125.32	150.47	25.15				0.03		
	10/15/2021	8:44	23-20	5	2.90	150.47	162.78	12.31				-		
	10/15/2021	8:50	20-17	12	5.75	162.78	208.43	45.65				0.03		
	10/15/2021	9:01	17-14	15	5.75	208.43	243.37	34.94				0.03		
	10/15/2021	9:10	14-11	25	6.96	243.37	286.78	43.41				0.03		
	10/15/2021	9:21	11-10	18	6.52	286.78	304.44	17.66				0.01		
15	10/13/2021	16:26	32-29	45	4.01	0.00	42.68	42.68	303	123	92	0.03		3-Foot Screen
	10/13/2021	16:44	29-26	32	4.29	42.68	83.47	40.79				0.03		
	10/13/2021	17:03	26-23	40	4.16	83.47	124.65	41.18				0.03		
	10/13/2021	17:20	23-20	22	3.98	124.65	152.34	27.69				0.03		
	10/14/2021	9:17	20-17	8	4.08	152.34	198.02	45.68				0.03	High pressures no flow . Pulled up and offset 1.5' East.	
	10/14/2021	9:38	17-14	10	4.22	198.02	244.83	46.81				0.03		
	10/14/2021	10:00	14-11	8	3.92	244.83	284.31	39.48				0.03		
	10/14/2021	10:17	11-10	8	4.10	284.31	302.59	18.28				0.01		
16	10/14/2021	16:31	32-29	15	5.36	0.00	54.36	54.36	307	124	93	0.03		3-Foot Screen
	10/14/2021	16:44	29-26	15	5.92	54.36	88.80	34.44				0.03		
	10/14/2021	16:59	26-23	10	5.08	88.80	126.40	37.60				0.03		
	10/14/2021	17:14	23-20	10	4.76	126.40	152.36	25.96				0.03		
	10/15/2021	8:44	23-20	5	2.89	152.36	164.32	11.96				-		
	10/15/2021	8:50	20-17	25	5.42	164.32	212.14	47.82				0.03		
	10/15/2021	9:01	17-14	22	6.36	212.14	247.02	34.88				0.03		
	10/15/2021	9:10	14-11	20	6.92	247.02	285.62	38.60				0.03		
	10/15/2021	9:21	11-10	20	6.50	285.62	307.32	21.70				0.01		
17	10/13/2021	16:24	32-29	12	4.38	0.00	47.68	47.68	302	123	92	0.03		3-Foot Screen
	10/13/2021	16:44	29-26	5	3.99	47.68	84.91	37.23				0.03		
	10/13/2021	17:03	26-23	5	4.31	84.91	124.30	39.39				0.03		
	10/13/2021	17:19	23-20	12	4.13	124.30	154.27	29.97				0.03		
	10/14/2021	9:01	23-20	5	3.88	154.27	169.59	15.32				-		
	10/14/2021	9:11	20-17	5	4.04	169.59	211.48	41.89				0.03		
	10/14/2021	9:38	17-14	10	4.14	211.48	248.60	37.12				0.03		
	10/14/2021	10:00	14-11	8	3.65	248.60	289.76	41.16				0.03		
	10/14/2021	10:17	11-10	10	4.38	289.76	302.46	12.70				0.01		
18	10/15/2021	10:14	32-30	5	2.73	0.00	28.72	28.72	300	122	91	0.02		Expendable Tip
	10/15/2021	10:30	30-28	10	3.73	28.72	58.44	29.72				0.02		
	10/15/2021	10:49	28-26	5	4.18	58.44	85.32	26.88				0.02		
	10/15/2021	11:06	26-24	5	4.28	85.32	112.18	26.86				0.02		
	10/15/2021	11:23	24-22	5	3.98	112.18	136.08	23.90				0.02		
	10/15/2021	11:43	22-20	5	3.90	136.08	165.20	29.12				0.02		
	10/15/2021	12:01	20-18	8	3.71	165.20	194.62	29.42				0.02		
	10/15/2021	12:18	18-16	5	3.95	194.62	221.06	26.44				0.02		
	10/15/2021	12:41	16-14	5	3.78	221.06	245.98	24.92				0.02		
	10/15/2021	13:02	14-12	8	3.98	245.98	272.38	26.40				0.02		
	10/15/2021	13:18	12-10	10	3.91	272.38	300.48	28.10				0.02		

19	10/13/2021	16:21	32-29	18	3.58	0.00	43.56	43.56	299	121	91	0.03		3-Foot Screen
	10/13/2021	16:44	29-26	5	3.58	43.56	86.12	42.56				0.03		
	10/13/2021	17:03	26-23	12	4.03	86.12	128.73	42.61				0.03		
	10/13/2021	17:19	23-20	15	4.23	128.73	148.76	20.03				0.03		
	10/14/2021	9:01	23-20	15	3.44	148.76	166.39	17.63				-	Small amount of surfacing. Sealed and continued.	
	10/14/2021	9:12	20-17	20	4.63	166.39	188.54	22.15				0.03	Small amount of surfacing unable to seal. Lifting and offsetting 2' East.	
	10/14/2021	9:30	20-17	32	5.08	188.54	214.48	25.94						
	10/14/2021	9:37	17-14	15	4.12	214.48	246.17	31.69				0.03	Small amount of surfacing. Sealed and continued.	
	10/14/2021	10:00	14-11	15	4.26	246.17	252.15	5.98				0.03	Unable to stop surfacing. Lifting up to the break and continuing.	
	10/14/2021	10:22	13-10	5	3.62	252.15	299.18	47.03				0.01	Surfacing continued immediately. Pulling up and offsetting 2' East.	
20	10/15/2021	10:14	32-30	12	3.22	0.00	27.98	27.98	302	122	92	0.02		Expendable Tip
	10/15/2021	10:30	30-28	10	4.08	27.98	52.92	24.94				0.02		
	10/15/2021	10:49	28-26	5	4.40	52.92	86.12	33.20				0.02		
	10/15/2021	11:06	26-24	5	4.18	86.12	114.00	27.88				0.02		
	10/15/2021	11:22	24-22	5	4.18	114.00	139.74	25.74				0.02		
	10/15/2021	11:43	22-20	5	3.92	139.74	167.89	28.15				0.02		
	10/15/2021	12:00	20-18	10	4.12	167.89	192.64	24.75				0.02		
	10/15/2021	12:19	18-16	5	4.32	192.64	217.68	25.04				0.02		
	10/15/2021	12:41	16-14	5	4.18	217.68	244.31	26.63				0.02		
	10/15/2021	13:02	14-12	5	4.22	244.31	279.18	34.87				0.02		
	10/15/2021	13:18	12-10	5	4.02	279.18	301.78	22.60				0.02		
21	10/13/2021	16:21	32-29	22	4.68	0.00	44.02	44.02	301	122	92	0.03		3-Foot Screen
	10/13/2021	16:44	29-26	15	4.06	44.02	86.44	42.42				0.03		
	10/13/2021	17:03	26-23	15	4.13	86.44	127.81	41.37				0.03		
	10/13/2021	17:19	23-20	12	4.20	127.81	146.24	18.43				0.03		
	10/14/2021	9:01	23-20	0	3.40	146.24	160.98	14.74				-		
	10/14/2021	9:12	20-17	5	3.99	160.98	205.92	44.94				0.03		
	10/14/2021	9:38	17-14	5	3.68	205.92	250.92	45.00				0.03		
	10/14/2021	10:00	14-11	5	4.02	250.92	288.15	37.23				0.03		
	10/14/2021	10:16	11-10	5	3.65	288.15	301.25	13.10				0.01		
22	10/15/2021	10:14	32-30	35	4.74	0.00	30.22	30.22	301	122	92	0.02		Expendable Tip
	10/15/2021	10:30	30-28	5	3.92	30.22	55.60	25.38				0.02		
	10/15/2021	10:49	28-26	5	4.02	55.60	85.38	29.78				0.02		
	10/15/2021	11:07	26-24	5	3.78	85.38	109.77	24.39				0.02		
	10/15/2021	11:23	24-22	8	4.22	109.77	137.48	27.71				0.02		
	10/15/2021	11:43	22-20	8	4.37	137.48	165.89	28.41				0.02		
	10/15/2021	12:01	20-18	10	4.12	165.89	191.75	25.86				0.02		
	10/15/2021	12:19	18-16	10	4.08	191.75	220.74	28.99				0.02		
	10/15/2021	12:41	16-14	8	4.54	220.74	250.31	29.57				0.02		
	10/15/2021	13:01	14-12	8	4.64	250.31	270.42	20.11				0.02		
	10/15/2021	13:17	12-10	8	4.34	270.42	301.45	31.03				0.02		
23	10/18/2021	15:49	32-30	60	4.73	0.00	28.54	28.54	301	122	91	0.02		Expendable Tip
	10/18/2021	15:56	30-28	42	4.91	28.54	56.79	28.25				0.02		
	10/18/2021	16:04	28-26	35	4.32	56.79	88.50	31.71				0.02		
	10/18/2021	16:13	26-24	50	5.02	88.50	109.39	20.89				0.02		
	10/18/2021	16:19	24-22	32	5.92	109.39	136.72	27.33				0.02		
	10/18/2021	16:27	22-20	32	5.53	136.72	165.28	28.56				0.02		
	10/18/2021	16:36	20-18	50	4.14	165.28	192.51	27.23				0.02		
	10/18/2021	16:44	18-16	50	5.08	192.51	217.94	25.43				0.02		
	10/18/2021	16:56	16-14	45	4.99	217.94	244.80	26.86				0.02		
	10/18/2021	17:08	14-12	28	6.84	244.80	272.50	27.70				0.02		
	10/18/2021	17:17	12-10	20	5.13	272.50	300.76	28.26				0.02		
24	10/15/2021	10:16	32-30	15	5.03	0.00	34.02	34.02	303	123	92	0.02		Expendable Tip
	10/15/2021	10:30	30-28	5	3.78	34.02	56.32	22.30				0.02		
	10/15/2021	10:49	28-26	0	3.59	56.32	84.12	27.80				0.02		
	10/15/2021	11:07	26-24	0	3.29	84.12	105.44	21.32				0.02		
	10/15/2021	11:23	24-22	5	3.87	105.44	135.06	29.62				0.02		
	10/15/2021	11:40	22-20	5	3.81	135.06	163.95	28.89				0.02		
	10/15/2021	12:01	20-18	5	4.11	163.95	193.42	29.47				0.02		
	10/15/2021	12:19	18-16	5	3.86	193.42	220.34	26.92				0.02		
	10/15/2021	12:41	16-14	8	3.52	220.34	251.76	31.42				0.02		
	10/15/2021	13:01	14-12	10	3.58	251.76	270.55	18.79				0.02		
	10/15/2021	13:17	12-10	8	3.84	270.55	302.54	31.99				0.02		
25	10/15/2021	14:16	32-30	35	4.01	0.00	30.62	30.62	302	122	92	0.02		Expendable Tip
	10/15/2021	14:31	30-28	22	3.95	30.62	57.09	26.47				0.02		
	10/15/2021	14:47	28-26	5	4.19	57.09	84.79	27.70				0.02		
	10/15/2021	14:59	26-24	5	4.26	84.79	108.41	23.62				0.02		
	10/15/2021	15:12	24-22	8	4.31	108.41	136.94	28.53				0.02		
	10/15/2021	15:31	22-20	5	4.21	136.94	164.29	27.35				0.02		
	10/15/2021	15:42	20-18	5	4.06	164.29	192.80	28.51				0.02		
	10/15/2021	16:01	18-16	5	4.03	192.80	216.82	24.02				0.02		
	10/15/2021	16:15	16-14	5	4.09	216.82	243.19	26.37				0.02		
	10/15/2021	16:25	14-12	5	4.18	243.19	272.18	28.99				0.02		
	10/15/2021	16:44	12-10	5	4.20	272.18	301.56	29.38				0.02		
26	10/18/2021	15:49	32-30	45	5.64	0.00	29.31	29.31	302	122	92	0.02		Expendable Tip
	10/18/2021	15:56	30-28	35	5.78	29.31	54.31	25.00				0.02		
	10/18/2021	16:04	28-26	35	5.52	54.31	88.44	34.13				0.02		
	10/18/2021	16:12	26-24	8	5.24	88.44	111.14	22.70				0.02		
	10/18/2021	16:20	24-22	12	5.16	111.14	138.49	27.35				0.02		
	10/18/2021	16:27	22-20	12	5.87	138.49	163.56	25.07				0.02		
	10/18/2021	16:36	20-18	20	6.06	163.56	190.34	26.78				0.02		
	10/18/2021	16:44	18-16	20	5.27	190.34	217.32	26.98				0.02		
	10/18/2021	16:57	16-14	18	5.68	217.32	246.13	28.81				0.02		
	10/18/2021	17:08	14-12	10	4.34	246.13	273.72	27.59				0.02		
	10/18/2021	17:17	12-10	10	4.68	273.72	302.14	28.42				0.02		
27	10/15/2021	14:16	32-30	25	3.90	0.00	29.47	29.47	308	125	94	0.02		Expendable Tip
	10/15/2021	14:31	30-28	10	4.57	29.47	52.31	22.84				0.02		
	10/15/2021	14:47	28-26	5	4.01	52.31	82.16	29.85				0.02		
	10/15/2021	14:59	26-24	5	4.01	82.16	109.63	27.47				0.02		
	10/15/2021	15:12	24-22	5	4.44	109.63	135.47	25.84				0.02		
	10/15/2021	15:31	22-20	5	4.31	135.47	170.34	34.87				0.02		
	10/15/2021	15:42	20-18	5	4.56	170.34	198.62	28.28				0.02		
	10/15/2021	16:02	18-16	5	4.24	198.62	217.02	18.40				0.02		
	10/15/2021	16:15	16-14	5	3.96	217.02	250.91	33.89				0.02		
	10/15/2021	16:25	14-12	8	3.93	250.91	271.42	20.51				0.02		
	10/15/2021	16:44	12-10	8	3.91	271.42	307.82	36.40				0.02		
28	10/18/2021	13:08	32-30	20	5.45	0.00	29.80	29.80	304	123	92	0.02		Expendable Tip
	10/18/2021	13:43	30-28	5	4.16	29.80	60.54	30.74				0.02		
	10/18/2021	13:52	28-26	5	4.18	60.54	90.17	29.63				0.02		
	10/18/2021	14:03	26-24	5	3.81	90.17	110.16	19.99				0.02		
	10/18/2021	14:24	24-22	5	3.78	110.16	136.92	26.76				0.02		
	10/18/2021	14:39	22-20	5	4.12	136.92	167.62	30.70				0.02		
	10/18/2021	14:49	20-18	10	5.13	167.62	194.13	26.51				0.02		
	10/18/2021	15:01	18-16	10	5.19	194.13	217.61	23.48				0.02		
	10/18/2021	15:13	16-14	10	5.04	217.61	243.89	26.28				0.02		
	10/18/2021	15:26	14-12	12	5.54	243.89	271.32	27.43				0.02		
	10/18/2021	15:35	12-10	12	5.34	271.32	304.19	32.87				0.02		
29	10/15/2021	14:16	32-30	18	4.25	0.00	28.64	28.64	302	122	92	0.02		Expendable Tip
	10/15/2021	14:31	30-28	10	4.18	28.64	59.61	30.97				0.02		
	10/15/2021	14:47	28-26	5	3.91	59.61	83.49	23.88				0.02		
	10/15/2021	14:59	26-24	5	3.87	83.49	110.26	26.77				0.02		
	10/15/2021	15:12	24-22	10	3.71	110.26	139.82	29.56				0.02		
	10/15/2021	15:31	22-20	12	3.82	139.82	164.00	24.18				0.02		
	10/15/2021	15:42	20-18	10	3.90	164.00	194.76	30.76				0.02		
	10/15/2021	16:02	18-16	12	4.16	194.76	219.73	24.97				0.02		
	10/15/2021	16:15	16-14	12	3.98	219.73	244.80	25.07				0.02		
	10/15/2021	16:25	14-12	12	4.03	244.80	276.97	32.17				0.02		
	10/15/2021	16:42	12-10	12	3.38	276.97	302.41	25.44				0.02		
30	10/18/2021	9:52	32-30	70	1.54	0.00	28.96	28.96	308	125	93	0.02		Expendable Tip
	10/18/2021	10:15	30-28	20	3.94	28.96	58.62	29.66				0.02		
	10/18/2021	10:48	28-26	22	6.38	58.62	85.96	27.34				0.02		
	10/18/2021	11:08	26-24	5	4.80	85.96	115.92	29.96				0.02		
	10/18/2021	11:17	24-22	12	4.72	115.92	133.65	17.73				0.02		
	10/18/2021	11:30	22-20	5	3.64	133.65	163.81	30.16				0.02		
	10/18/2021	11:39	20-18	5	4.75	163.81	192.34	28.53				0.02		
	10/18/2021	11:51	18-16	5	4.40	192.34	218.76	26.42				0.02		
	10/18/2021	12:09	16-14	10	4.65	218.76	246.31	27.55				0.02		
	10/18/2021	12:08	14-12	0	3.30	246.31	271.83	25.52				0.02		
	10/18/2021	12:22	12-10	10	3.86	271.83	307.61	35.78				0.02		
31	10/15/2021	14:16	32-30	35	5.02	0.00	31.48	31.48	303	123	92	0.02		Expendable Tip
	10/15/2021	14:31	30-28	10	4.85	31.48	53.95	22.47				0.02		
	10/15/2021	14:47	28-26	15	4.23	53.95	86.91	32.96				0.02		
	10/15/2021	14:59	26-24	15	4.16	86.91	110.56	23.65				0.02		
	10/15/2021	15:12	24-22	10	3.71	110.56	140.65	30.09				0.02		
	10/15/2021	15:31	22-20	5	3.62	140.65	168.42	27.77				0.02		
	10/15/2021	15:42	20-18	8	3.75	168.42	192.61	24.19				0.02		
	10/15/2021	16:02	18-16	10	4.19	192.61	215.64	23.03				0.02		
	10/15/2021	16:15	16-14	10	4.03	215.64	246.72	31.08				0.02		
	10/15/2021	16:25	14-12	10	4.17	246.72	273.45	26.73				0.02		
	10/15/2021	16:41	12-10	10	4.06	273.45	303.04	29.59				0.02		
32	10/18/2021	13:11	25-23	90	2.05	0.00	43.72	43.72	301	122	91	0.03		Expendable Tip
	10/18/2021	13:43	23-21	32	3.68	43.72	82.65	38.93				0.03		
	10/18/2021	13:57	21-19	20	3.01	82.65	125.53	42.88				0.03		
	10/18/2021	14:24	19-17	5	3.58	125.53	168.70	43.17				0.03		
	10/18/2021	14:39	17-15	5	3.99	168.70	203.42	34.72				0.03		
	10/18/2021	15:11	15-13	5	4.03	203.42	245.13	41.71				0.03		
	10/18/2021	15:26	13-10	12	5.96	245.13	300.75	55.62				0.05		
33	10/18/2021	9:51	28-26	48	4.05	0.00	37.61	37.61	303	123	92	0.03		Expendable Tip
	10/18/2021	10:14	26-24	30	4.56	37.61	69.41	31.80				0.03		
	10/18/2021	10:48	24-22	20	4.70	69.41	100.62	31.21				0.03		
	10/18/2021	11:08	22-20	0	3.72	100.62	135.98	35.36				0.03		
	10/18/2021	11:17	20-18	12	5.06	135.98	170.12	34.14				0.03		
	10/18/2021	11:31	18-16	5	3.78	170.12	200.34	30.22				0.03		
	10/18/2021	11:39	16-14	5	4.64	200.34	238.61	38.27				0.03		
	10/18/2021	11:54	14-12	5	4.04	238.61	270.62	32.01				0.03		
	10/18/2021	12:22	12-10	10	4.54	270.62	302.85	32.23				0.03		
34	10/18/2021	13:11	20-18	40	3.60	0.00	62.31	62.31	304	123	92	0.05		Expendable Tip
	10/18/2021	13:43	18-16	48	3.59	62.31	130.64	68.33				0.05		
	10/18/2021	14:04	16-14	70	3.52	130.64	184.96	54.32				0.05		
	10/18/2021	14:41	14-12	40	4.10	184.96	241.97	57.01				0.05		
	10/18/2021	15:11	12-10	40	3.96	241.97	303.92	61.95				0.05		

35	10/18/2021	9:51	24-22	62	2.73	0.00	45.13	45.13	300	122	91	0.04	Refusal at 24' bgs.	Expendable Tip
	10/18/2021	10:14	22-20	32	4.98	45.13	89.47	44.34				0.04		
	10/18/2021	10:48	20-18	20	3.87	89.47	130.96	41.49				0.04		
	10/18/2021	11:07	18-16	10	3.32	130.96	180.62	49.66				0.04		
	10/18/2021	11:22	16-14	5	3.04	180.62	219.62	39.00				0.04		
	10/18/2021	11:37	14-12	18	4.59	219.62	256.98	37.36				0.04		
	10/18/2021	11:55	12-10	10	3.90	256.98	300.34	43.36				0.04		
36	10/18/2021	13:14	20-18	85	1.38	0.00	42.18	42.18	301	122	92	0.05		Expendable Tip
	10/18/2021	13:43	18-16	70	1.78	42.18	115.61	73.43				0.05		
	10/18/2021	14:04	16-14	65	2.02	115.61	173.48	57.87				0.05		
	10/18/2021	14:41	14-12	65	2.13	173.48	234.55	61.07				0.05		
	10/18/2021	15:11	12-10	65	2.30	234.55	301.47	66.92				0.05		
37	10/18/2021	10:07	20-18	25	3.46	0.00	34.18	34.18	301	122	92	0.05	Unable to achieve flow on first attempt. Pulling up and offsetting 2' East. Refusal at 20' bgs. Surfacing out of previous bore hole. Giving time to allow the bentonite to se ell up. Surfacing did not stop. Offset 4' NE and continued.	Expendable Tip
	10/18/2021	10:55	20-18	40	1.50	34.18	90.17	55.99				-		
	10/18/2021	11:22	18-16	10	2.21	90.17	123.56	33.39				0.05		
	10/18/2021	11:31	16-14	12	3.17	123.56	186.32	62.76				0.05		
	10/18/2021	11:55	14-12	15	3.78	186.32	240.26	53.94				0.05		
	10/18/2021	12:22	12-10	15	3.88	240.26	301.25	60.99				0.05		
38	10/27/2021	11:56	25-23	30	4.18	0.00	43.76	43.76	307	124	93	0.03		Expendable Tip
	10/27/2021	12:09	23-21	20	4.14	43.76	82.19	38.43				0.03		
	10/27/2021	12:29	21-19	10	4.28	82.19	124.39	42.20				0.03		
	10/27/2021	12:49	19-17	5	3.60	124.39	165.92	41.53				0.03		
	10/27/2021	13:04	17-15	5	3.71	165.92	210.03	44.11				0.03		
	10/27/2021	13:26	15-13	5	4.30	210.03	248.37	38.34				0.03		
	10/27/2021	13:42	13-11	5	4.27	248.37	287.02	38.65				0.03		
	10/27/2021	13:56	11-10	5	4.23	287.02	306.59	19.57				0.02		
39	10/27/2021	11:55	25-23	80	2.84	0.00	42.19	42.19	303	123	92	0.03		Expendable Tip
	10/27/2021	12:09	23-21	10	2.70	42.19	83.68	41.49				0.03		
	10/27/2021	12:29	21-19	20	3.02	83.68	120.28	36.60				0.03		
	10/27/2021	12:49	19-17	10	3.29	120.28	160.37	40.09				0.03		
	10/27/2021	13:04	17-15	20	3.43	160.37	209.50	49.13				0.03		
	10/27/2021	13:26	15-13	5	3.58	209.50	241.56	32.06				0.03		
	10/27/2021	13:42	13-11	5	3.69	241.56	283.01	41.45				0.03		
	10/27/2021	13:56	11-10	5	3.78	283.01	303.27	20.26				0.02		
40	10/26/2021	9:06	25-22	95	3.33	0.00	61.34	61.34	303	123	92	0.05		Expendable Tip
	10/26/2021	9:31	22-20	70	3.42	61.34	100.34	39.00				0.03		
	10/26/2021	9:51	20-18	75	3.17	100.34	140.91	40.57				0.03		
	10/26/2021	10:08	18-16	80	3.24	140.91	180.57	39.66				0.03		
	10/26/2021	10:25	16-14	80	3.18	180.57	220.94	40.37				0.03		
	10/26/2021	10:45	14-12	80	3.22	220.94	261.58	40.64				0.03		
	10/26/2021	11:07	12-10	35	4.56	261.58	302.59	41.01				0.03		
41	10/27/2021	11:55	25-23	85	2.16	0.00	40.98	40.98	302	122	92	0.03		Expendable Tip
	10/27/2021	12:10	23-21	75	2.01	40.98	80.56	39.58				0.03		
	10/27/2021	12:29	21-19	70	2.46	80.56	120.76	40.20				0.03		
	10/27/2021	12:48	19-17	80	3.02	120.76	160.22	39.46				0.03		
	10/27/2021	13:04	17-15	80	2.99	160.22	205.33	45.11				0.03		
	10/27/2021	13:25	15-13	75	2.89	205.33	239.75	34.42				0.03		
	10/27/2021	13:42	13-11	70	3.02	239.75	280.18	40.43				0.03		
	10/27/2021	13:56	11-10	65	2.96	280.18	301.97	21.79				0.02		
42	10/26/2021	9:06	25-22	90	2.86	0.00	62.48	62.48	301	122	92	0.05		Expendable Tip
	10/26/2021	9:31	22-20	65	3.84	62.48	100.23	37.75				0.03		
	10/26/2021	9:51	20-18	70	4.02	100.23	143.65	43.42				0.03		
	10/26/2021	10:08	18-16	80	4.29	143.65	181.60	37.95				0.03		
	10/26/2021	10:25	16-14	80	4.03	181.60	221.06	39.46				0.03		
	10/26/2021	10:45	14-12	75	3.99	221.06	263.82	42.76				0.03		
	10/26/2021	11:08	12-10	75	4.02	263.82	301.29	37.47				0.03		
43	10/27/2021	11:55	25-23	85	2.98	0.00	40.26	40.26	303	123	92	0.03		Expendable Tip
	10/27/2021	12:10	23-21	55	3.04	40.26	79.75	39.49				0.03		
	10/27/2021	12:29	21-19	35	4.15	79.75	122.04	42.29				0.03		
	10/27/2021	12:49	19-17	5	4.22	122.04	162.60	40.56				0.03		
	10/27/2021	13:05	17-15	8	4.23	162.60	204.74	42.14				0.03		
	10/27/2021	13:25	15-13	5	4.12	204.74	243.65	38.91				0.03		
	10/27/2021	13:42	13-11	5	4.09	243.65	284.61	40.96				0.03		
	10/27/2021	13:56	11-10	5	4.13	284.61	302.63	18.02				0.02		
44	10/26/2021	9:06	25-23	75	3.90	0.00	43.59	43.59	304	123	92	0.03		Expendable Tip
	10/26/2021	9:16	23-21	70	3.92	43.59	82.26	38.67				0.03		
	10/26/2021	9:31	21-19	25	4.25	82.26	123.47	41.21				0.03		
	10/26/2021	9:51	19-17	15	4.50	123.47	165.29	41.82				0.03		
	10/26/2021	10:08	17-15	20	4.33	165.29	202.91	37.62				0.03		
	10/26/2021	10:25	15-13	35	4.34	202.91	241.84	38.93				0.03		
	10/26/2021	10:46	13-11	20	4.62	241.84	286.71	44.87				0.03		
	10/26/2021	11:08	11-10	20	4.16	286.71	303.55	16.84				0.02		
45	10/27/2021	9:10	25-22	85	1.88	0.00	60.39	60.39	301	122	92	0.05	Small amount of surfacing out of bore. Sealed and continued.	Expendable Tip
	10/27/2021	9:39	22-20	10	3.76	60.39	101.56	41.17				0.03		
	10/27/2021	9:59	20-18	12	4.06	101.56	143.62	42.06				0.03	Small amount of surfacing out of bore. Sealed and continued.	
	10/27/2021	10:14	18-16	12	4.00	143.62	184.06	40.44				0.03		
	10/27/2021	10:28	16-14	18	4.06	184.06	222.73	38.67				0.03		
	10/27/2021	10:49	14-12	12	4.52	222.73	263.89	41.16				0.03		
	10/27/2021	10:58	12-10	10	4.26	263.89	301.27	37.38				0.03		
46	10/26/2021	9:06	25-23	90	2.96	0.00	41.62	41.62	302	122	92	0.03		Expendable Tip
	10/26/2021	9:16	23-21	90	3.40	41.62	84.18	42.56				0.03		
	10/26/2021	9:31	21-19	25	4.14	84.18	121.60	37.42				0.03		
	10/26/2021	9:51	19-17	15	4.00	121.60	164.72	43.12				0.03		
	10/26/2021	10:08	17-15	5	4.19	164.72	201.67	36.95				0.03		
	10/26/2021	10:24	15-13	5	4.68	201.67	243.91	42.24				0.03		
	10/26/2021	10:46	13-11	5	4.49	243.91	286.27	42.36				0.03		
	10/26/2021	11:08	11-10	5	4.21	286.27	302.30	16.03				0.02		
47	10/27/2021	9:10	25-22	72	2.25	0.00	64.81	64.81	304	123	92	0.05		Expendable Tip
	10/27/2021	9:39	22-20	18	4.09	64.81	100.49	35.68				0.03		
	10/27/2021	10:00	20-18	20	4.32	100.49	145.84	45.35				0.03		
	10/27/2021	10:14	18-16	8	4.31	145.84	183.70	37.86				0.03		
	10/27/2021	10:28	16-14	12	4.23	183.70	221.47	37.77				0.03		
	10/27/2021	10:48	14-12	10	4.16	221.47	264.77	43.30				0.03		
	10/27/2021	10:58	12-10	10	4.28	264.77	303.52	38.75				0.03		
48	10/25/2021	13:14	25-22	70	2.94	0.00	62.17	62.17	302	122	92	0.05		Expendable Tip
	10/25/2021	13:44	22-20	70	3.58	62.17	100.31	38.14				0.03		
	10/25/2021	13:56	20-18	70	3.64	100.31	143.91	43.60				0.03		
	10/25/2021	14:15	18-16	25	3.02	143.91	184.52	40.61				0.03	Small amount of surfacing out of bore. Sealed and continued.	
	10/25/2021	14:30	16-14	50	3.00	184.52	221.69	37.17				0.03	Fair amount of surfacing out of bore. Sealed and continued.	
	10/25/2021	14:52	14-12	70	3.16	221.69	262.88	41.19				0.03		
	10/25/2021	15:13	12-10	65	3.23	262.88	302.18	39.30				0.03		
49	10/27/2021	9:10	25-23	42	3.01	0.00	41.35	41.35	303	123	92	0.03		Expendable Tip
	10/27/2021	9:23	23-21	22	4.02	41.35	83.64	42.29				0.03		
	10/27/2021	9:39	21-19	10	4.25	83.64	123.09	39.45				0.03		
	10/27/2021	10:00	19-17	10	4.28	123.09	163.91	40.82				0.03		
	10/27/2021	10:15	17-15	0	3.96	163.91	200.34	36.43				0.03		
	10/27/2021	10:28	15-13	8	4.12	200.34	241.59	41.25				0.03		
	10/27/2021	10:48	13-11	5	4.00	241.59	286.19	44.60				0.03		
	10/27/2021	10:58	11-10	5	3.96	286.19	302.52	16.33				0.02		
50	10/25/2021	13:14	25-23	10	3.36	0.00	41.37	41.37	301	122	92	0.03		Expendable Tip
	10/25/2021	13:28	23-21	5	3.92	41.37	82.64	41.27				0.03		
	10/25/2021	13:44	21-19	5	3.54	82.64	123.98	41.34				0.03		
	10/25/2021	13:56	19-17	0	3.65	123.98	160.28	36.30				0.03		
	10/25/2021	14:15	17-15	4	4.12	160.28	203.59	43.31				0.03		
	10/25/2021	14:30	15-13	18	4.70	203.59	244.08	40.49				0.03		
	10/25/2021	14:52	13-11	22	3.47	244.08	289.17	45.09				0.03		
	10/25/2021	15:13	11-10	20	3.51	289.17	301.48	12.31				0.02		
51	10/27/2021	9:10	25-23	40	3.68	0.00	40.18	40.18	302	122	92	0.03		Expendable Tip
	10/27/2021	9:23	23-21	35	3.92	40.18	80.97	40.79				0.03		
	10/27/2021	9:40	21-19	5	4.44	80.97	121.49	40.52				0.03		
	10/27/2021	10:00	19-17	10	4.20	121.49	160.27	38.78				0.03		
	10/27/2021	10:15	17-15	0	4.26	160.27	203.82	43.55				0.03		
	10/27/2021	10:28	15-13	5	4.31	203.82	246.31	42.49				0.03		
	10/27/2021	10:48	13-11	5	4.20	246.31	283.48	37.17				0.03		
	10/27/2021	10:57	11-10	5	4.23	283.48	302.25	18.77				0.02		
52	10/25/2021	13:14	25-23	20	3.58	0.00	40.29	40.29	303	123	92	0.03		Expendable Tip
	10/25/2021	13:28	23-21	20	4.09	40.29	81.52	41.23				0.03		
	10/25/2021	13:44	21-19	15	3.90	81.52	120.95	39.43				0.03		
	10/25/2021	13:56	19-17	15	3.90	120.95	162.30	41.35				0.03		
	10/25/2021	14:15	17-15	10	4.30	162.30	202.31	40.01				0.03		
	10/25/2021	14:31	15-13	12	3.90	202.31	241.67	39.36				0.03		
	10/25/2021	14:52	13-11	15	3.77	241.67	281.54	39.87				0.03		
	10/25/2021	15:13	11-10	15	3.88	281.54	302.56	21.02				0.02		
53	10/26/2021	12:05	25-23	32	3.20	0.00	41.58	41.58	302	122	92	0.03		Expendable Tip
	10/26/2021	12:32	23-21	8	3.20	41.58	84.73	43.15				0.03		
	10/26/2021	12:54	21-19	15	3.70	84.73	121.49	36.76				0.03		
	10/26/2021	13:12	19-17	5	3.14	121.49	161.11	39.62				0.03		
	10/26/2021	13:28	17-15	32	3.16	161.11	200.31	39.20				0.03		
	10/26/2021	13:42	15-13	22	4.24	200.31	242.51	42.20				0.03		
	10/26/2021	14:09	13-11	30	4.03	242.51	280.67	38.16				0.03		
	10/26/2021	14:20	11-10	25	3.89	280.67	302.41	21.74				0.02		
54	10/25/2021	13:14	25-23	55	3.56	0.00	41.53	41.53	306	124	93	0.03		Expendable Tip
	10/25/2021	13:28	23-21	28	3.68	41.53	80.78	39.25				0.03		
	10/25/2021	13:44	21-19	5	4.03	80.78	121.07	40.29				0.03		
	10/25/2021	13:55	19-17	8	4.16	121.07	164.88	43.81				0.03		
	10/25/2021	14:15	17-15	10	4.51	164.88	201.64	36.76				0.03		
	10/25/2021	14:31	15-13	15	4.37	201.64	242.96	41.32				0.03		
	10/25/2021	14:52	13-11	15	4.03	242.96	287.66	44.70				0.03		
	10/25/2021	15:13	11-10	15	4.23	287.66	305.91	18.25				0.02		
55	10/26/2021	12:10	25-23	90	3.85	0.00	40.25	40.25	303	123	92	0.03		Expendable Tip
	10/26/2021	12:33	23-21	15	4.51	40.25	82.61	42.36				0.03		
	10/26/2021	12:53	21-19	30	3.38	82.61	120.64	38.03				0.03		
	10/26/2021	13:12	19-17	5	4.14	120.64	162.07	41.43				0.03		
	10/26/2021	13:28	17-15	15	4.08	162.07	201.04	38.97				0.03		
	10/26/2021	13:43	15-13	12	3.73	201.04	241.09	40.05				0.03		
	10/26/2021	14:09	13-11	20	3.99	241.09	280.30	39.21				0.03		
	10/26/2021	14:20	11-10	20	4.01	280.30	303.05	22.75				0.02		
56	10/25/2021	10:07	25-22	75	2.16	0.00	56.24	56.24	302	122	92	0.05		Expendable Tip
	10/25/2021	10:25	22-20	75	2.43	56.24	100.34	44.10				0.03		
	10/25/2021	10:47	20-18	60	1.99	100.34	140.79	40.45				0.03		
	10/25/2021	11:07	18-16	85	2.48	140.79	178.38	37.59				0.03		
	10/25/2021	11:34	16-14	60	2.41	178.38	220.04	41.66				0.03		
	10/25/2021	11:56	14-12	55	2.58	220.04	261.47	41.43				0.03		
	10/25/2021	12:19	12-10	55	2.64	261.47	301.77	40.30				0.03		
57	10/26/2021	12:10	25-23	90	1.99	0.00	42.92	42.92	302	122	92	0.03		Expendable Tip
	10/26/2021	12:33	23-21	8	3.80	42.92	80.91	37.99				0.03		
	10/26/2021	12:53	21-19	15	3.84	80.91	123.94	43.03				0.03		
	10/26/2021	13:12	19-17	5	4.02	123.94	160.48	36.54				0.03		
	10/26/2021	13:28	17-15	22	3.52	160.48	200.57	40.09				0.03		
	10/26/2021	13:43	15-13	12	4.50	200.57	241.60	41.03				0.03		
	10/26/2021	14:09	13-11	22	4.22	241.60	280.96	39.36				0.03		
	10/26/2021	14:20	11-10	22	4.03	280.96	302.15	21.19				0.02		
58	10/25/2021	10:07	25-22	70	2.26	0.00	57.32	57.32	303	123	92	0.05		Expendable Tip
	10/25/2021	10:25	22-20	50	3.12	57.32	101.49	44.17				0.03	Fair amount of surfaicng out of bore. Sealed and continued.	
	10/25/2021	10:47	20-18	55	1.99	101.49	140.26	38.77				0.03	Small amount of surfacing out of bore. Sealed and continued.	
	10/25/2021	11:07	18-16	0	3.41	140.26	179.56	39.30				0.03		
	10/25/2021	11:34	16-14	8	4.01	179.56	223.70	44.14				0.03		
	10/25/2021	11:57	14-12	0	4.05	223.70	265.71	42.01				0.03		
	10/25/2021	12:19	12-10	5	4.38	265.71	302.56	36.85				0.03		

59	10/27/2021	14:05	25-22	80	1.99	0.00	61.38	61.38	300	122	91	0.05		Expendable Tip
	10/27/2021	14:20	22-20	20	6.31	61.38	100.56	39.18				0.03		
	10/27/2021	14:27	20-18	40	6.08	100.56	141.65	41.09				0.03		
	10/27/2021	14:34	18-16	20	6.37	141.65	184.36	42.71				0.03		
	10/27/2021	14:45	16-14	22	6.42	184.36	221.39	37.03				0.03		
	10/27/2021	14:54	14-12	20	6.42	221.39	268.19	46.80				0.03		
	10/27/2021	15:02	12-10	20	6.37	268.19	300.28	32.09				0.03		
60	10/25/2021	10:01	25-22	40	3.06	0.00	60.89	60.89	301	122	92	0.05		Expendable Tip
	10/25/2021	10:26	22-20	38	3.84	60.89	104.35	43.46				0.03		
	10/25/2021	10:47	20-18	20	3.66	104.35	141.29	36.94				0.03		
	10/25/2021	11:05	18-16	75	2.89	141.29	184.72	43.43				0.03		
	10/25/2021	11:33	16-14	10	3.15	184.72	222.59	37.87				0.03		
	10/25/2021	11:57	14-12	0	3.36	222.59	267.63	45.04				0.03		
	10/25/2021	12:19	12-10	0	3.33	267.63	301.24	33.61				0.03		
61	10/26/2021	12:10	25-23	90	2.31	0.00	41.86	41.86	304	123	92	0.03		Expendable Tip
	10/26/2021	12:33	23-21	22	4.37	41.86	84.16	42.30				0.03		
	10/26/2021	12:53	21-19	35	4.31	84.16	122.69	38.53				0.03		
	10/26/2021	13:12	19-17	5	4.06	122.69	163.27	40.58				0.03		
	10/26/2021	13:28	17-15	15	4.24	163.27	204.54	41.27				0.03		
	10/26/2021	13:43	15-13	5	4.19	204.54	243.27	38.73				0.03		
	10/26/2021	14:09	13-11	5	4.23	243.27	282.20	38.93				0.03		
	10/26/2021	14:20	11-10	5	4.13	282.20	303.50	21.30				0.02		
62	10/25/2021	9:59	25-22	25	3.26	0.00	62.17	62.17	303	123	92	0.05		Expendable Tip
	10/25/2021	10:26	22-20	38	3.48	62.17	103.98	41.81				0.03		
	10/25/2021	10:47	20-18	20	3.68	103.98	144.62	40.64				0.03		
	10/25/2021	11:06	18-16	5	2.66	144.62	184.55	39.93				0.03		
	10/25/2021	11:33	16-14	8	2.59	184.55	223.47	38.92				0.03		
	10/25/2021	11:57	14-12	10	4.14	223.47	264.86	41.39				0.03		
	10/25/2021	12:19	12-10	5	4.03	264.86	302.57	37.71				0.03		
									Total Gallons :	**Total Lbs. 3DME**	**Total Lbs. of ZVI:**	**Total Litres of BDI:**		
									18763	7600	5700	16.91		

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
3DME PRB 5
Table 6

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BOI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	10/22/2021	10:45	29-27	90	2.48	0.00	34.27	34.27	302	122	92	0.03	Soil core shows clay at 29' bgs.	Expendable Tip
	10/22/2021	11:06	27-25	65	2.38	34.27	67.32	33.05				0.03		
	10/22/2021	11:29	25-23	40	2.39	67.32	99.82	32.50				0.03		
	10/22/2021	11:53	23-21	74	3.14	99.82	130.55	30.73				0.03		
	10/22/2021	12:10	21-19	90	2.29	130.55	161.28	30.73				0.03		
	10/22/2021	12:35	19-17	85	2.34	161.28	192.78	31.50				0.03		
	10/22/2021	12:53	17-15	75	2.16	192.78	226.31	33.53				0.03		
	10/22/2021	13:19	15-13	75	2.23	226.31	253.61	27.30				0.03		
	10/22/2021	13:49	13-10	90	1.34	253.61	302.41	48.80				0.04		
2	10/22/2021	10:44	29-27	100+	0.98	0.00	30.18	30.18	301	122	92	0.03	Soil core shows clay at 29' bgs.	Expendable Tip
	10/22/2021	11:05	27-25	100+	1.05	30.18	60.18	30.00				0.03		
	10/22/2021	11:29	25-23	95	1.23	60.18	90.67	30.49				0.03		
	10/22/2021	11:52	23-21	80	1.24	90.67	127.62	36.95				0.03		
	10/22/2021	12:10	21-19	90	1.25	127.62	160.77	33.15				0.03		
	10/22/2021	12:35	19-17	90	1.49	160.77	192.35	31.58				0.03		
	10/22/2021	12:53	17-15	70	2.53	192.35	224.81	32.46				0.03	Small amount of surfacing out of the bore.	
	10/22/2021	13:19	15-13	75	2.51	224.81	254.98	30.17				0.03		
	10/22/2021	13:49	13-10	90	1.35	254.98	301.48	46.50				0.04		
3	10/22/2021	10:44	29-27	90	1.90	0.00	33.60	33.60	302	122	92	0.03	Soil core shows clay at 29' bgs.	Expendable Tip
	10/22/2021	11:06	27-25	75	2.20	33.60	64.97	31.37				0.03		
	10/22/2021	11:29	25-23	48	2.25	64.97	98.30	33.33				0.03		
	10/22/2021	11:53	23-21	50	3.12	98.30	129.49	31.19				0.03		
	10/22/2021	12:10	21-19	60	3.04	129.49	163.47	33.98				0.03		
	10/22/2021	12:35	19-17	65	3.24	163.47	193.57	30.10				0.03		
	10/22/2021	12:53	17-15	65	3.62	193.57	227.38	33.81				0.03		
	10/22/2021	13:20	15-13	65	3.75	227.38	253.72	26.34				0.03		
	10/22/2021	13:50	13-10	80	3.32	253.72	301.52	47.80				0.04		
4	10/21/2021	15:01	27-25	100+	2.13	0.00	38.34	38.34	303	123	92	0.03	Small amount of surfacing from bore.	Expendable Tip
	10/21/2021	15:30	25-23	95	1.35	38.34	70.41	32.07				0.03		
	10/21/2021	15:45	23-21	48	2.90	70.41	106.91	36.50				0.03	Large amount of backpressure at the end of the interval. Reducing flow rate.	
	10/21/2021	16:13	21-19	22	2.81	106.91	143.21	36.30				0.03		
	10/21/2021	16:35	19-17	20	3.34	143.21	152.34	9.13				-	Small amount of surfacing from bore.	
	10/22/2021	8:45	19-17	20	3.36	152.34	179.96	27.62				0.03		
	10/22/2021	9:06	17-15	10	2.59	179.96	225.96	46.00				0.03		
	10/22/2021	9:29	15-13	12	2.50	225.96	261.34	35.38				0.03		
	10/22/2021	9:49	13-10	10	2.52	261.34	302.54	41.20				0.04		
5	10/20/2021	16:20	27-25	100+	0.98	0.00	20.73	20.73	302	122	92	0.03	Unable to achieve flow at deeper intervals. Lifted up until flow was achieved.	Expendable Tip
	10/20/2021	16:40	25-23	40	3.56	20.73	81.67	60.94				0.03	Fair amount of backpressure at the end of the interval.	
	10/21/2021	8:50	23-21	55	3.18	81.67	106.83	25.16				0.03		
	10/21/2021	9:09	21-19	35	3.50	106.83	142.96	36.13				0.03		
	10/21/2021	9:23	19-17	38	4.96	142.96	176.27	33.31				0.03		
	10/21/2021	9:38	17-15	15	4.66	176.27	211.51	35.24				0.03		
	10/21/2021	9:50	15-13	22	4.30	211.51	246.41	34.90				0.03		
	10/21/2021	10:06	13-10	20	4.26	246.41	301.74	55.33				0.04		
6	10/21/2021	15:01	27-25	100+	1.03	0.00	34.21	34.21	302	122	92	0.03	Small amount of back pressure at the end of the interval.	Expendable Tip
	10/21/2021	15:30	25-23	30	2.67	34.21	72.07	37.86				0.03		
	10/21/2021	15:46	23-21	24	3.29	72.07	107.83	35.76				0.03	Large amount of backpressure at the end of the interval. Reducing flow rate.	
	10/21/2021	16:13	21-19	22	2.68	107.83	142.83	35.00				0.03		
	10/21/2021	16:35	19-17	20	3.10	142.83	156.44	13.61				-		
	10/22/2021	8:44	19-17	30	4.32	156.44	178.07	21.63				0.03	Small amount of back pressure at the end of the interval.	
	10/22/2021	9:07	17-15	18	3.22	178.07	220.34	42.27				0.03		
	10/22/2021	9:29	15-13	15	2.89	220.34	262.81	42.47				0.03		
	10/22/2021	9:49	13-10	8	3.49	262.81	301.92	39.01				0.04		
7	10/21/2021	15:02	27-25	100+	1.38	0.00	36.32	36.32	301	122	92	0.03	Small amount of back pressure at the end of the interval.	Expendable Tip
	10/21/2021	15:31	25-23	28	3.13	36.32	72.56	36.24				0.03		
	10/21/2021	15:46	23-21	22	3.47	72.56	106.78	34.22				0.03	Large amount of backpressure at the end of the interval. Reducing flow rate.	
	10/21/2021	16:12	21-19	15	2.84	106.78	143.61	36.83				0.03		
	10/21/2021	16:34	19-17	15	3.20	143.61	152.19	8.58				-		
	10/22/2021	8:44	19-17	15	3.15	152.19	180.51	28.32				0.03	Small amount of back pressure at the end of the interval.	
	10/22/2021	9:07	17-15	12	3.90	180.51	221.71	41.20				0.03		
	10/22/2021	9:28	15-13	10	3.60	221.71	263.19	41.48				0.03		
	10/22/2021	9:49	13-10	5	3.45	263.19	301.47	38.28				0.04		
8	10/20/2021	16:20	27-25	100+	0.83	0.00	15.98	15.98	302	122	92	0.03	Unable to achieve flow at deeper intervals. Lifted up until flow was achieved.	Expendable Tip
	10/20/2021	16:40	25-23	40	3.73	15.98	80.64	64.66				0.03	Fair amount of back pressure at the end of the interval.	
	10/21/2021	8:50	23-21	25	2.86	80.64	107.83	27.19				0.03		
	10/21/2021	9:09	21-19	0	3.20	107.83	143.51	35.68				0.03		
	10/21/2021	9:23	19-17	28	3.04	143.51	175.83	32.32				0.03		
	10/21/2021	9:38	17-15	22	4.22	175.83	214.03	38.20				0.03		
	10/21/2021	9:50	15-13	18	3.92	214.03	250.37	36.34				0.03		
	10/21/2021	10:06	13-10	20	4.13	250.37	302.18	51.81				0.04		
9	10/21/2021	15:02	27-25	100+	1.03	0.00	33.07	33.07	303	123	92	0.03		Expendable Tip
	10/21/2021	15:31	25-23	78	3.22	33.07	72.34	39.27				0.03		
	10/21/2021	15:46	23-21	10	3.38	72.34	108.30	35.96				0.03		
	10/21/2021	16:12	21-19	5	3.49	108.30	144.07	35.77				0.03		
	10/21/2021	16:33	19-17	15	2.41	144.07	149.17	5.10				-		
	10/22/2021	8:44	19-17	28	3.19	149.17	180.83	31.66				0.03		
	10/22/2021	9:07	17-15	15	2.56	180.83	222.59	41.76				0.03		
	10/22/2021	9:29	15-13	8	3.30	222.59	265.92	43.33				0.03		
	10/22/2021	9:49	13-10	0	3.16	265.92	303.18	37.26				0.04		
10	10/20/2021	16:20	33-31	90	1.76	0.00	30.49	30.49	302	122	92	0.02		Expendable Tip
	10/20/2021	16:40	31-29	80	2.76	30.49	65.23	34.74				0.02	Fair amount of backpressure at the end of the interval.	
	10/21/2021	8:50	29-27	52	3.93	65.23	84.61	19.38				0.02	Small amount of backpressure at the end of the interval.	
	10/21/2021	9:09	27-25	38	3.54	84.61	107.83	23.22				0.02		
	10/21/2021	9:23	25-23	22	4.72	107.83	131.92	24.09				0.02		
	10/21/2021	9:38	23-21	12	3.87	131.92	158.63	26.71				0.02		
	10/21/2021	9:50	21-19	5	4.29	158.63	186.73	28.10				0.02		
	10/21/2021	10:06	19-17	5	4.32	186.73	217.31	30.58				0.02		
	10/21/2021	10:16	17-15	20	5.42	217.31	244.40	27.09				0.02		
	10/21/2021	10:23	15-13	20	5.34	244.40	270.90	26.50				0.02	Small amount of surfacing out of the bore.	
	10/21/2021	10:33	13-10	20	5.21	270.90	302.34	31.44				0.03		
11	10/20/2021	9:16	33-31	90	1.50	0.00	25.91	25.91	300	122	91	0.02		Expendable Tip
	10/20/2021	9:37	31-29	75	1.69	25.91	49.88	23.97				0.02		
	10/20/2021	9:52	29-27	90	2.05	49.88	80.16	30.28				0.02		
	10/20/2021	10:27	27-25	28	4.15	80.16	105.68	25.52				0.02		
	10/20/2021	10:41	25-23	5	4.24	105.68	130.50	24.82				0.02		
	10/20/2021	10:54	23-21	8	3.96	130.50	159.62	29.12				0.02		
	10/20/2021	11:06	21-19	12	4.98	159.62	183.96	24.34				0.02		
	10/20/2021	11:22	19-17	15	4.18	183.96	210.86	26.90				0.02		
	10/20/2021	11:33	17-15	15	4.92	210.86	234.18	23.32				0.02		
	10/20/2021	11:45	15-13	15	4.56	234.18	261.79	27.61				0.02		
	10/20/2021	12:00	13-10	15	4.73	261.79	300.45	38.66				0.03		
12	10/19/2021	14:52	33-31	80	2.65	0.00	28.51	28.51	305	123	93	0.02		Expendable Tip
	10/19/2021	15:07	31-29	70	2.14	28.51	53.61	25.10				0.02		
	10/19/2021	15:26	29-27	70	2.92	53.61	78.23	24.62				0.02		
	10/19/2021	15:42	27-25	65	2.86	78.23	105.28	27.05				0.02		
	10/19/2021	15:50	25-23	32	4.72	105.28	130.68	25.40				0.02		
	10/19/2021	15:57	23-21	20	3.59	130.68	159.62	28.94				0.02		
	10/19/2021	16:09	21-19	5	3.71	159.62	183.22	23.60				0.02		
	10/19/2021	16:21	19-17	5	3.69	183.22	210.36	27.14				0.02		
	10/19/2021	16:33	17-15	10	3.44	210.36	237.65	27.29				0.02		
	10/19/2021	16:41	15-13	10	4.31	237.65	263.47	25.82				0.02		
	10/19/2021	16:47	13-10	10	4.29	263.47	304.56	41.09				0.03		
13	10/20/2021	16:20	33-31	85	1.58	0.00	27.64	27.64	305	124	93	0.02		Expendable Tip
	10/20/2021	16:46	31-29	80	2.76	27.64	65.21	37.57				0.02	Fair amount of backpressure at the end of the interval.	
	10/21/2021	8:50	29-27	85	1.67	65.21	82.34	17.13				0.02		
	10/21/2021	9:09	27-25	85	1.79	82.34	110.28	27.94				0.02		
	10/21/2021	9:23	25-23	32	4.04	110.28	132.76	22.48				0.02		
	10/21/2021	9:38	23-21	15	4.21	132.76	158.90	26.14				0.02		
	10/21/2021	9:50	21-19	10	4.26	158.90	187.59	28.69				0.02		
	10/21/2021	10:06	19-17	10	4.55	187.59	215.34	27.75				0.02		
	10/21/2021	10:16	17-15	15	4.79	215.34	247.15	31.81				0.02		
	10/21/2021	10:23	15-13	15	4.83	247.15	269.18	22.03				0.02	Small amount of surfacing out of the bore.	
	10/21/2021	10:33	13-10	20	4.98	269.18	304.91	35.73				0.03		
14	10/19/2021	15:19	33-31	85	1.37	0.00	25.61	25.61	306	124	93	0.02	Sediment immediately heaved into the rods. Unable to achieve flow . Offsetting 2' West and redriving.	Expendable Tip
	10/19/2021	15:28	31-29	75	2.09	25.61	54.96	29.35				0.02		
	10/19/2021	15:42	29-27	65	2.68	54.96	80.56	25.60				0.02		
	10/19/2021	15:50	27-25	55	3.48	80.56	109.58	29.02				0.02		
	10/19/2021	15:58	25-23	38	4.59	109.58	137.86	28.28				0.02		
	10/19/2021	16:09	23-21	20	4.56	137.86	158.72	20.86				0.02		
	10/19/2021	16:21	21-19	18	4.74	158.72	184.65	25.93				0.02		
	10/19/2021	16:33	19-17	20	5.06	184.65	212.34	27.69				0.02		
	10/19/2021	16:41	17-15	22	4.68	212.34	239.81	27.47				0.02		
	10/19/2021	16:48	15-13	22	4.72	239.81	262.31	22.50				0.02		
	10/19/2021	16:59	13-10	35	5.56	262.31	305.72	43.41				0.03		

15	10/20/2021	9:21	33-31	90	0.98	0.00	25.89	25.89	303	123	92	0.02		Expendable Tip
	10/20/2021	9:37	31-29	78	1.20	25.89	50.36	24.47				0.02		
	10/20/2021	9:52	29-27	90	1.56	50.36	79.62	29.26				0.02	Fair amount of backpressure at the end of the interval.	
	10/20/2021	10:27	27-25	52	3.54	79.62	105.32	25.70				0.02		
	10/20/2021	10:41	25-23	38	4.44	105.32	130.83	25.51				0.02		
	10/20/2021	10:54	23-21	15	4.26	130.83	159.87	29.04				0.02		
	10/20/2021	11:06	21-19	10	4.16	159.87	182.12	22.25				0.02		
	10/20/2021	11:22	19-17	10	4.62	182.12	209.02	26.90				0.02		
	10/20/2021	11:33	17-15	35	4.13	209.02	229.46	20.44				0.02		
	10/20/2021	11:46	15-13	20	4.50	229.46	262.82	33.36				0.02		
	10/20/2021	12:00	13-10	18	4.64	262.82	302.96	40.14				0.03		
16	10/19/2021	14:52	33-31	70	3.10	0.00	28.49	28.49	304	123	92	0.02		Expendable Tip
	10/19/2021	15:07	31-29	22	3.94	28.49	55.83	27.34				0.02		
	10/19/2021	15:28	29-27	12	3.10	55.83	79.62	23.79				0.02		
	10/19/2021	15:42	27-25	5	4.15	79.62	109.23	29.61				0.02		
	10/19/2021	15:50	25-23	5	4.16	109.23	132.51	23.28				0.02		
	10/19/2021	15:57	23-21	5	3.32	132.51	159.77	27.26				0.02		
	10/19/2021	16:09	21-19	8	4.02	159.77	184.16	24.39				0.02		
	10/19/2021	16:22	19-17	5	3.94	184.16	210.43	26.27				0.02		
	10/19/2021	16:33	17-15	10	4.26	210.43	240.67	30.24				0.02		
	10/19/2021	16:41	15-13	12	4.56	240.67	264.30	23.63				0.02		
	10/19/2021	16:48	13-10	15	5.03	264.30	303.71	39.41				0.03		
17	10/20/2021	9:21	33-31	85	1.23	0.00	24.18	24.18	302	122	92	0.02		Expendable Tip
	10/20/2021	9:38	31-29	74	1.03	24.18	52.17	27.99				0.02		
	10/20/2021	9:52	29-27	60	3.42	52.17	82.17	30.00				0.02	Fair amount of backpressure at the end of the interval.	
	10/20/2021	10:27	27-25	40	3.88	82.17	107.83	25.66				0.02		
	10/20/2021	10:40	25-23	35	3.95	107.83	131.92	24.09				0.02		
	10/20/2021	10:54	23-21	42	4.02	131.92	160.27	28.35				0.02		
	10/20/2021	11:06	21-19	35	3.98	160.27	184.32	24.05				0.02		
	10/20/2021	11:21	19-17	35	4.23	184.32	211.12	26.80				0.02		
	10/20/2021	11:33	17-15	35	4.86	211.12	235.80	24.68				0.02		
	10/20/2021	11:45	15-13	10	4.12	235.80	261.38	25.58				0.02		
	10/20/2021	12:01	13-10	8	3.85	261.38	302.18	40.80				0.03		
18	10/19/2021	14:52	33-31	40	3.96	0.00	28.61	28.61	302	122	92	0.02		Expendable Tip
	10/19/2021	15:07	31-29	5	3.76	28.61	59.62	31.01				0.02		
	10/19/2021	15:28	29-27	5	3.78	59.62	82.37	22.75				0.02		
	10/19/2021	15:42	27-25	5	3.83	82.37	109.64	27.27				0.02		
	10/19/2021	15:50	25-23	8	4.02	109.64	133.74	24.10				0.02		
	10/19/2021	15:57	23-21	5	3.74	133.74	158.42	24.68				0.02		
	10/19/2021	16:09	21-19	10	3.83	158.42	185.07	26.65				0.02		
	10/19/2021	16:22	19-17	8	4.02	185.07	212.49	27.42				0.02		
	10/19/2021	16:33	17-15	8	3.99	212.49	240.69	28.20				0.02		
	10/19/2021	16:41	15-13	10	4.02	240.69	263.75	23.06				0.02		
	10/19/2021	16:48	13-10	15	5.59	263.75	302.19	38.44				0.03		
19	10/20/2021	9:21	33-31	85	1.04	0.00	24.79	24.79	308	125	94	0.02		Expendable Tip
	10/20/2021	9:38	31-29	5	3.38	24.79	58.61	33.82				0.02		
	10/20/2021	9:53	29-27	15	4.07	58.61	82.94	24.33				0.02		
	10/20/2021	10:27	27-25	15	4.56	82.94	106.49	23.55				0.02		
	10/20/2021	10:40	25-23	15	4.88	106.49	133.68	27.19				0.02		
	10/20/2021	10:54	23-21	14	4.60	133.68	159.55	25.87				0.02		
	10/20/2021	11:07	21-19	10	4.40	159.55	183.07	23.52				0.02		
	10/20/2021	11:21	19-17	10	4.43	183.07	211.08	28.01				0.02		
	10/20/2021	11:33	17-15	15	4.86	211.08	234.67	23.59				0.02		
	10/20/2021	11:45	15-13	14	4.34	234.67	262.34	27.67				0.02		
	10/20/2021	12:01	13-10	12	4.24	262.34	307.91	45.57				0.03		
20	10/19/2021	11:46	33-31	55	5.23	0.00	26.83	26.83	303	123	92	0.02		Expendable Tip
	10/19/2021	11:56	31-29	10	5.24	26.83	53.61	26.78				0.02		
	10/19/2021	12:07	29-27	10	4.84	53.61	81.34	27.73				0.02		
	10/19/2021	12:22	27-25	8	4.88	81.34	106.62	25.28				0.02		
	10/19/2021	12:37	25-23	8	4.43	106.62	130.54	23.92				0.02		
	10/19/2021	12:51	23-21	10	4.70	130.54	160.74	30.20				0.02		
	10/19/2021	13:00	21-19	5	4.54	160.74	185.26	24.52				0.02		
	10/19/2021	13:09	19-17	10	4.34	185.26	209.62	24.36				0.02		
	10/19/2021	13:20	17-15	5	4.38	209.62	237.35	27.73				0.02		
	10/19/2021	13:33	15-13	8	4.42	237.35	263.95	26.60				0.02		
	10/19/2021	13:47	13-10	5	4.23	263.95	302.94	38.99				0.03		
21	10/21/2021	11:24	33-31	25	3.62	0.00	29.66	29.66	304	123	92	0.02		Expendable Tip
	10/21/2021	11:38	31-29	5	3.54	29.66	53.45	23.79				0.02		
	10/21/2021	11:56	29-27	0	3.33	53.45	82.76	29.31				0.02		
	10/21/2021	12:13	27-25	5	3.00	82.76	108.34	25.58				0.02		
	10/21/2021	12:29	25-23	5	3.26	108.34	135.82	27.48				0.02		
	10/21/2021	12:47	23-21	10	4.78	135.82	159.58	23.76				0.02		
	10/21/2021	12:59	21-19	12	3.36	159.58	184.62	25.04				0.02		
	10/21/2021	13:14	19-17	10	3.55	184.62	212.59	27.97				0.02		
	10/21/2021	13:35	17-15	10	4.47	212.59	236.24	23.65				0.02		
	10/21/2021	13:50	15-13	12	4.70	236.24	268.31	32.07				0.02		
	10/21/2021	14:04	13-10	12	4.78	268.31	303.56	35.25				0.03		
22	10/19/2021	11:46	33-31	40	3.82	0.00	27.18	27.18	306	124	93	0.02		Expendable Tip
	10/19/2021	11:56	31-29	8	3.76	27.18	54.81	27.63				0.02		
	10/19/2021	12:07	29-27	15	4.14	54.81	79.93	25.12				0.02		
	10/19/2021	12:22	27-25	15	4.28	79.93	105.28	25.35				0.02		
	10/19/2021	12:37	25-23	18	3.99	105.28	134.71	29.43				0.02		
	10/19/2021	12:52	23-21	15	4.93	134.71	158.26	23.55				0.02		
	10/19/2021	13:01	21-19	10	4.19	158.26	184.65	26.39				0.02		
	10/19/2021	13:09	19-17	12	4.30	184.65	210.84	26.19				0.02		
	10/19/2021	13:21	17-15	10	3.98	210.84	237.60	26.76				0.02		
	10/19/2021	13:33	15-13	10	4.15	237.60	264.81	27.21				0.02		
	10/19/2021	13:47	13-10	5	3.68	264.81	305.71	40.90				0.03		
23	10/20/2021	13:05	33-31	20	3.64	0.00	30.82	30.82	305	123	93	0.02		Expendable Tip
	10/20/2021	13:21	31-29	12	4.42	30.82	58.91	28.09				0.02		
	10/20/2021	13:36	29-27	18	3.94	58.91	82.54	23.63				0.02		
	10/20/2021	13:55	27-25	18	4.73	82.54	110.52	27.98				0.02		
	10/20/2021	14:08	25-23	15	4.70	110.52	133.61	23.09				0.02		
	10/20/2021	14:22	23-21	20	4.89	133.61	160.58	26.97				0.02		
	10/20/2021	14:34	21-19	20	4.84	160.58	183.65	23.07				0.02		
	10/20/2021	14:47	19-17	20	5.05	183.65	212.05	28.40				0.02		
	10/20/2021	15:06	17-15	20	5.01	212.05	235.64	23.59				0.02		
	10/20/2021	15:18	15-13	20	5.09	235.64	265.91	30.27				0.02		
	10/20/2021	15:28	13-10	20	5.16	265.91	304.56	38.65				0.03		
24	10/19/2021	11:46	33-31	50	5.58	0.00	28.90	28.90	304	123	92	0.02		Expendable Tip
	10/19/2021	11:56	31-29	12	4.19	28.90	60.91	32.01				0.02		
	10/19/2021	12:07	29-27	10	3.98	60.91	81.33	20.42				0.02		
	10/19/2021	12:22	27-25	8	3.74	81.33	105.02	23.69				0.02		
	10/19/2021	12:36	25-23	10	4.83	105.02	132.96	27.94				0.02		
	10/19/2021	12:52	23-21	25	5.74	132.96	157.32	24.36				0.02		
	10/19/2021	13:01	21-19	14	4.92	157.32	183.71	26.39				0.02		
	10/19/2021	13:09	19-17	15	5.08	183.71	211.34	27.63				0.02		
	10/19/2021	13:21	17-15	12	4.74	211.34	236.98	25.64				0.02		
	10/19/2021	13:33	15-13	15	4.60	236.98	267.46	30.48				0.02		
	10/19/2021	13:48	13-10	15	4.11	267.46	303.69	36.23				0.03		
25	10/20/2021	13:05	33-31	90	1.02	0.00	23.61	23.61	302	122	92	0.02		Expendable Tip
	10/20/2021	13:21	31-29	70	1.96	23.61	50.18	26.57				0.02		
	10/20/2021	13:35	29-27	65	1.89	50.18	77.92	27.74				0.02		
	10/20/2021	13:56	27-25	70	2.15	77.92	104.37	26.45				0.02		
	10/20/2021	14:08	25-23	65	2.47	104.37	130.18	25.81				0.02		
	10/20/2021	14:22	23-21	55	2.99	130.18	156.85	26.67				0.02		
	10/20/2021	14:34	21-19	55	3.02	156.85	179.24	22.39				0.02		
	10/20/2021	14:47	19-17	55	3.09	179.24	209.17	29.93				0.02		
	10/20/2021	15:06	17-15	55	3.46	209.17	233.28	24.11				0.02		
	10/20/2021	15:18	15-13	55	3.42	233.28	261.40	28.12				0.02		
	10/20/2021	15:28	13-10	50	3.09	261.40	301.72	40.32				0.03		
26	10/19/2021	11:46	33-31	80	2.79	0.00	25.13	25.13	305	123	93	0.02		Expendable Tip
	10/19/2021	11:56	31-29	15	4.41	25.13	53.27	28.14				0.02		
	10/19/2021	12:07	29-27	14	4.28	53.27	82.15	28.88				0.02		
	10/19/2021	12:22	27-25	12	4.30	82.15	107.49	25.34				0.02		
	10/19/2021	12:36	25-23	12	4.48	107.49	131.29	23.80				0.02		
	10/19/2021	12:52	23-21	16	4.12	131.29	159.20	27.91				0.02		
	10/19/2021	13:01	21-19	16	4.18	159.20	182.59	23.39				0.02		
	10/19/2021	13:09	19-17	18	4.04	182.59	210.28	27.69				0.02		
	10/19/2021	13:21	17-15	12	4.67	210.28	238.44	28.16				0.02		
	10/19/2021	13:34	15-13	16	4.37	238.44	263.57	25.13				0.02		
	10/19/2021	13:48	13-10	15	4.58	263.57	304.81	41.24				0.03		
27	10/21/2021	11:24	33-31	70	1.02	0.00	23.18	23.18	302	122	92	0.02		Expendable Tip
	10/21/2021	11:38	31-29	50	1.99	23.18	50.31	27.13				0.02		
	10/21/2021	11:56	29-27	65	2.34	50.31	80.36	30.05				0.02		
	10/21/2021	12:13	27-25	90	2.46	80.36	106.73	26.37				0.02		
	10/21/2021	12:29	25-23	85	2.64	106.73	131.47	24.74				0.02		
	10/21/2021	12:48	23-21	80	2.79	131.47	154.06	22.59				0.02		
	10/21/2021	12:59	21-19	70	2.58	154.06	182.17	28.11				0.02		
	10/21/2021	13:15	19-17	65	2.64	182.17	209.72	27.55				0.02		
	10/21/2021	13:35	17-15	55	2.74	209.72	234.19	24.47				0.02		
	10/21/2021	13:50	15-13	65	3.02	234.19	260.47	26.28				0.02		
	10/21/2021	14:04	13-10	55	3.05	260.47	302.18	41.71				0.03		
28	10/20/2021	13:05	33-31	90	2.43	0.00	26.81	26.81	302	122	92	0.02		Expendable Tip
	10/20/2021	13:21	31-29	60	1.82	26.81	53.94	27.13				0.02		
	10/20/2021	13:35	29-27	65	2.31	53.94	79.73	25.79				0.02		
	10/20/2021	13:56	27-25	70	2.68	79.73	106.28	26.55				0.02		
	10/20/2021	14:08	25-23	60	3.18	106.28	130.29	24.01				0.02		
	10/20/2021	14:22	23-21	55	3.08	130.29	158.17	27.88				0.02		
	10/20/2021	14:35	21-19	55	3.02	158.17	181.91	23.74				0.02		
	10/20/2021	14:47	19-17	55	3.06	181.91	209.62	27.71				0.02		
	10/20/2021	15:06	17-15	55	3.18	209.62	234.55	24.93				0.02		
	10/20/2021	15:17	15-13	50	3.24	234.55	260.37	25.82				0.02		
	10/20/2021	15:28	13-10	50	3.41	260.37	301.65	41.28				0.03		

29	10/21/2021	11:24	33-31	75	1.59	0.00	24.08	24.08	303	123	92	0.02		Expendable Tip
	10/21/2021	11:38	31-29	55	2.11	24.08	51.68	27.60				0.02		
	10/21/2021	11:56	29-27	18	3.71	51.68	78.52	26.84				0.02		
	10/21/2021	12:13	27-25	10	3.15	78.52	104.25	25.73				0.02		
	10/21/2021	12:29	25-23	10	3.80	104.25	130.28	26.03				0.02		
	10/21/2021	12:48	23-21	10	4.12	130.28	157.49	27.21				0.02		
	10/21/2021	12:59	21-19	40	3.06	157.49	183.56	26.07				0.02		
	10/21/2021	13:15	19-17	32	3.36	183.56	209.38	25.82				0.02		
	10/21/2021	13:35	17-15	20	3.74	209.38	237.62	28.24				0.02		
	10/21/2021	13:50	15-13	30	3.55	237.62	262.34	24.72				0.02		
	10/21/2021	14:04	13-10	18	3.86	262.34	303.28	40.94				0.03		
30	10/20/2021	13:06	33-31	90	2.49	0.00	28.91	28.91	303	123	92	0.02		Expendable Tip
	10/20/2021	13:21	31-29	8	3.52	28.91	57.29	28.38				0.02		
	10/20/2021	13:35	29-27	5	3.40	57.29	82.64	25.35				0.02		
	10/20/2021	13:56	27-25	15	4.16	82.64	109.87	27.23				0.02		
	10/20/2021	14:08	25-23	8	4.27	109.87	131.64	21.77				0.02		
	10/20/2021	14:23	23-21	15	4.76	131.64	158.60	26.96				0.02		
	10/20/2021	14:35	21-19	15	4.99	158.60	184.26	25.66				0.02		
	10/20/2021	14:47	19-17	15	5.02	184.26	211.24	26.98				0.02		
	10/20/2021	15:06	17-15	15	5.32	211.24	237.18	25.94				0.02		
	10/20/2021	15:17	15-13	15	5.19	237.18	267.34	30.16				0.02		
	10/20/2021	15:28	13-10	15	5.23	267.34	302.56	35.22				0.03		
31	10/21/2021	11:24	33-31	50	2.74	0.00	28.73	28.73	303	123	92	0.02		Expendable Tip
	10/21/2021	11:38	31-29	28	3.56	28.73	53.48	24.75				0.02		
	10/21/2021	11:57	29-27	10	3.73	53.48	80.19	26.71				0.02		
	10/21/2021	12:13	27-25	5	3.92	80.19	109.62	29.43				0.02		
	10/21/2021	12:29	25-23	15	4.74	109.62	132.59	22.97				0.02		
	10/21/2021	12:48	23-21	15	4.56	132.59	158.63	26.04				0.02		
	10/21/2021	13:00	21-19	22	4.04	158.63	183.20	24.57				0.02		
	10/21/2021	13:16	19-17	22	3.98	183.20	210.35	27.15				0.02		
	10/21/2021	13:35	17-15	20	4.19	210.35	235.80	25.45				0.02		
	10/21/2021	13:49	15-13	25	4.19	235.80	263.72	27.92				0.02		
	10/21/2021	14:03	13-10	15	4.62	263.72	302.54	38.82				0.03		
32	10/28/2021	15:35	34-32	65	4.54	0.00	25.19	25.19	302	122	92	0.02		Expendable Tip
	10/28/2021	15:40	32-30	40	6.12	25.19	51.92	26.73				0.02		
	10/28/2021	15:46	30-28	48	6.16	51.92	75.93	24.01				0.02		
	10/28/2021	15:51	28-26	22	6.66	75.93	101.97	26.04				0.02		
	10/28/2021	15:57	26-24	30	6.75	101.97	126.74	24.77				0.02		
	10/28/2021	16:03	24-22	12	6.83	126.74	150.23	23.49				0.02		
	10/28/2021	16:06	22-20	12	6.86	150.23	175.34	25.11				0.02		
	10/28/2021	16:12	20-18	12	6.87	175.34	205.38	25.04				0.02		
	10/28/2021	16:20	18-16	15	6.89	205.38	225.16	24.78				0.02		
	10/28/2021	16:26	16-14	15	6.92	225.16	250.31	25.15				0.02		
	10/28/2021	16:32	14-12	15	6.89	250.31	275.36	25.05				0.02		
	10/28/2021	16:37	12-10	15	6.88	275.36	302.18	26.82				0.02		
33	10/28/2021	13:06	34-32	80	3.01	0.00	26.32	26.32	302	122	92	0.02		Expendable Tip
	10/28/2021	13:34	32-30	40	2.78	26.32	53.49	27.17				0.02		
	10/28/2021	13:42	30-28	18	2.78	53.49	76.77	23.28				0.02	Small amount of surfacing out of the bore. Sealed and continued.	
	10/28/2021	13:55	28-26	5	4.31	76.77	103.35	26.58				0.02		
	10/28/2021	14:02	26-24	5	4.80	103.35	127.28	23.93				0.02		
	10/28/2021	14:15	24-22	0	3.88	127.28	153.62	26.34				0.02		
	10/28/2021	14:22	22-20	5	3.50	153.62	178.96	25.34				0.02		
	10/28/2021	14:35	20-18	0	3.44	178.96	205.64	26.68				0.02		
	10/28/2021	14:47	18-16	0	3.72	205.64	229.06	23.42				0.02		
	10/28/2021	15:00	16-14	15	4.78	229.06	250.77	21.71				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:12	14-12	22	4.56	250.77	276.31	25.54				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:23	12-10	22	4.67	276.31	301.99	25.68				0.02	Small amount of surfacing out of bore. Sealed and continued.	
34	10/28/2021	9:47	34-32	100	1.43	0.00	23.59	23.59	301	122	91	0.02		Expendable Tip
	10/28/2021	10:00	32-30	80	1.48	23.59	49.17	25.58				0.02		
	10/28/2021	10:17	30-28	75	2.34	49.17	75.61	26.44				0.02		
	10/28/2021	10:32	28-26	70	2.25	75.61	100.34	24.73				0.02		
	10/28/2021	10:45	26-24	45	2.98	100.34	124.20	23.86				0.02		
	10/28/2021	11:00	24-22	65	2.86	124.20	150.50	26.30				0.02		
	10/28/2021	11:25	22-20	70	2.59	150.50	175.31	24.81				0.02		
	10/28/2021	11:39	20-18	75	2.68	175.31	200.74	25.43				0.02	Small amount of surfacing. Sealed and continued.	
	10/28/2021	11:56	18-16	72	2.79	200.74	225.95	25.21				0.02	Small amount of surfacing. Sealed and continued.	
	10/28/2021	12:05	16-14	72	2.68	225.95	251.06	25.11				0.02	Small amount of surfacing. Sealed and continued.	
	10/28/2021	12:25	14-12	70	3.06	251.06	274.88	23.82				0.02		
	10/28/2021	12:29	12-10	70	3.02	274.88	301.06	26.17				0.02		
35	10/28/2021	13:06	34-32	80	1.99	0.00	25.09	25.09	305	124	93	0.02		Expendable Tip
	10/28/2021	13:33	32-30	12	2.76	25.09	51.22	26.13				0.02		
	10/28/2021	13:42	30-28	0	2.74	51.22	75.20	23.98				0.02		
	10/28/2021	13:55	28-26	10	4.56	75.20	103.67	28.47				0.02		
	10/28/2021	14:02	26-24	10	4.54	103.67	126.02	22.35				0.02		
	10/28/2021	14:15	24-22	90	2.16	126.02	154.03	28.01				0.02		
	10/28/2021	14:22	22-20	80	2.18	154.03	178.51	24.48				0.02		
	10/28/2021	14:35	20-18	12	4.01	178.51	204.99	26.48				0.02		
	10/28/2021	14:47	18-16	15	4.14	204.99	228.33	23.34				0.02		
	10/28/2021	15:00	16-14	20	4.69	228.33	254.76	26.43				0.02		
	10/28/2021	15:12	14-12	32	4.89	254.76	279.06	24.30				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:23	12-10	30	4.56	279.06	305.17	26.11				0.02	Small amount of surfacing out of bore. Sealed and continued.	
36	10/28/2021	9:47	34-32	90	1.22	0.00	24.82	24.82	303	123	92	0.02		Expendable Tip
	10/28/2021	10:00	32-30	70	2.01	24.82	52.90	28.08				0.02		
	10/28/2021	10:17	30-28	60	2.55	52.90	76.90	24.00				0.02		
	10/28/2021	10:32	28-26	60	2.37	76.90	100.95	24.05				0.02		
	10/28/2021	10:45	26-24	70	2.36	100.95	125.19	24.24				0.02		
	10/28/2021	11:00	24-22	70	2.49	125.19	150.23	25.04				0.02		
	10/28/2021	11:25	22-20	75	2.48	150.23	178.62	28.39				0.02	Small amount of surfacing. Sealed and continued.	
	10/28/2021	11:39	20-18	75	2.69	178.62	200.73	22.11				0.02	Small amount of surfacing. Sealed and continued.	
	10/28/2021	11:56	18-16	70	2.99	200.73	225.19	24.46				0.02	Small amount of surfacing. Sealed and continued.	
	10/28/2021	12:05	16-14	70	3.02	225.19	250.68	25.49				0.02		
	10/28/2021	12:25	14-12	70	3.05	250.68	274.62	23.94				0.02		
	10/28/2021	12:29	12-10	70	3.01	274.62	302.89	28.27				0.02		
37	10/28/2021	13:06	34-32	90	2.01	0.00	25.99	25.99	303	123	92	0.02		Expendable Tip
	10/28/2021	13:35	32-30	80	4.34	25.99	51.67	25.68				0.02		
	10/28/2021	13:42	30-28	75	4.52	51.67	77.09	25.42				0.02		
	10/28/2021	13:55	28-26	40	3.75	77.09	102.78	25.69				0.02		
	10/28/2021	14:02	26-24	35	3.47	102.78	125.06	22.28				0.02		
	10/28/2021	14:15	24-22	45	3.74	125.06	150.79	25.73				0.02		
	10/28/2021	14:22	22-20	35	3.97	150.79	176.07	25.28				0.02		
	10/28/2021	14:35	20-18	22	4.31	176.07	201.33	25.26				0.02		
	10/28/2021	14:47	18-16	45	3.68	201.33	226.85	25.52				0.02		
	10/28/2021	15:00	16-14	40	3.02	226.85	255.53	28.68				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:12	14-12	45	3.16	255.53	278.49	22.96				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:23	12-10	45	3.26	278.49	302.66	24.17				0.02		
38	10/28/2021	9:47	34-32	35	2.22	0.00	27.63	27.63	306	124	93	0.02		Expendable Tip
	10/28/2021	10:01	32-30	0	2.49	27.63	51.86	24.23				0.02		
	10/28/2021	10:18	30-28	0	2.40	51.86	78.37	26.51				0.02		
	10/28/2021	10:32	28-26	0	2.38	78.37	104.36	25.99				0.02		
	10/28/2021	10:47	26-24	12	4.13	104.36	126.35	21.99				0.02		
	10/28/2021	10:59	24-22	8	4.78	126.35	153.69	27.34				0.02		
	10/28/2021	11:25	22-20	10	4.56	153.69	177.05	23.36				0.02		
	10/28/2021	11:38	20-18	12	4.71	177.05	206.87	29.82				0.02		
	10/28/2021	11:56	18-16	10	4.65	206.87	227.28	20.41				0.02		
	10/28/2021	12:05	16-14	12	4.72	227.28	256.01	28.73				0.02		
	10/28/2021	12:25	14-12	12	4.56	256.01	278.15	22.14				0.02		
	10/28/2021	12:29	12-10	12	4.62	278.15	305.79	27.64				0.02		
39	10/28/2021	13:06	34-32	100+	2.18	0.00	22.69	22.69	302	122	92	0.02		Expendable Tip
	10/28/2021	13:35	32-30	90	4.31	22.69	52.07	29.38				0.02		
	10/28/2021	13:42	30-28	85	4.06	52.07	78.03	25.96				0.02		
	10/28/2021	13:54	28-26	70	2.86	78.03	100.99	22.96				0.02		
	10/28/2021	14:02	26-24	70	2.89	100.99	124.56	23.57				0.02		
	10/28/2021	14:16	24-22	90	3.65	124.56	150.28	25.72				0.02		
	10/28/2021	14:22	22-20	80	4.03	150.28	172.37	22.09				0.02		
	10/28/2021	14:35	20-18	80	2.54	172.37	200.49	28.12				0.02		
	10/28/2021	14:47	18-16	90	2.19	200.49	225.61	25.12				0.02		
	10/28/2021	15:00	16-14	90	2.37	225.61	249.44	23.83				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:12	14-12	80	2.45	249.44	275.46	26.02				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	10/28/2021	15:23	12-10	80	2.56	275.46	301.59	26.13				0.02		
40	10/28/2021	9:47	34-32	52	2.45	0.00	27.91	27.91	306	124	93	0.02		Expendable Tip
	10/28/2021	10:00	32-30	10	3.43	27.91	53.68	25.77				0.02		
	10/28/2021	10:18	30-28	10	3.29	53.68	78.63	24.95				0.02		
	10/28/2021	10:32	28-26	12	3.19	78.63	104.26	25.63				0.02		
	10/28/2021	10:47	26-24	22	4.71	104.26	127.52	23.26				0.02		
	10/28/2021	10:59	24-22	22	4.93	127.52	153.14	25.62				0.02		
	10/28/2021	11:26	22-20	28	4.36	153.14	178.33	25.19				0.02		
	10/28/2021	11:38	20-18	32	4.29	178.33	205.58	27.25				0.02		
	10/28/2021	11:56	18-16	18	4.32	205.58	228.49	22.91				0.02		
	10/28/2021	12:05	16-14	18	4.39	228.49	258.33	29.84				0.02		
	10/28/2021	12:25	14-12	20	4.45	258.33	280.61	22.28				0.02		
	10/28/2021	12:30	12-10	22	4.78	280.61	305.91	25.30				0.02		
41	11/2/2021	9:35	34-30	85	2.37	0.00	49.61	49.61	301	122	91	0.04	Small amount of surfacing out of bore. Sealed and continued.	Expendable Tip
	11/2/2021	10:12	30-28	22	3.69	49.61	75.83	26.22				0.02		
	11/2/2021	10:28	28-26	18	3.21	75.83	100.26	24.43				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	11/2/2021	10:42	26-24	25	3.64	100.26	125.46	25.20				0.02		
	11/2/2021	10:58	24-22	25	3.12	125.46	148.32	22.86				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	11/2/2021	11:07	22-20	30	3.24	148.32	174.61	26.29				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	11/2/2021	11:19	20-18	35	3.06	174.61	200.34	25.73				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	11/2/2021	11:33	18-16	35	3.01	200.34	224.16	23.82				0.02		
	11/2/2021	11:52	16-14	35	3.04	224.16	249.18	25.02				0.02		
	11/2/2021	12:23	14-12	30	3.00	249.18	273.61	24.43				0.02		
	11/2/2021	12:38	12-10	20	2.98	273.61	300.68	27.07				0.02		
42	11/2/2021	9:36	34-32	22	4.02	0.00	27.83	27.83	303	123	92	0.02		Expendable Tip
	11/2/2021	9:57	32-30	10	3.94	27.83	52.68	24.85				0.02		
	11/2/2021	10:12	30-28	5	4.45	52.68	78.49	25.81				0.02		
	11/2/2021	10:28	28-26	15	4.93	78.49	103.56	25.07				0.02		
	11/2/2021	10:42	26-24	10	4.68	103.56	126.71	23.15				0.02		
	11/2/2021	10:58	24-22	12	4.64	126.71	153.65	26.94				0.02		
	11/2/2021	11:07	22-20	12	4.64	153.65	178.20	24.55				0.02		
	11/2/2021	11:19	20-18	8	3.98	178.20	202.65	24.45				0.02		
	11/2/2021	11:33	18-16	8	4.03	202.65	226.89	24.24				0.02		
	11/2/2021	11:52	16-14	10	4.68	226.89	251.06	24.17				0.02		
	11/2/2021	12:22	14-12	5	3.19	251.06	276.91	25.85				0.02		
	11/2/2021	12:38	12-10	5	3.24	276.91	303.49	26.58				0.02		

43	11/2/2021	13:19	34-32	80	3.32	0.00	26.18	26.18	305	124	93	0.02		Expendable Tip
	11/2/2021	13:27	32-30	20	4.99	26.18	49.57	23.39				0.02		
	11/2/2021	13:34	30-28	12	5.82	49.57	75.50	25.93				0.02		
	11/2/2021	13:42	28-26	12	5.78	75.50	101.30	25.80				0.02		
	11/2/2021	13:48	26-24	12	5.68	101.30	120.88	19.58				0.02		
	11/2/2021	13:54	24-22	15	5.94	120.88	150.24	29.36				0.02		
	11/2/2021	14:07	22-20	15	5.62	150.24	176.32	26.08				0.02		
	11/2/2021	14:16	20-18	15	6.12	176.32	204.36	28.04				0.02		
	11/2/2021	14:20	18-16	22	5.92	204.36	227.48	23.12				0.02		
	11/2/2021	14:26	16-14	25	5.69	227.48	253.61	26.13				0.02		
	11/2/2021	14:35	14-12	15	5.25	253.61	278.20	24.59				0.02		
	11/2/2021	14:42	12-10	15	5.16	278.20	305.22	27.02				0.02		
44	11/2/2021	9:36	34-32	65	3.97	0.00	28.92	28.92	304	123	92	0.02		Expendable Tip
	11/2/2021	9:57	32-30	8	3.48	28.92	53.74	24.82				0.02		
	11/2/2021	10:12	30-28	12	4.16	53.74	76.18	22.44				0.02		
	11/2/2021	10:27	28-26	5	4.42	76.18	100.25	24.07				0.02		
	11/2/2021	10:42	26-24	5	4.02	100.25	126.81	26.56				0.02		
	11/2/2021	10:59	24-22	15	4.96	126.81	154.75	27.94				0.02		
	11/2/2021	11:07	22-20	15	4.68	154.75	176.03	21.28				0.02		
	11/2/2021	11:19	20-18	10	4.72	176.03	201.99	25.96				0.02		
	11/2/2021	11:33	18-16	15	4.26	201.99	227.61	25.62				0.02		
	11/2/2021	11:53	16-14	15	4.13	227.61	252.31	24.70				0.02		
	11/2/2021	12:22	14-12	5	3.48	252.31	277.61	25.30				0.02		
	11/2/2021	12:38	12-10	5	3.61	277.61	304.29	26.68				0.02		
45	11/2/2021	13:20	34-32	72	4.32	0.00	24.74	24.74	304	123	92	0.02		Expendable Tip
	11/2/2021	13:27	32-30	22	6.04	24.74	52.86	28.12				0.02		
	11/2/2021	13:34	30-28	18	5.36	52.86	77.31	24.45				0.02		
	11/2/2021	13:42	28-26	18	6.08	77.31	104.20	26.89				0.02		
	11/2/2021	13:48	26-24	15	6.04	104.20	127.27	23.07				0.02		
	11/2/2021	13:55	24-22	20	5.80	127.27	153.67	26.40				0.02		
	11/2/2021	14:07	22-20	18	5.62	153.67	177.82	24.15				0.02		
	11/2/2021	14:16	20-18	20	5.09	177.82	203.56	25.74				0.02		
	11/2/2021	14:20	18-16	24	4.86	203.56	227.89	24.33				0.02		
	11/2/2021	14:26	16-14	32	5.36	227.89	253.16	25.27				0.02		
	11/2/2021	14:35	14-12	22	6.10	253.16	276.83	23.67				0.02		
	11/2/2021	14:42	12-10	25	5.49	276.83	304.28	27.45				0.02		
46	11/2/2021	9:36	34-32	90	2.50	0.00	23.48	23.48	303	123	92	0.02	Small amount of surfacing out of bore. Sealed and continued.	Expendable Tip
	11/2/2021	9:57	32-30	5	3.02	23.48	50.23	26.75				0.02		
	11/2/2021	10:12	30-28	8	3.45	50.23	76.32	26.09				0.02		
	11/2/2021	10:27	28-26	8	4.12	76.32	101.79	25.47				0.02		
	11/2/2021	10:42	26-24	5	4.03	101.79	127.81	26.02				0.02		
	11/2/2021	10:59	24-22	22	4.78	127.81	155.09	27.28				0.02		
	11/2/2021	11:07	22-20	22	4.56	155.09	180.51	25.42				0.02		
	11/2/2021	11:18	20-18	22	4.31	180.51	204.79	24.28				0.02		
	11/2/2021	11:33	18-16	20	4.45	204.79	227.59	22.80				0.02		
	11/2/2021	11:53	16-14	18	4.34	227.59	253.68	26.09				0.02	Small amount of surfacing out of bore. Sealed and continued.	
	11/2/2021	12:23	14-12	5	3.33	253.68	276.11	22.43				0.02		
	11/2/2021	12:38	12-10	5	3.21	276.11	303.22	27.11				0.02		
47	11/1/2021	13:19	34-32	82	2.87	0.00	26.78	26.78	303	123	92	0.02		Expendable Tip
	11/1/2021	13:31	32-30	12	3.71	26.78	59.75	32.97				0.02		
	11/1/2021	13:41	30-28	7	3.86	59.75	78.32	18.57				0.02		
	11/1/2021	14:04	28-26	15	3.66	78.32	101.93	23.61				0.02		
	11/1/2021	14:17	26-24	5	3.42	101.93	132.12	30.19				0.02		
	11/1/2021	14:42	24-22	10	3.65	132.12	150.02	17.90				0.02		
	11/1/2021	15:02	22-20	12	4.12	150.02	175.23	25.21				0.02		
	11/1/2021	15:13	20-18	15	4.31	175.23	202.96	27.73				0.02		
	11/1/2021	15:28	18-16	15	4.26	202.96	225.27	22.31				0.02		
	11/1/2021	15:39	16-14	15	4.32	225.27	251.46	26.19				0.02		
	11/1/2021	15:48	14-12	15	4.19	251.46	275.98	24.52				0.02		
	11/1/2021	15:59	12-10	15	4.29	275.98	303.45	27.47				0.02		
48	11/1/2021	9:56	34-32	90	1.98	0.00	24.33	24.33	301	122	92	0.02		Expendable Tip
	11/1/2021	10:10	32-30	90	2.02	24.33	49.58	25.25				0.02		
	11/1/2021	10:24	30-28	90	2.05	49.58	75.61	26.03				0.02		
	11/1/2021	10:49	28-26	80	2.25	75.61	100.27	24.66				0.02		
	11/1/2021	10:57	26-24	75	2.19	100.27	124.35	24.08				0.02		
	11/1/2021	11:14	24-22	75	2.09	124.35	150.57	26.22				0.02		
	-	-	22-20	-	-	150.57	150.57	0.00				-	Surfacing out of bore. Unable to seal. Lifting to the next interval.	
	11/1/2021	11:42	20-18	45	2.25	150.57	180.36	29.79				0.04		
	11/1/2021	11:58	18-16	55	2.36	180.36	210.78	30.42				0.02		
	11/1/2021	12:06	16-14	55	2.39	210.78	240.36	29.58				0.02		
	11/1/2021	12:13	14-12	55	2.64	240.36	271.36	31.00				0.02		
	11/1/2021	12:22	12-10	55	2.67	271.36	301.25	29.89				0.02		
49	11/1/2021	13:19	34-32	90	2.57	0.00	25.13	25.13	305	123	93	0.02		Expendable Tip
	11/1/2021	13:31	32-30	15	4.22	25.13	50.35	25.22				0.02		
	11/1/2021	13:42	30-28	5	3.96	50.35	74.96	24.61				0.02		
	11/1/2021	14:04	28-26	10	3.92	74.96	101.77	26.81				0.02		
	11/1/2021	14:17	26-24	10	3.42	101.77	122.84	21.07				0.02		
	11/1/2021	14:42	24-22	10	3.24	122.84	150.36	27.52				0.02		
	11/1/2021	15:02	22-20	10	3.59	150.36	176.91	26.55				0.02		
	11/1/2021	15:13	20-18	12	4.03	176.91	202.13	25.22				0.02		
	11/1/2021	15:28	18-16	12	4.03	202.13	224.96	22.83				0.02		
	11/1/2021	15:39	16-14	12	4.12	224.96	251.66	26.70				0.02		
	11/1/2021	15:48	14-12	12	4.03	251.66	274.32	22.66				0.02		
	11/1/2021	15:59	12-10	15	4.12	274.32	304.65	30.33				0.02		
50	11/1/2021	9:56	34-32	32	2.79	0.00	25.88	25.88	304	123	92	0.02		Expendable Tip
	11/1/2021	10:11	32-30	5	3.13	25.88	53.86	27.98				0.02		
	11/1/2021	10:24	30-28	5	3.49	53.86	75.22	21.36				0.02		
	11/1/2021	10:49	28-26	5	3.17	75.22	102.49	27.27				0.02		
	11/1/2021	10:57	26-24	5	3.19	102.49	126.37	23.88				0.02		
	11/1/2021	11:14	24-22	5	3.25	126.37	153.94	27.57				0.02		
	11/1/2021	11:31	22-20	5	4.18	153.94	177.69	23.75				0.02		
	11/1/2021	11:48	20-18	5	4.25	177.69	202.17	24.48				0.02		
	11/1/2021	11:58	18-16	5	4.32	202.17	226.43	24.26				0.02		
	11/1/2021	12:06	16-14	5	3.99	226.43	252.11	25.68				0.02		
	11/1/2021	12:13	14-12	8	4.02	252.11	276.02	23.91				0.02		
	11/1/2021	12:22	12-10	12	4.12	276.02	303.52	27.50				0.02		
51	10/29/2021	12:39	34-32	90	1.48	0.00	25.62	25.62	303	123	92	0.02		Expendable Tip
	10/29/2021	12:52	32-30	42	3.56	25.62	50.27	24.65				0.02		
	10/29/2021	13:01	30-28	50	3.49	50.27	75.19	24.92				0.02		
	10/29/2021	13:13	28-26	35	3.28	75.19	101.11	25.92				0.02		
	10/29/2021	13:24	26-24	30	3.46	101.11	125.73	24.62				0.02		
	10/29/2021	13:36	24-22	5	4.14	125.73	153.69	27.96				0.02		
	10/29/2021	13:42	22-20	5	4.23	153.69	176.88	23.19				0.02		
	10/29/2021	13:53	20-18	8	4.67	176.88	201.40	24.52				0.02		
	10/29/2021	14:04	18-16	10	4.51	201.40	226.03	24.63				0.02		
	10/29/2021	14:13	16-14	10	4.10	226.03	254.88	28.85				0.02		
	10/29/2021	14:20	14-12	10	4.46	254.88	276.91	22.03				0.02		
	10/29/2021	14:30	12-10	12	4.62	276.91	302.57	25.66				0.02		
52	10/29/2021	9:45	34-32	82	1.89	0.00	25.88	25.88	305	124	93	0.02		Expendable Tip
	10/29/2021	10:02	32-30	12	2.72	25.88	52.19	26.31				0.02		
	10/29/2021	10:14	30-28	40	4.98	52.19	76.31	24.12				0.02		
	10/29/2021	10:24	28-26	5	3.88	76.31	102.87	26.56				0.02		
	10/29/2021	10:33	26-24	15	3.72	102.87	126.38	23.51				0.02		
	10/29/2021	10:46	24-22	10	4.70	126.38	150.24	23.86				0.02		
	10/29/2021	10:52	22-20	8	4.18	150.24	177.91	27.67				0.02		
	10/29/2021	11:03	20-18	10	4.08	177.91	202.46	24.55				0.02		
	10/29/2021	11:13	18-16	10	4.11	202.46	227.92	25.46				0.02		
	10/29/2021	11:23	16-14	10	4.09	227.92	254.36	26.44				0.02		
	10/29/2021	11:33	14-12	15	4.03	254.36	278.92	24.56				0.02		
	10/29/2021	11:39	12-10	15	4.12	278.92	305.16	26.24				0.02		
53	10/29/2021	12:39	34-32	95	2.87	0.00	26.18	26.18	304	123	92	0.02		Expendable Tip
	10/29/2021	12:52	32-30	18	4.92	26.18	51.64	25.46				0.02		
	10/29/2021	13:00	30-28	20	4.18	51.64	76.20	24.56				0.02		
	10/29/2021	13:13	28-26	5	3.61	76.20	101.63	25.43				0.02		
	10/29/2021	13:23	26-24	10	3.99	101.63	126.89	25.26				0.02		
	10/29/2021	13:36	24-22	12	3.99	126.89	150.27	23.38				0.02		
	10/29/2021	13:42	22-20	12	4.02	150.27	175.63	25.36				0.02		
	10/29/2021	13:53	20-18	18	4.63	175.63	202.58	26.95				0.02		
	10/29/2021	14:04	18-16	18	4.53	202.58	227.61	25.03				0.02		
	10/29/2021	14:14	16-14	5	3.68	227.61	253.66	26.05				0.02		
	10/29/2021	14:20	14-12	8	4.00	253.66	277.91	24.25				0.02		
	10/29/2021	14:30	12-10	10	4.25	277.91	303.59	25.68				0.02		
54	10/29/2021	9:46	34-32	90	1.82	0.00	24.80	24.80	303	123	92	0.02		Expendable Tip
	10/29/2021	10:02	32-30	22	3.19	24.80	50.36	25.56				0.02		
	10/29/2021	10:14	30-28	40	3.37	50.36	76.19	25.83				0.02		
	10/29/2021	10:24	28-26	8	3.70	76.19	101.66	25.47				0.02		
	10/29/2021	10:33	26-24	12	3.88	101.66	126.49	24.83				0.02		
	10/29/2021	10:46	24-22	8	4.56	126.49	149.83	23.34				0.02		
	10/29/2021	10:53	22-20	8	4.09	149.83	175.26	25.43				0.02		
	10/29/2021	11:03	20-18	8	4.08	175.26	201.65	26.39				0.02		
	10/29/2021	11:13	18-16	10	4.16	201.65	226.07	24.42				0.02		
	10/29/2021	11:23	16-14	8	4.03	226.07	252.66	26.59				0.02		
	10/29/2021	11:33	14-12	12	4.10	252.66	274.32	21.66				0.02		
	10/29/2021	11:39	12-10	20	4.32	274.32	302.59	28.27				0.02		
55	10/29/2021	12:39	34-32	70	3.52	0.00	27.54	27.54	304	123	92	0.02		Expendable Tip
	10/29/2021	12:52	32-30	40	4.32	27.54	51.88	24.34				0.02		
	10/29/2021	13:00	30-28	50	4.04	51.88	76.70	24.82				0.02		
	10/29/2021	13:13	28-26	18	4.36	76.70	102.68	25.98				0.02		
	10/29/2021	13:23	26-24	25	4.69	102.68	128.93	26.25				0.02		
	10/29/2021	13:36	24-22	5	4.38	128.93	153.66	24.73				0.02		
	10/29/2021	13:42	22-20	15	4.18	153.66	176.99	23.33				0.02		
	10/29/2021	13:53	20-18	50	3.78	176.99	203.47	26.48				0.02		
	10/29/2021	14:04	18-16	20	4.16	203.47	226.49	23.02				0.02		
	10/29/2021	14:14	16-14	10	4.02	226.49	251.30	24.81				0.02		
	10/29/2021	14:20	14-12	10	4.23	251.30	276.89	25.59				0.02		
	10/29/2021	14:30	12-10	10	4.26	276.89	304.11	27.22				0.02		
56	10/29/2021	9:47	34-32	72	2.91	0.00	26.71	26.71	295	120	90	0.02		Expendable Tip
	10/29/2021	10:03	32-30	22	3.91	26.71	52.18	25.47				0.02		
	10/29/2021	10:14	30-28	42	3.65	52.18	75.82	23.64				0.02		
	10/29/2021	10:24	28-26	8	3.98	75.82	101.38	25.56				0.02		
	10/29/2021	10:33	26-24	12	4.06	101.38	125.89	24.51				0.02		
	10/29/2021	10:46	24-22	5	4.53	125.89	148.62	22.73				0.02		
	10/29/2021	10:53	22-20	10	4.00	148.62	175.31	26.69				0.02		
	10/29/2021	11:04	20-18	40	3.26	175.31	199.62	24.31				0.02		
	10/29/2021	11:13	18-16	40	3.23	199.62	224.33	24.71				0.02		
	10/29/2021	11:23	16-14	40	3.25	224.33	249.93	25.60				0.02	Fair amount of surfacing out of bore. Sealed and continued.	
	10/29/2021	11:33	14-12	40	3.26	249.93	270.41	20.48				0.02	Fair amount of surfacing out of bore. Sealed and continued.	
	10/29/2021	11:39	12-10	60	3.05	270.41	295.06	24.65				0.02	Fair amount of surfacing out of bore. Sealed and continued.	

57	10/29/2021	12:39	34-32	65	3.96	0.00	28.31	28.31	306	124	93	0.02		Expendable Tip
	10/29/2021	12:50	32-30	18	3.94	28.31	52.42	24.11				0.02		
	10/29/2021	13:00	30-28	20	4.50	52.42	77.28	24.86				0.02		
	10/29/2021	13:13	28-26	5	3.08	77.28	101.22	23.94				0.02		
	10/29/2021	13:23	26-24	10	3.68	101.22	126.70	25.48				0.02		
	10/29/2021	13:36	24-22	15	4.47	126.70	151.09	24.39				0.02		
	10/29/2021	13:42	22-20	18	4.22	151.09	176.32	25.23				0.02		
	10/29/2021	13:53	20-18	18	4.96	176.32	201.58	25.26				0.02		
	10/29/2021	14:04	18-16	20	4.55	201.58	225.79	24.21				0.02		
	10/29/2021	14:14	16-14	15	4.64	225.79	251.31	25.52				0.02		
	10/29/2021	14:20	14-12	18	4.68	251.31	279.61	28.30				0.02		
	10/29/2021	14:30	12-10	15	4.57	279.61	305.82	26.21				0.02		
58	10/29/2021	9:47	34-32	54	2.02	0.00	25.79	25.79	303	123	92	0.02		Expendable Tip
	10/29/2021	10:03	32-30	12	3.87	25.79	51.32	25.53				0.02		
	10/29/2021	10:14	30-28	20	3.78	51.32	75.54	24.22				0.02		
	10/29/2021	10:24	28-26	12	4.42	75.54	100.26	24.72				0.02		
	10/29/2021	10:33	26-24	18	4.47	100.26	127.57	27.31				0.02		
	10/29/2021	10:46	24-22	12	3.86	127.57	152.19	24.62				0.02		
	10/29/2021	10:53	22-20	14	3.90	152.19	176.93	24.74				0.02		
	10/29/2021	11:04	20-18	15	4.12	176.93	200.31	23.38				0.02		
	10/29/2021	11:13	18-16	12	4.03	200.31	225.16	24.85				0.02		
	10/29/2021	11:23	16-14	12	4.12	225.16	252.61	27.45				0.02		
	10/29/2021	11:33	14-12	12	4.08	252.61	276.34	23.73				0.02		
	10/29/2021	11:39	12-10	15	4.13	276.34	302.57	26.23				0.02		
59	11/1/2021	13:20	34-32	52	3.94	0.00	30.31	30.31	304	123	92	0.02		Expendable Tip
	11/1/2021	13:31	32-30	15	4.98	30.31	55.65	25.34				0.02		
	11/1/2021	13:42	30-28	10	4.10	55.65	75.54	19.89				0.02		
	11/1/2021	14:05	28-26	12	3.99	75.54	103.53	27.99				0.02		
	11/1/2021	14:17	26-24	12	4.42	103.53	129.67	26.14				0.02		
	11/1/2021	14:43	24-22	10	3.46	129.67	155.32	25.65				0.02		
	11/1/2021	15:02	22-20	12	3.95	155.32	175.61	20.29				0.02		
	11/1/2021	15:13	20-18	12	3.99	175.61	200.15	24.54				0.02		
	11/1/2021	15:28	18-16	15	4.26	200.15	226.18	26.03				0.02		
	11/1/2021	15:39	16-14	15	4.23	226.18	253.47	27.29				0.02		
	11/1/2021	15:48	14-12	20	4.56	253.47	276.88	23.41				0.02		
	11/1/2021	15:59	12-10	15	4.03	276.88	303.61	26.73				0.02		
60	11/1/2021	9:55	34-32	50	3.17	0.00	25.71	25.71	306	124	93	0.02		Expendable Tip
	11/1/2021	10:11	32-30	12	3.56	25.71	51.68	25.97				0.02		
	11/1/2021	10:24	30-28	12	3.49	51.68	75.99	24.31				0.02		
	11/1/2021	10:49	28-26	12	3.47	75.99	102.47	26.48				0.02		
	11/1/2021	10:58	26-24	12	3.51	102.47	126.44	23.97				0.02		
	11/1/2021	11:14	24-22	12	3.50	126.44	150.02	23.58				0.02		
	11/1/2021	11:31	22-20	12	4.68	150.02	176.91	26.89				0.02		
	11/1/2021	11:48	20-18	12	4.62	176.91	203.51	26.60				0.02		
	11/1/2021	11:58	18-16	12	4.52	203.51	226.64	23.13				0.02		
	11/1/2021	12:07	16-14	12	4.26	226.64	252.88	26.24				0.02		
	11/1/2021	12:13	14-12	15	4.25	252.88	279.57	26.69				0.02		
	11/1/2021	12:22	12-10	15	4.32	279.57	305.62	26.05				0.02		
61	11/1/2021	13:20	34-32	88	1.96	0.00	25.49	25.49	308	125	94	0.02		Expendable Tip
	11/1/2021	13:31	32-30	15	4.19	25.49	52.40	26.91				0.02		
	11/1/2021	13:43	30-28	10	4.50	52.40	81.16	28.76				0.02		
	11/1/2021	14:05	28-26	12	4.22	81.16	103.47	22.31				0.02		
	11/1/2021	14:17	26-24	15	4.20	103.47	128.04	24.57				0.02		
	11/1/2021	14:43	24-22	10	3.94	128.04	156.84	28.80				0.02		
	11/1/2021	15:02	22-20	10	4.03	156.84	176.82	19.98				0.02		
	11/1/2021	15:13	20-18	8	3.84	176.82	201.56	24.74				0.02		
	11/1/2021	15:28	18-16	8	4.13	201.56	226.59	25.03				0.02		
	11/1/2021	15:39	16-14	10	4.26	226.59	253.28	26.69				0.02		
	11/1/2021	15:48	14-12	12	4.19	253.28	276.91	23.63				0.02		
	11/1/2021	15:59	12-10	10	4.04	276.91	307.98	31.07				0.02		
62	11/1/2021	9:55	34-32	90	1.68	0.00	25.36	25.36	305	123	93	0.02		Expendable Tip
	11/1/2021	10:11	32-30	5	3.03	25.36	51.83	26.47				0.02		
	11/1/2021	10:24	30-28	5	3.14	51.83	75.64	23.81				0.02		
	11/1/2021	10:49	28-26	18	3.16	75.64	100.29	24.65				0.02		
	11/1/2021	10:58	26-24	18	3.27	100.29	126.68	26.39				0.02		
	11/1/2021	11:14	24-22	18	3.25	126.68	151.07	24.39				0.02		
	11/1/2021	11:31	22-20	22	4.32	151.07	176.30	25.23				0.02		
	11/1/2021	11:48	20-18	12	4.19	176.30	202.19	25.89				0.02		
	11/1/2021	11:58	18-16	15	4.23	202.19	228.30	26.11				0.02		
	11/1/2021	12:07	16-14	15	4.29	228.30	254.45	26.15				0.02		
	11/1/2021	12:13	14-12	15	4.29	254.45	276.83	22.38				0.02		
	11/1/2021	12:22	12-10	15	4.25	276.83	304.55	27.72				0.02		

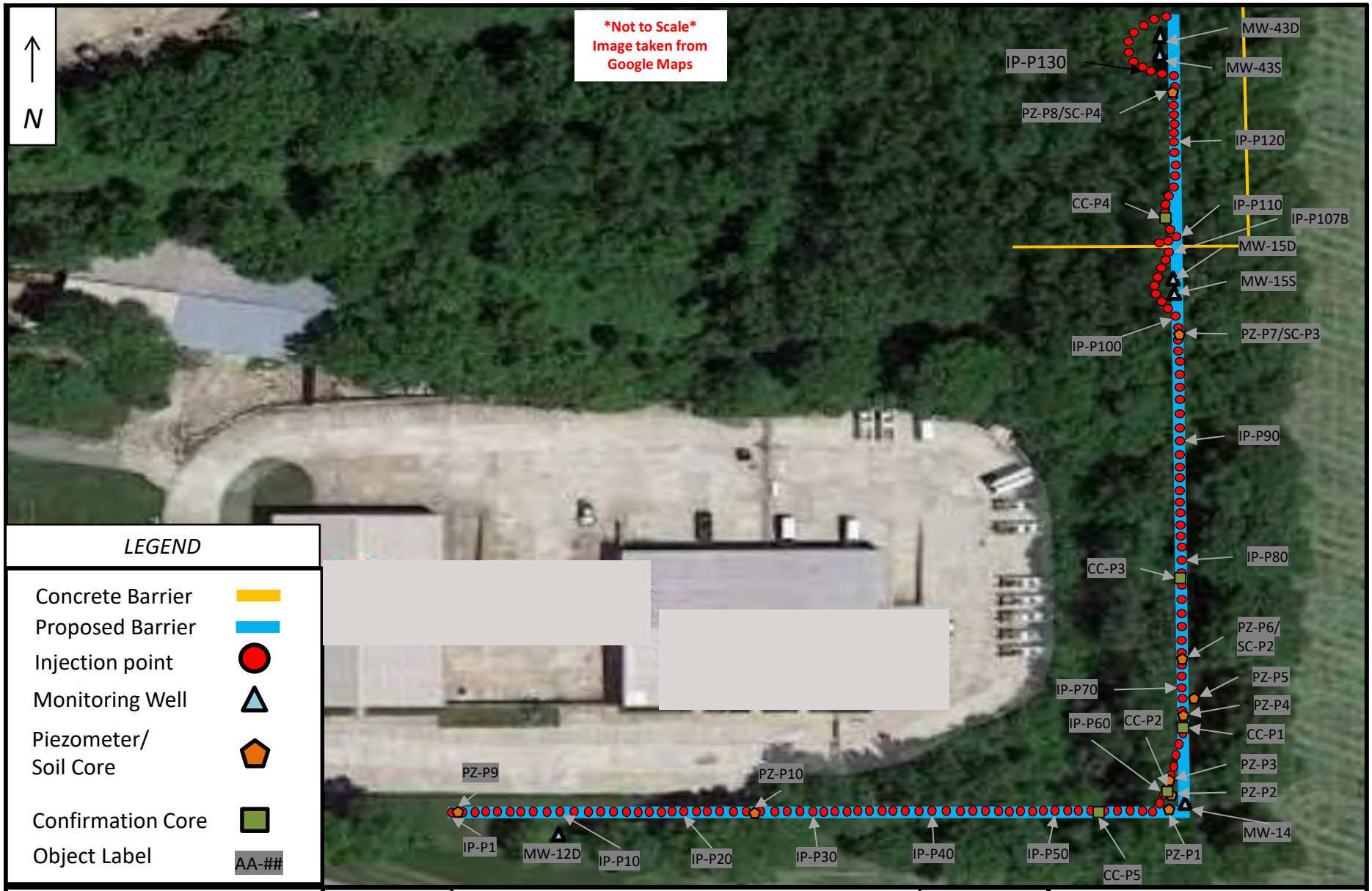
Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BOI:
18197	7301	5476	16.91

Patriot Engineering -Houghland Canning
Groundwater Parameter Log
Plumestop Barrier
Table 1

Date	Time	Location	Water Depth (feet)	Screened Interval	GW Direction	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP	Nearest Active Injection Points (distance, direction)	Nearest MW (distance, direction)	Gallons/Depth Injected at Observation	Solution Concentration (ppm)	Comments
10/14/2021	11:38		---			449	1.2	7.71	60					
	17:56		---			308	2.13	7.71	79.5					
10/15/2021	9:00		9.15			323	2.79	7.65	28					
10/18/2021	9:34					322	3.43	7.59	-40.8					
	18:10					310.6	1.09	7.68	-68.7					
10/19/2021	8:40					283.3	3.16	7.75	-90.1					
	18:06					299.7	2.91	7.63	-97.2					
10/20/2021	9:05					296.8	0.99	7.56	-209					
	18:01	PZ P-1		15-20' bgs	SE	303.1	1.84	7.75	.98.4	IP P61 (5', SE)	MW-14 (8', SE)			
10/21/2021	8:30					289.2	6.44	7.69	-32.3					
	18:08					306	3.55	7.77	-22.6					
10/22/2021	8:28					298.2	2.46	7.84	4.2					
	15:35					289.9	2.25	7.81	4					
10/26/2021	8:39					250.9	4.12	7.87	-41.4					
	18:12					267.5	2.74	7.69	-45.2					
10/27/2021	12:02					275.1	2.21	7.71	-77.3					
	16:27					275.4	3.11	7.67	-67					
10/14/2021	11:48		---			572	6.42	7.83	90.7					
	12:55		10			590	6.77	7.8	65.4					
	13:10		6			---	---	---	---					
	13:35		8.65			618	5.5	7.7	52.8					
	14:02		8.64			630	4.89	7.61	---					
	17:59		---			660	3.58	7.15	185.8					
10/15/2021	8:56		8.5			680	2.71	7.2	60					
10/18/2021	18:13					481.5	2.51	7.18	-26.6					
10/19/2021	8:45					638	4.04	7.31	-96					
	18:08	PZ P-2		25-30' bgs	SE	644	2.48	7.2	-54.7	IP P62 (2.5', SE)	MW-14 (6', SE)			
10/20/2021	9:25					656	3.3	7.39	-77.9					
	18:07					651	1.98	7.2	-124.8					
10/22/2021	8:32					6:18	1.56	7.12	-130.9					
	15:37					635	3.05	7.23	.25.7					
10/25/2021	13:58					633	2.12	7.15	-108.8					
10/26/2021	8:43					591	2.91	7.23	-43.5					
	18:15					596	3.37	7.27	-9.7					
10/27/2021	12:04					594	2.39	7.34	19.2					
	12:28					584	2.65	7.27	-30.4					
10/14/2021	11:45		---			826	0.93	7.4	16					
10/14/2021	12:52		---			835	1.74	7.39	36.9					
10/14/2021	13:30	PZ P-3	8.82	20-25' bgs	SE	833	1.43	7.33	-25.6					
10/14/2021	14:02		8.82			827	1.41	7.25	56.9					
														Driller ran over the PZ. PZ abandoned
10/15/2021	10:01		10.35			524	1.29	7.56	10.8					
10/18/2021	18:17					561.3	4.35	7.66	5.4				500	
10/19/2021	8:56					708	2.62	7.56	-99.9				800	
10/19/2021	18:19					357.9	4.6	7.53	42.7				1750	
10/20/2021	9:40					1198	3.4	7.41	-57.5				1100	
	18:12					947	1.66	7.3	-102.3				650	
10/21/2021	8:37	PZ P-4		32-22' bgs	SE	786	2.13	7.16	-10	IPs P68 and P67 (3', between points)				
	10:10												200	
	18:12					778	2.49	7.18	13.1				200	
10/22/2021	8:35					799	2.1	7.26	-35.5				150	
	15:41					704	1.34	7.18	-26.4				100	
10/25/2021	14:16					622	4.63	7.47	18.7				120	
10/26/2021														Well dry- abandoned
10/18/2021	18:24													NS
10/19/2021	9:10					763	2.05	7.37	-159.2				700	
	18:12					957	1.79	7.08	-153.8				600	
10/20/2021	9:55					1094	0.09	7.09	-442.4				350	
	18:15					1321	0.6	7.08	-310				150	
10/21/2021	9:45					1290	4.53	7.25	-121.3					
	10:18												200	
	18:13	PZ P-5		32'-22'	SE	1066	2.74	7.01	-124.9	IP 69 (3', E)			250	
10/22/2021	8.38					914	2.11	7.21	-158				150	
	15:44					871	2.86	7.24	-136.4				200	
10/25/2021	14:30					774	0.79	7.48	-269				50	
10/26/2021	8:57					629	4.83	7.66	-109.3				<50	
	18:19					616	3.02	7.52	-134.2				<50	
10/27/2021	12:08					597	2.53	7.55	-155.6				<50	
	16:24					576.7	1.89	7.61	-177.3				<50	
10/18/2021	15:30					601	2.19	7.55	7.1					
	16:37					589	4.01	7.39	-60.9					
	17:26					595	1.32	7.37	-1.8					
	18:06	PZ-P-6				591	5.8	7.41	29.1	3' N of IP-P72; 3' S of IP-P73				
10/19/2021	9:01					592	1.64	7.33	-30.7				50	
	10:56					607	3.9	7.44	.22.9				90	
	18:22					597	2.77	7.37	46				50	
10/20/2021	10:01					591	2.79	7.33	-8.5				50	
10/18/2021	18:18					257.8	2.96	7.55	2.65					
10/19/2021	9:07					267.1	2	7.59	46.2					
	18:09					245.7	2.98	7.6	-2.1					
10/20/2021	8:59					244.4	2.17	7.34	-42.3					
	18:30					245	1.72	7.35	-29.6					
10/21/2021	8:34					242.4	2	7.57	-16.4					
	18:10	MW-14				242.3	1.77	7.62	16.4					
10/22/2021	8:30					249.2	2.45	4.2	7.64					
	15:39					257.7	2.57	7.66	-12.6					
10/25/2021	13:51					263	2.02	7.46	-80					
10/26/2021	8:46					275.3	2.6	7.73	-40.1					
	18:17					291.6	2.87	7.74	1.4					
10/27/2021	12:06					289.9	2.43	7.63	1.4					
10/22/2021	17:13					690	5.08	7.46	-11.3	3' N to IP-99; 3' S to IP-98				
10/25/2021	13:36					603	1.83	7.3	-135				<50	
	14:50					592	2.5	-138	7.3				<50	
10/26/2021	9:06	PZ-P7				19:12	560	7.41	-39.9				<50	
	18:26					598.4	4.36	7.51	-13.9				<50	
10/27/2021	12:17					590.5	4.13	7.58	14.6				<50	
	16:31			45'-25' bgs		590.3	2.94	7.48	-10				<50	
11/2/2021	13:45					603.6	2.29	7.4	-56.5	IP-125 (3' S) and IP 126 (3' N)			500	
	16:55	PZ-P8		36-16		591	5.27	7.78	7.9				250	
11/3/2021	9:12					578.1	2.62	7.32	-5.3				150	
	16:00					569	6.18	7.58	-0.4				<50	
11/10/2021	15:50	MW-43-S	11.6	18-10?		400.1	1.35	6.7	70.2				2250	
11/10/2021	15:55	MW-43D	11.6	34-20?		644	0.69	7.1	-52.5					
11/3/2021	12:34					862	5.8	7.72	-83.7					
	12:56					839	3.04	7.4	-87.3					
	13:18					826	3.16	7.34	-97.6					
	13:44	PZ-9				819	3.49	7.34	-80.6	3' E of IP-P1; 3' W of IP-P2				
	14:05					818	4.25	7.39	-61.1					
	14:30					820	2.95	7.29	-86.3					
	14:52					817	2.5	7.26	-84					
	15:20					813	2.9	7.3	-85.2					

Patriot Engineering-Houghland Canning
Groundwater Parameter Log
3DME Barriers
Table 2

Date	Time	Location	Temperature (Celsius)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP	Nearest Active Injection Points (distance, direction)	Gallons/Depth Injected at Observation	Comments
11/17/2020	9:25	MW-11S	15.61	830	0.37	7.08	71	-	-	Baseline collected prior to site as client didn't use YSI correctly
9/23/2021	16:46		13.8	697	0.27	7.12	-63.5	IP-2 (4' W)	304	
Took samples throughout completion of IP-6		PZ-3	-	-	-	-	-	IP-6 (3' W)		Sampled constantly throughout the day. As IP-6 was completed
			-	-	-	-	-	IP-6 (3' W)		saw a noticable rise in water level and turbidity.
Took samples throughout completion of IP-6		PZ-4	-	-	-	-	-	IP-6 (6' W)		Sampled constantly throughout the day. As IP-6 was completed
			-	-	-	-	-	IP-6 (6' W)		saw a noticable rise in water level and turbidity.
9/27/2021	12:30	PZ-1	-	-	-	-	-	IP-16 (3' W)	120	Saw influence in the peizometer after about 120 gal in IP-16
9/24/2021	13:00	MW-30S	14.5	523.1	0.06	7.63	-116.8	IP-10 (4' W)	302	IP-10 completed at time of sample
9/27/2021	14:07	MW-23	14.8	527.2	0.09	7.73	-60.3	IP-24 (8' N) and IP-22 (8' S)	90	
9/27/2021	14:30		15.5	2045	0.05	7.77	-80	IP-24 (8' N) and IP-22 (8' S)	150	
9/27/2021	15:00		14.5	639	0.51	7.34	-187.9	IP-24 (8' N) and IP-22 (8' S)	225	
10/4/2021	13:30	MW-24	16.3	475.4	5.61	6.85	75	IP-41 (5' W)	90	
10/4/2021	13:45		15.7	2116	0.09	7.62	-55.1	IP-41 (5' W)	135	
10/4/2021	16:00		16.2	914	0.04	7.05	-103.5	IP-41 (5' W)	302	Taken after the completion of IP-41.
10/13/2021	15:20	MW-33D	14.3	580	7.51	7.08	68	IP-17 (5' W)	0	Taken prior to the start of the point.
10/14/2021	8:55		13.6	585.8	0.23	7.01	69.7	IP-17 (5' W)	150	Taken at the beginning of the day.
10/14/2021	10:20		13.6	596.2	2.98	7.12	99.3	IP-17 (5' W)	300	Taken after the completion of IP-17.
10/14/2021	10:30	MW-33S	13.07	555.6	0.01	7.24	70.4	IP-17 (20' W)		Taken after the completion of IP-17
10/11/2021	10:15	MW-39D	14.6	817	1.6	6.83	93.5	IP-18 (8' S)	130	
10/11/2021	15:10		15.1	552	0.07	7.66	-178	IP-18 (8' S) and IP-20 (8' N)	-	IPs 18 and 20 completed and within 8' of MW.
10/6/2021	12:45	MW-26D	15.9	426	1.67	7.18	71.4	IP-31 (6' W)	75	
10/6/2021	15:00		16	455	0.56	7.25	-12.3	IP-31 (6' W)	280	
10/26/2021	9:30	MW-22D	16.2	691	1.78	7.17	99.8	IP-42 (6' W)	100	
10/26/2021	10:40		16.2	743	2.22	7.02	115.6	IP-42 (6' W)	260	
10/26/2021	12:15		16.1	686	1.65	7.2	85.7	IP-42 (6' W)	301	IP-42 completed at time of sample.
10/28/2021	12:45	MW-29S	15	688	1.7	7.11	76.1	IP-33 (11' W)	0	
10/28/2021	14:15		15.1	689	0.89	7.09	2.4	IP-33 (11' W)	155	
10/28/2021	16:00		15.1	705	0.24	7.13	-3.4	IP-33 (11' W)	302	IP-33 completed at time of sample.



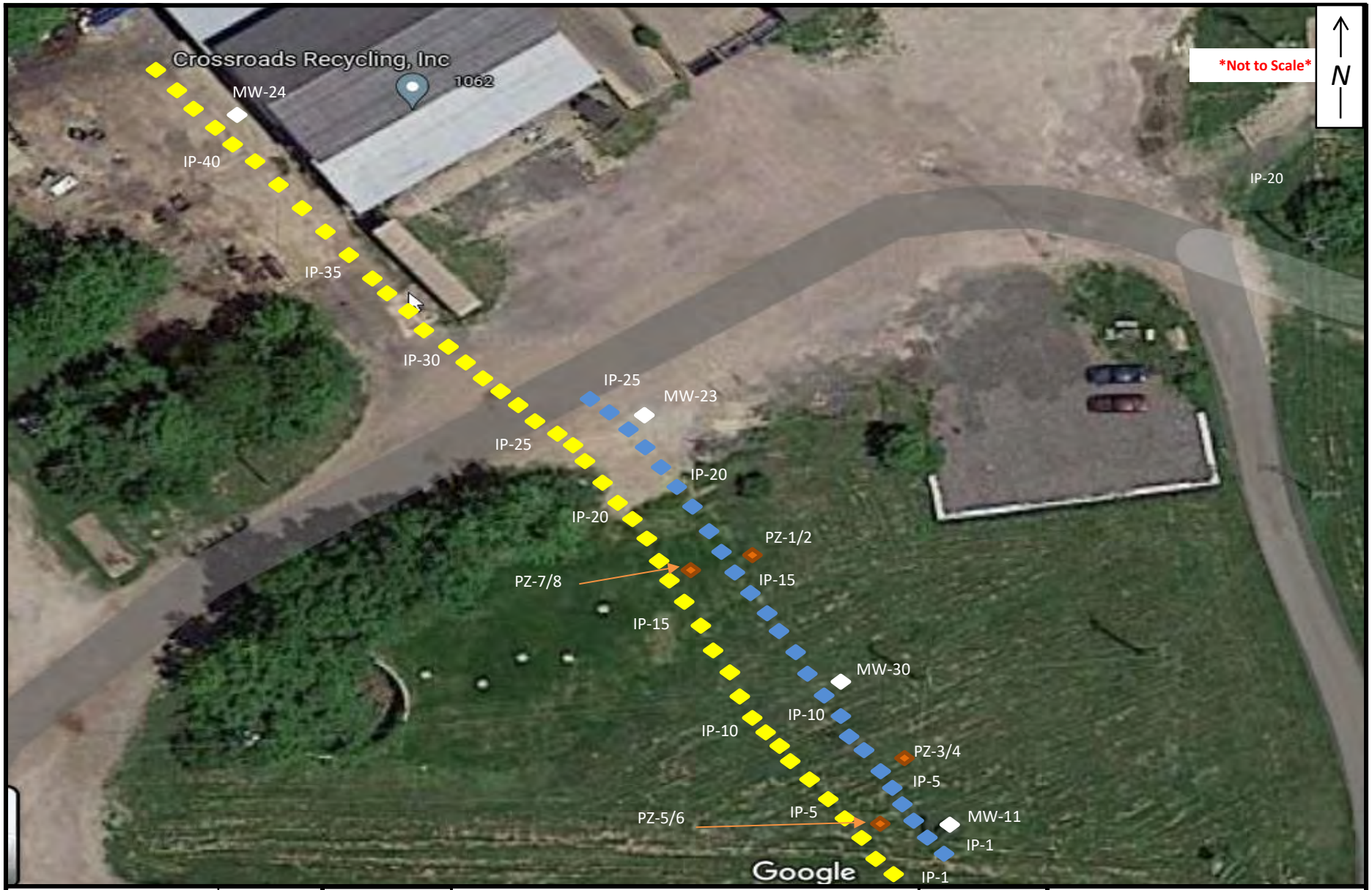
PLUME STOP
Liquid Activated Carbon

Prepared By:
JE

Figure 1 – Plumestop Barrier Injection Locations Map
Patriot – Houghland Canning
1130 Eastview Dr, Franklin, IN 46131

Date Prepared:
Oct 2021

REGENESIS
REMEDIATION SERVICES
Technology-Based Solutions for the Environment



LEGEND

- PRB-1 Injection Point
- PRB-2 Injection Point
- Monitoring Well
- Temporary Well

Prepared By: *BD*

Figure 2 – Injection Map
Former Houghland Canning Facility
PRB 1 and 2

Date Prepared: *Sept 2021*

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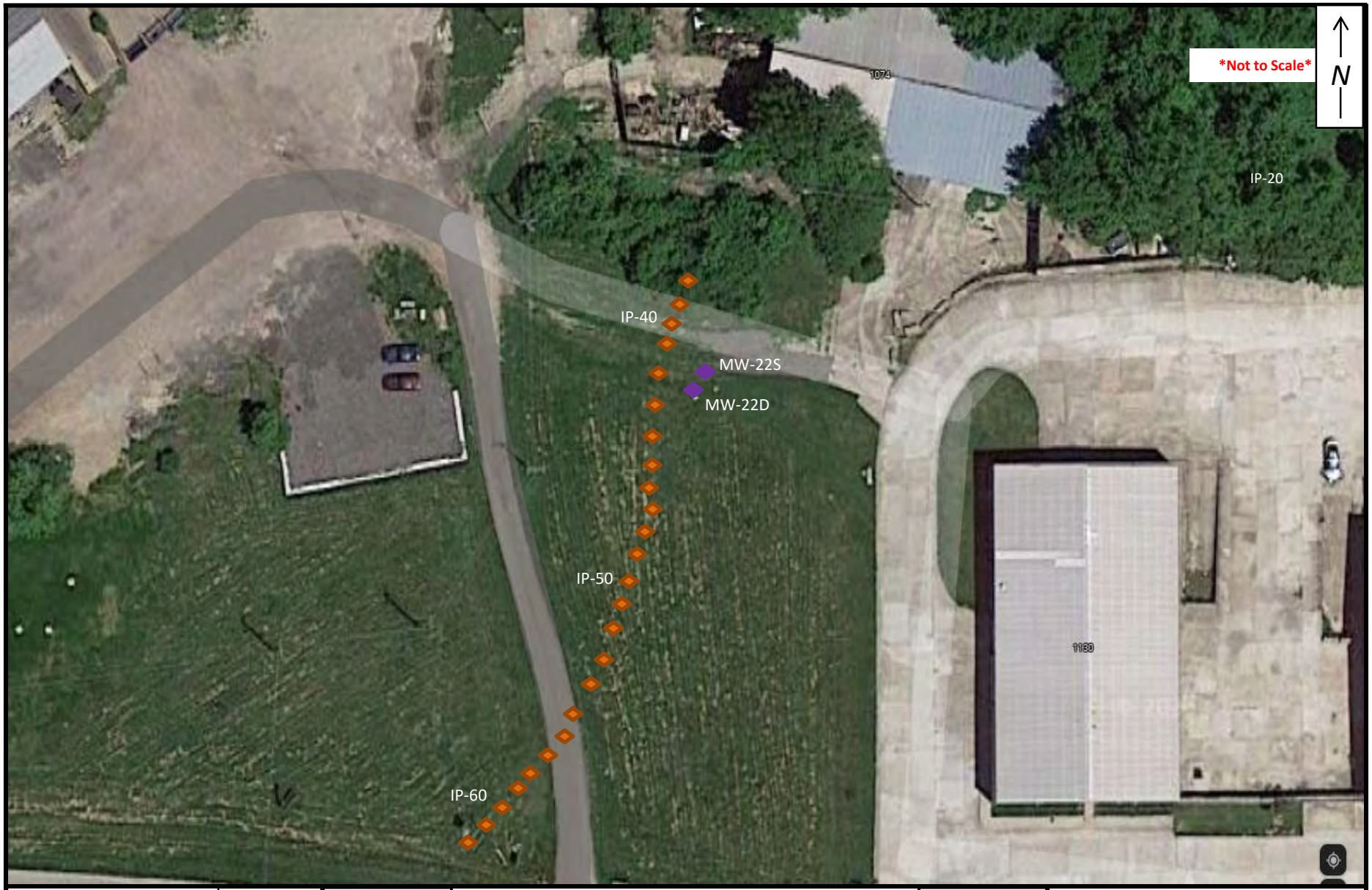
LEGEND	Prepared By: *BD*	**Figure 3 – Injection Map** **Former Houghland Canning Facility** **PRB 3**	Date Prepared: *Oct 2021*	REGENESIS REMEDIATION SERVICES Technology-Based Solutions for the Environment
Injection Point Monitoring Well				

LEGEND	Prepared By:	Figure 4 – Injection Map	Date Prepared:
Injection Point Monitoring Well	*BD*	Former Houghland Canning Facility PRB 4 Northern End	*Oct 2021*

REGENESIS REMEDIATION SERVICES
Technology-Based Solutions for the Environment



LEGEND

- Injection Point
- Monitoring Well

Prepared By: *BD*

Figure 5 – Injection Map
Former Houghland Canning Facility
PRB 4 Southern End

Date Prepared: *Oct 2021*

REGENESIS REMEDIATION SERVICES
Technology-Based Solutions for the Environment

LEGEND

- Injection Point
- Monitoring Well

Prepared By: *BD*

Figure 6 – Injection Map
Former Houghland Canning Facility
PRB 4 Northern End

Date Prepared: *Oct 2021*

REGENESIS REMEDIATION SERVICES
Technology-Based Solutions for the Environment

LEGEND

- Injection Point
- Monitoring Well

Prepared By: *BD*

Figure 7 – Injection Map
Former Houghland Canning Facility
PRB 4 Southern End

Date Prepared: *Oct 2021*

REGENESIS REMEDIATION SERVICES
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Photo Log – PlumeStop Barrier Photos

Photo 1: View looking East at the injection trailer set up near MW-14

Photo 2: View looking East of the drill rig set up on IP-41 near the firehydrant

Photo 3: View looking Northeast at the injection trailer and generator near the West end of the PlumeStop Barrier

Photo 4: View of the peristaltic pump, ysi, and bailers used to take ground water parameters

Photo 5: View looking Northwest at the drill rig set up on IP-P63 near MW-14

Photo 6: bailer sample from PZ-P9 taken after injecting on an adjacent IP. The black color indicates product influence

APPENDIX D

RRS APPLICATION SUMMARY REPORT FOR THE OFF-SITE GROUNDWATER PRBs

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5/5/2022 **REGENESIS Proposal No. Kgask69758**

Patriot Engineering
6150 E 75th St, Indianapolis, IN 46250

SUBJECT: Application Summary Report for Remedial Services at the Offsite Houghland Canning Facility

Mike Casper,

REGENESIS Remediation Services (RRS) has recently completed an *in-situ* injection application of 3-D Microemulsion, S-MicroZVI, and Bio-Dechlor Inoculum at the offsite portion of the Houghland Canning Facility (Site) located at 1130 Eastview Dr, Franklin, IN. The goal of the application was to remediate chlorinated compounds. RRS employed *in-situ* chemical reduction, enhanced anaerobic biodegradation, and bioaugmentation technologies to meet remediation goals.

RRS mobilized a support pickup truck, injection trailer, and personnel to the site to begin work over 24 days on February the 22nd. RRS staffed this project with an experienced Project Supervisor who ensured a safe, successful injection application. RRS began by staging all necessary equipment in areas near the injection points. Using up to two Geoprobe machines at a time, RRS began completing points (up to four at a time) in the Deep Only barriers and then moved on to the Shallow and Deep barriers after completion of the former. Once all injection activities were completed, the site was cleaned, empty containers organized, and all equipment taken offsite.

Please review the attached application summary page, injection log, and photo log for more detail on the application.

RRS appreciates the opportunity to work at this site with Patriot. RRS will be available to interpret the field data as it is collected or answer any questions. If you need additional information regarding the application process or attached field notes, please contact Andrew Kavanagh at 574.304.4353 or Bill Disselhorst at 630.740.8815.

Sincerely,

Bill Disselhorst
Senior Project Supervisor
REGENESIS Remediation Services

Andrew Kavanagh
Central Region Project Manager
REGENESIS Remediation Services

cc: bhicks@regenesis.com; kgaskill@regenesis.com

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REGENESIS REMEDIATION SERVICES
Technology-Based Solutions for the Environment

Summary

3-D MICROEMULSION

S-Micro ZVI Sulfidated Zero-Valent Iron

BDI PLUS BIO-DECHLOR INOCULUM

OVERVIEW

Client: Patriot Engineering
Client PM: Mike Casper
RRS Project Manager: Andrew Kavanagh
RRS Project Supervisor: Bill Disselhorst

Site Address: 1130 E Eastview Dr, Franklin, IN 46131
Project Name: Houghland Canning
Project Dates: 2/22/22-4/26/22

Design

The proposed design called for six permeable reactive barriers (PRBs) utilizing 3DME, S-MZVI, and BDI throughout the plume with depths varying between deep injection points (65'-30' bgs) and shallow and deep injection points (65'-10' bgs). Lengths of each barrier varied with the longest PRB being 795' long and the shortest being 73' long. In total there were six barriers consisting of 227 distinct injection points.

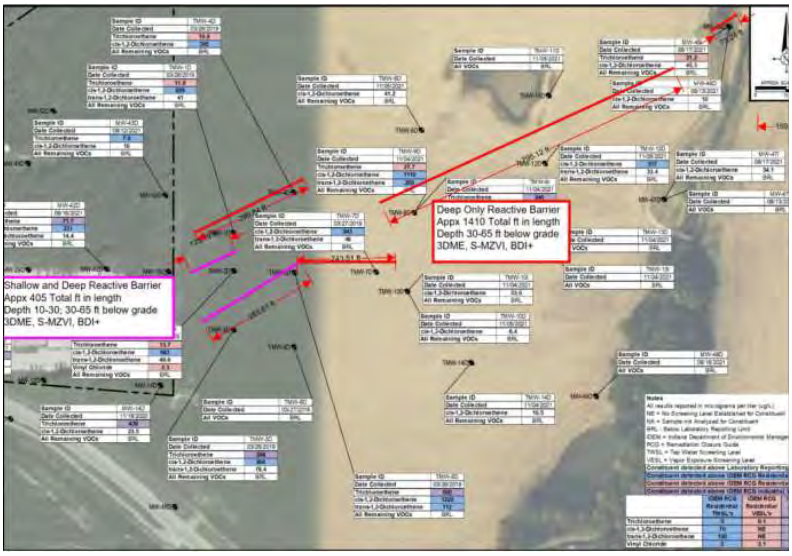

Figure 1. Original Treatment Barrier Location Design

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Site Preparations

Site Recon

- Equipment staging
  - All product containers were stored in the open field across the bridge leading away from the access road.
  - Empty product containers were stored next to the access road prior to the bridge.
- Utility locates
  - All utility locates were done at the direction of Patriot Engineering prior to RRS beginning injections.

Reagent Delivery

- Product and equipment shipping
  - Product was shipped in two different shipments. The first arrived prior to the start of injections and contained 12,000 lbs of S-MZVI and 16,000 lbs of 3DME. The other shipment contained 19,500 lbs of S-MZVI and 26,000 lbs of 3DME.
    - BDI was shipped directly to the site as needed.
  - All product was delivered directly to site where it was off loaded by RRS personnel and organized into the staging area.

On Site Equipment

- Two GeoProbe Drills were used on-site at various points in time. One was operated by Midway Services. The other was supplied and operated by Enviro-Dynamics.
- RRS rented a telehandler to maneuver product to and from the injection areas.
- A Connex box was on-site to store any equipment necessary.

Health and Safety Compliance

- Daily safety tailgates took place to instill a safety-first attitude during work hours. Subjects included vehicular and equipment traffic, stop work authority, weather, heat stress, emergency medical locations, and 3M site specific health and safety protocol. A health and safety plan (HASP) was maintained and signed by all onsite workers.

General Application Information

The remediation reagent was prepared and applied via an RRS custom injection trailer. The injection trailer is fully enclosed and contains mixing tanks, pumps, and a delivery system equipped for direct connection to the injection wells. The RRS injection trailer used for the completion of this project contains the following components:

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- Complete drain conical mixing tanks
- Vortex/Cyclone mixer
- Application pump
- Multiple fluid delivery lines
- Self-sufficient, dedicated power
- Slip-resistant and chemical resistant flooring
- Flow and pressure controls
- Backflow prevention
- Pressure bypass controls
- Emergency eyewash and First-Aid station

The application pump is a multiple diaphragm positive displacement pump designed to prevent pulsation of the remediation reagent while being applied. The application pump can deliver the remediation reagent at up to 250 pounds per square inch (psi) at up to 21 gallons per minute (gpm) to overcome potential hydraulic limitations. Mechanisms capable of maintaining and controlling injection pressures and injection flowrates per injection point have been installed to achieve and maintain desired application pressures and flowrates. Safety bypass mechanisms are also installed to release back pressure in the event injection pressures exceed desired application ranges. Our application delivery system can deliver the remediation reagent at up to four (4) separate delivery lines simultaneously, each having the capability of monitoring injection pressures and injection flowrates/totals at any given time. Additional line extensions were utilized when necessary to increase the trailers range without being moved.

The remediation reagent solutions were prepared in 350-gallon conical tanks that are configured with chemically resistant materials. This system setup allows for the remediation reagent solutions to be injected while mixing and preparing the second tank so that downtime is avoided due to mixing and continuous pumping can occur. A vortex/cyclone mixer mounted to the mixing tanks rated with a liquid movement of 1800 gpm in water and is outfitted with a shaft and propellers capable of sustaining a homogenous mixture was used to help mix the reagents properly. For each batch, mix water was supplied by a nearby fire hydrant before turning on the mixer. Once the water filled to the appropriate volume per the design concentration the remedial reagent was transferred from their containers via an air-driven diaphragm pump. Each tote was measured and marked to show volumetric measurements to ensure accurate reagent dosing.

On-Site Work Summary

Design Verification & Calibration

- Groundwater monitoring
    - Groundwater monitoring was done at locations near enough to wells that were installed by Patriot prior to RRS arriving on-site. This would include TMW-12 and TMW-9 (see attached map for locations).

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Deep Central Barrier

- Orientation
  - The barrier ran in a southwest to northeast direction starting northwest of TMW-9 and ending just before the access road.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. Several points needed to be redrilled due to this and were offset 1-3' from the original bore hole.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Well data
      - TMW-9 and TMW-12 saw slight changes in coloration after injections showing visual confirmation of the product mix in the wells.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
5.44	1.8	5.3	49	28.1	41.0

Table 1: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **15,750 lbs of 3DME, 411,813 lbs ZVI, and 47.25 L of BDI** was mixed and applied as a 5% solution, with a total volume of **39,501 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 4'-drop screens
Injection Depth: 65'-30' bgs
Number of Injection Points: 99
Deviations from Proposal:

- Several points were completed using expendable tips rather than the proposed 4'-drop screens due to clogging and/or surfacing issues. See log for details on the tooling for each point.

General Observations

- Saw visual confirmation of product mix in the well after injections were completed near TMW-9 and TMW-12.
- Pressures decreased as RRS lifted into shallower intervals.

Please see attached Table 1 (of injection logbook) for details on injection flow rates and pressures observed.

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Deep Southern Barrier

- Orientation
  - The barrier ran in a west to east direction with the western end starting 6' north of the proposed location of MW-5.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. However, at any time that surfacing occurred the bore was able to be resealed and no volume was redistributed because of this.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Well data
      - No wells were located in the area at the time of injection.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
4.99	1.7	4.9	59	43.5	45

Table 2: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **4,773 lbs of 3DME, 3,580 lbs ZVI, and 14.32 L of BDI** was mixed and applied as a 5% solution, with a total volume of **11,970 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 4'-drop screens
Injection Depth: 65'-30' bgs
Number of Injection Points: 30
Deviations from Proposal:

- Several points were completed using expendable tips rather than the proposed 4'-drop screens due to clogging and/or surfacing issues. See log for details on the tooling for each point.

General Observations

- Pressures decreased as RRS lifted into shallower intervals.

Please see attached Table 2 (of injection logbook) for details on injection flow rates and pressures observed.

Deep Western Barrier

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- Orientation
  - The barrier ran in a southwest to northeast direction with the most northern end starting northeast of the proposed position of MW-4.
- Surfacing
  - Surfacing did not occur throughout the completion of the barrier.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Well data
      - No wells were located in the area at the time of injection.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
6.32	1.8	5.6	52	28.1	40

Table 3: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **6,045 lbs of 3DME, 4,534 lbs ZVI, and 18.14 L of BDI** was mixed and applied as a 5% solution, with a total volume of **15,162 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 4'-drop screens
Injection Depth: 65'-30' bgs
Number of Injection Points: 38
Deviations from Proposal:

- Several points were completed using expendable tips rather than the proposed 4'-drop screens due to clogging and/or surfacing issues. See log for details on the tooling for each point.

General Observations

- Due to an equipment malfunction, injection points 19-22 were started and unable to be completed the same day. Once the equipment was fixed, RRS continued injections at these locations.

Please see attached Table 3 (of injection logbook) for details on injection flow rates and pressures observed.

Deep Northern Barrier

- Orientation

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- The barrier ran in a southwest to northeast direction with the center point 6' northwest of MW-13.
- Surfacing
  - Surfacing did not occur throughout the completion of the barrier.
- IP Relocation
    - No points were relocated during the completion of the barrier.
- QA/QC During Application
  - Groundwater
    - Well data
      - Groundwater parameters were not taken during the time of injections as Patriot did not have a YSI meter on-site.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
6.15	1.3	6.2	69	23.2	65

Table 4: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **1,432 lbs of 3DME, 1,074 lbs ZVI, and 4.3 L of BDI** was mixed and applied as a 5% solution, with a total volume of **3,591 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 4'-drop Screens
Injection Depth: 65'-30' bgs
Number of Injection Points: 9
Deviations from Proposal:

- IP-8 points was completed using an expendable tip rather than the proposed 4'-drop screen due to clogging. See log for details on the tooling for each point.

Please see attached Table 4 (of injection logbook) for details on injection flow rates and pressures observed.

Shallow and Deep Northern Barrier

- Orientation
  - The barrier ran in a southwest to northeast direction with the most northern point 18' northeast of the proposed location of MW-2.
- Surfacing
  - Surfacing occurred at various points throughout the barrier. In all instances, RRS was able to continue injections at the location without relocating the point.
- IP Relocation

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        - No points were relocated during the completion of the barrier.
- QA/QC During Application
    - Groundwater
        - Well data
            - No wells were located in the area at the time of injection.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
6.04	1.6	5.8	58	35.2	44

Table 5: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **4,118 lbs of 3DME, 3,088 lbs ZVI, and 11.18 L of BDI** was mixed and applied as a 5% solution, with a total volume of **10,302 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 4'-drop screens
Injection Depth: 65'-10' bgs
Number of Injection Points: 15
Deviations from Proposal:

- None.

General Observations

- Reoccurring backpressure was seen at IP-13.

Please see attached Table 5 (of injection logbook) for details on injection flow rates and pressures observed.

Shallow and Deep Southern Barrier

- Orientation
    - The barrier ran in a southwest to northeast direction with the most northern point 8' south of the proposed location of MW-5 and the most southern point 20' southwest of the proposed location of MW-3.
- Surfacing
    - Surfacing occurred at various points throughout the barrier. In all instances, RRS was able to continue injections at the location without relocating the point.
- IP Relocation
        - No points were relocated during the completion of the barrier.
- QA/QC During Application

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- Groundwater
  - Well data
    - No wells were located in the area at the time of injection.

Average Flowrate (GPM)	Standard Deviation of Flowrate (GPM)	Median Flowrate (GPM)	Average Pressure (PSI)	Standard Deviation of Pressure (PSI)	Median Pressure (PSI)
5.53	1.4	5.4	50	35.2	40

Table 6: Average and median flowrates and average pressures. Flowrates were kept low and consistent to prevent backpressure.

A total of **9,900 lbs of 3DME, 7,412 lbs ZVI, and 26.82 L of BDI** was mixed and applied as a 5% solution, with a total volume of **25,974 gal** applied in the area. BDI was added at a 2x concentration.

Application Method: DPT, 4'-drop screens
Injection Depth: 65'-10- bgs
Number of Injection Points: 36
Deviations from Proposal:

- Several points were completed using expendable tips rather than the proposed 4'-drop screens due to clogging and/or surfacing issues. See log for details on the tooling for each point.

General Observations

- Backpressure after the completion of an interval became more common as the barrier progressed southwest. See logbook for details as to which injection points had backpressure at each interval.

Please see attached Table 6 (of injection logbook) for details on injection flow rates and pressures observed.

Site Restoration and Clean Up

- Prior to demobilizing offsite, all Regenesis equipment was cleaned up. Rental equipment was called off and returned.
- All marking equipment (flags, stakes, rebar) was removed and discarded.
- All bores were backfilled using bentonite and covered to match the existing ground surface.

RRS appreciates the opportunity to work with Patriot at this site. If you need additional information regarding the application event or have any questions, please feel free to contact Andrew Kavanagh at 574.304.4353 or Bill Disselhorst at 630.740.8815.

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Appendix A

(Injection Logs, Groundwater Parameter Logs, Photo Logs, Maps)

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
Offsite Deep Only Central Barrier
Table 1

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	2/23/2022	11:53	65-61	80	2.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/23/2022	12:18	61-57	53	3.80	45.67	93.67	48.00				0.05		
	2/23/2022	12:34	57-53	24	3.90	93.67	139.34	45.67				0.05		
	2/23/2022	12:58	53-49	23	3.40	139.34	185.01	45.67				0.05		
	2/23/2022	13:25	49-45	25	3.60	185.01	230.68	45.67				0.05		
	2/23/2022	13:58	45-41	7	4.20	230.68	276.35	45.67				0.05		
	2/23/2022	14:14	41-37	12	4.20	276.35	322.02	45.67				0.05		
	2/23/2022	14:35	37-33	12	4.10	322.02	367.69	45.67				0.05		
	2/23/2022	15:23	33-30	10	4.50	367.69	399.00	31.31				0.05		
2	2/23/2022	13:07	30-33	96	3.40	0.00	33.25	33.25	399	159	119	0.04	Redrilled 2x with the bottom up tooling. Offset 2' N and redrove with top down.	3-Foot Internal Screen
	2/23/2022	13:37	33-36	89	2.30	33.25	66.50	33.25				0.04		
	2/23/2022	14:15	36-39	85	2.20	66.50	99.75	33.25				0.04		
	2/23/2022	14:33	39-42	125	2.90	99.75	133.00	33.25				0.04		
	2/25/2022	9:28	42-45	115	2.10	133.00	166.25	33.25				0.04		
	2/25/2022	9:54	45-48	70	2.10	166.25	199.50	33.25				0.04		
	2/25/2022	10:10	48-51	85	6.10	199.50	232.75	33.25				0.04		
	2/25/2022	10:33	51-54	65	3.20	232.75	266.00	33.25				0.04		
	2/25/2022	10:49	54-57	117	3.50	266.00	299.25	33.25				0.04		
	2/25/2022	11:07	57-60	97	3.60	299.25	332.50	33.25				0.04		
	2/25/2022	11:20	60-63	130	2.20	332.50	365.75	33.25				0.04		
	2/25/2022	11:40	63-65	130	2.00	365.75	399.00	33.25				0.04		
3	2/23/2022	11:53	30-33	80	1.30	0.00	33.25	33.25	399	159	119	0.04		3-Foot Internal Screen
	2/23/2022	12:18	33-36	56	2.20	33.25	66.50	33.25				0.04		
	2/23/2022	12:34	36-39	76	3.00	66.50	99.75	33.25				0.04		
	2/23/2022	12:54	39-42	52	1.50	99.75	133.00	33.25				0.04		
	2/23/2022	13:20	42-45	76	3.50	133.00	166.25	33.25				0.04		
	2/23/2022	13:49	45-48	60	3.20	166.25	199.50	33.25				0.04		
	2/23/2022	14:02	48-51	80	3.50	199.50	232.75	33.25				0.04		
	2/23/2022	14:22	51-54	82	3.10	232.75	266.00	33.25				0.04		
	2/23/2022	15:15	54-57	67	1.60	266.00	299.25	33.25				0.04		
	2/25/2022	9:28	57-60	106	2.20	299.25	332.50	33.25				0.04		
	2/25/2022	9:49	60-63	67	2.40	332.50	365.75	33.25				0.04		
	2/25/2022	10:04	63-65	88	5.20	365.75	399.00	33.25				0.04		
4	2/23/2022	11:53	30-33	80	1.70	0.00	33.25	33.25	399	159	119	0.04		3-Foot Internal Screen
	2/23/2022	12:18	33-36	58	1.70	33.25	66.50	33.25				0.04		
	2/23/2022	12:34	36-39	79	3.00	66.50	99.75	33.25				0.04		
	2/23/2022	12:54	39-42	51	2.10	99.75	133.00	33.25				0.04		
	2/23/2022	13:14	42-45	80	3.00	133.00	166.25	33.25				0.04		
	2/23/2022	13:37	45-48	86	3.80	166.25	199.50	33.25				0.04		
	2/23/2022	13:47	48-51	75	3.70	199.50	232.75	33.25				0.04		
	2/23/2022	13:58	51-54	110	4.50	232.75	266.00	33.25				0.04		
	2/23/2022	14:10	54-57	42	2.90	266.00	299.25	33.25				0.04	Fair amount of back pressure after completion of the interval.	
	2/23/2022	15:15	57-60	83	4.10	299.25	332.50	33.25				0.04	Small amount of back pressure after completion of the interval.	
	2/23/2022	15:25	60-63	96	2.00	332.50	365.75	33.25				0.04		
	2/23/2022	15:32	63-65	111	2.30	365.75	399.00	33.25				0.04		
5	4/4/2022	11:45	65-61	140	3.80	0.00	45.67	45.67	399	159	119	0.05	Small amount of surfacing out of the bore. Sealed and continued.	4'-Dropdown Screen
	4/4/2022	11:58	61-57	107	5.30	45.67	91.34	45.67				0.05	Small amount of back pressure after completion of the interval.	
	4/4/2022	12:12	57-53	62	6.50	91.34	137.01	45.67				0.05	Small amount of back pressure after completion of the interval.	
	4/4/2022	12:22	53-49	57	7.00	137.01	182.68	45.67				0.05		
	4/4/2022	12:32	49-45	78	8.60	182.68	228.35	45.67				0.05		
	4/4/2022	12:40	45-41	61	8.50	228.35	274.02	45.67				0.05		
	4/4/2022	12:47	41-37	93	8.80	274.02	319.69	45.67				0.05		
	4/4/2022	12:55	37-33	112	8.90	319.69	365.36	45.67				0.05		
	4/4/2022	13:02	33-30	48	8.40	365.36	399.00	33.64				0.04		
6	2/25/2022	11:06	65-61	123	2.00	0.00	12.00	12.00	399	159	119	0.05	Fair amount of surfacing out of bore. Lifting to next interval and continuing.	4'-Dropdown Screen
	2/25/2022	11:13	61-57	102	2.30	12.00	91.34	79.34				0.05		
	2/25/2022	11:49	57-53	130	5.10	91.34	137.01	45.67				0.05		
	2/25/2022	12:04	53-49	45	4.60	137.01	182.68	45.67				0.05		
	2/25/2022	12:21	49-45	27	3.10	182.68	228.35	45.67				0.05		
	2/25/2022	12:37	45-41	24	4.10	228.35	274.02	45.67				0.05		
	2/25/2022	12:51	41-37	36	3.20	274.02	319.69	45.67				0.05		
	2/25/2022	13:09	37-33	22	5.70	319.69	365.36	45.67				0.05		
	2/25/2022	13:20	33-30	53	3.40	365.36	399.00	33.64				0.04		
7	2/25/2022	11:20	65-62	50	2.90	0.00	33.25	33.25	399	159	119	0.04		Expendable Tip
	2/25/2022	11:05	62-59	78	4.50	33.25	66.50	33.25				0.04		
	2/25/2022	12:02	59-56	100	7.10	66.50	99.75	33.25				0.04		
	2/25/2022	12:21	56-53	20	4.90	99.75	133.00	33.25				0.04		
	2/25/2022	12:33	53-50	25	5.80	133.00	166.25	33.25				0.04		
	2/25/2022	12:40	50-47	24	6.20	166.25	199.50	33.25				0.04		
	2/25/2022	12:51	47-44	29	6.00	199.50	232.75	33.25				0.04		
	2/25/2022	13:09	44-41	26	5.80	232.75	266.00	33.25				0.04		
	2/25/2022	13:20	41-39	29	6.40	266.00	299.25	33.25				0.04		
	2/25/2022	13:32	39-36	23	4.80	299.25	332.50	33.25				0.04		
	2/25/2022	13:43	36-33	25	5.80	332.50	365.75	33.25				0.04		
	2/25/2022	13:53	33-30	23	6.10	365.75	399.00	33.25				0.04		
8	2/25/2022	10:39	65-61	92	2.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/25/2022	10:51	61-57	72	4.50	45.67	91.34	45.67				0.05		
	2/25/2022	11:02	57-53	21	5.10	91.34	137.01	45.67				0.05		
	2/25/2022	11:14	53-49	21	5.50	137.01	182.68	45.67				0.05		
	2/25/2022	11:25	49-45	27	5.90	182.68	228.35	45.67				0.05		
	2/25/2022	11:32	45-41	29	6.40	228.35	274.02	45.67				0.05		
	2/25/2022	11:44	41-37	5	2.70	274.02	319.69	45.67				0.05		
	2/25/2022	12:02	37-33	30	3.20	319.69	365.36	45.67				0.05		
	2/25/2022	12:21	33-30	17	4.30	365.36	399.00	33.64				0.04		
9	2/25/2022	12:17	65-61	78	2.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/25/2022	12:35	61-57	116	1.50	45.67	91.34	45.67				0.05		
	2/25/2022	12:51	57-53	30	4.90	91.34	137.01	45.67				0.05		
	2/25/2022	13:09	53-49	23	6.00	137.01	182.68	45.67				0.05		
	2/25/2022	13:20	49-45	11	4.30	182.68	228.35	45.67				0.05		
	2/25/2022	13:32	45-41	22	6.30	228.35	274.02	45.67				0.05		
	2/25/2022	13:43	41-37	24	6.40	274.02	319.69	45.67				0.05		
	2/25/2022	13:53	37-33	24	6.00	319.69	365.36	45.67				0.05		
	2/25/2022	14:06	33-30	20	5.80	365.36	399.00	33.64				0.04		
10	2/25/2022	13:14	65-61	77	2.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/25/2022	13:32	61-57	22	5.00	45.67	91.34	45.67				0.05		
	2/25/2022	13:43	57-53	25	5.80	91.34	137.01	45.67				0.05		
	2/25/2022	13:53	53-49	23	5.60	137.01	182.68	45.67				0.05		
	2/25/2022	14:06	49-45	21	4.90	182.68	228.35	45.67				0.05		
	2/25/2022	14:15	45-41	72	9.90	228.35	274.02	45.67				0.05		
	2/25/2022	14:22	41-37	62	9.00	274.02	319.69	45.67				0.05		
	2/25/2022	14:27	37-33	62	10.00	319.69	365.36	45.67				0.05		
	2/25/2022	14:38	33-30	63	10.40	365.36	399.00	33.64				0.04		
11	2/28/2022	9:28	65-61	66	4.90	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	9:50	61-57	71	4.50	45.67	91.34	45.67				0.05		
	2/28/2022	9:59	57-53	30	4.00	91.34	137.01	45.67				0.05		
	2/28/2022	10:09	53-49	46	6.40	137.01	182.68	45.67				0.05		
	2/28/2022	10:19	49-45	30	4.70	182.68	228.35	45.67				0.05		
	2/28/2022	10:27	45-41	22	4.10	228.35	274.02	45.67				0.05		
	2/28/2022	10:38	41-37	29	4.20	274.02	319.69	45.67				0.05		
	2/28/2022	10:49	37-33	29	3.90	319.69	365.36	45.67				0.05		
	2/28/2022	11:15	33-30	48	4.80	365.36	399.00	33.64				0.05		
12	2/28/2022	9:45	65-61	70	4.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	9:58	61-57	37	7.20	45.67	91.34	45.67				0.05		
	2/28/2022	10:05	57-53	11	4.10	91.34	137.01	45.67				0.05		
	2/28/2022	10:13	53-49	14	4.70	137.01	182.68	45.67				0.05		
	2/28/2022	10:25	49-45	8	3.50	182.68	228.35	45.67				0.05		
	2/28/2022	10:36	45-41	9	4.10	228.35	274.02	45.67				0.05		
	2/28/2022	10:46	41-37	18	6.30	274.02	319.69	45.67				0.05		
	2/28/2022	10:53	37-33	11	5.00	319.69	365.36	45.67				0.05		
	2/28/2022	11:15	33-30	17	5.50	365.36	399.00	33.64				0.04		
13	2/28/2022	9:28	65-61	66	6.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	9:50	61-57	37	4.80	45.67	91.34	45.67				0.05		
	2/28/2022	9:58	57-53	21	5.00	91.34	137.01	45.67				0.05		
	2/28/2022	10:09	53-49	6	3.20	137.01	182.68	45.67				0.05		
	2/28/2022	10:22	49-45	16	4.80	182.68	228.35	45.67				0.05		
	2/28/2022	10:33	45-41	13	4.80	228.35	274.02	45.67				0.05		
	2/28/2022	10:46	41-37	18	4.40	274.02	319.69	45.67				0.05		
	2/28/2022	11:15	37-33	19	5.60	319.69	365.36	45.67				0.05		
	2/28/2022	11:25	33-30	25	7.40	365.36	399.00	33.64				0.04		

14	2/28/2022	9:48	65-61	100	3.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	10:16	61-57	72	1.80	45.67	91.34	45.67				0.05		
	2/28/2022	10:32	57-53	90	2.30	91.34	137.01	45.67				0.05		
	2/28/2022	11:15	53-49	46	2.10	137.01	182.68	45.67				0.05		
	2/28/2022	11:48	49-45	100	3.00	182.68	228.35	45.67				0.05		
	2/28/2022	12:27	45-41	68	2.00	228.35	274.02	45.67				0.05		
	2/28/2022	13:24	41-37	130	1.40	274.02	319.69	45.67				0.05		
	2/28/2022	13:52	37-33	125	1.80	319.69	365.36	45.67				0.05		
	2/28/2022	14:19	33-30	125	1.70	365.36	399.00	33.64				0.04		
15	2/28/2022	12:04	65-61	103	2.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	12:22	61-57	90	1.90	45.67	91.34	45.67				0.05		
	2/28/2022	12:52	57-53	74	2.60	91.34	137.01	45.67				0.05		
	2/28/2022	13:15	53-49	85	7.70	137.01	182.68	45.67				0.05		
	2/28/2022	13:25	49-45	22	5.40	182.68	228.35	45.67				0.05		
	2/28/2022	13:34	45-41	41	4.70	228.35	274.02	45.67				0.05		
	2/28/2022	13:51	41-37	41	6.70	274.02	319.69	45.67				0.05		
	2/28/2022	14:00	37-33	88	9.40	319.69	365.36	45.67				0.05		
	2/28/2022	14:07	33-30	75	10.10	365.36	399.00	33.64				0.04		
16	2/28/2022	15:10	65-61	115	3.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	15:28	61-57	5	4.00	45.67	91.34	45.67				0.05		
	2/28/2022	15:42	57-53	43	4.20	91.34	137.01	45.67				0.05		
	2/28/2022	15:54	53-49	68	7.90	137.01	182.68	45.67				0.05		
	3/1/2022	8:47	49-45	51	4.20	182.68	228.35	45.67				0.05		
	3/1/2022	9:08	45-41	80	7.20	228.35	274.02	45.67				0.05		
	3/1/2022	9:17	41-37	63	6.40	274.02	319.69	45.67				0.05		
	3/1/2022	9:36	37-33	41	4.40	319.69	365.36	45.67				0.05		
	3/1/2022	9:46	33-30	30	5.70	365.36	399.00	33.64				0.04		
17	2/28/2022	11:58	65-61	105	5.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	12:27	61-57	63	8.30	45.67	91.34	45.67				0.05		
	2/28/2022	12:35	57-53	38	6.40	91.34	137.01	45.67				0.05		
	2/28/2022	12:42	53-49	29	5.30	137.01	182.68	45.67				0.05		
	2/28/2022	12:53	49-45	40	6.50	182.68	228.35	45.67				0.05		
	2/28/2022	13:02	45-41	23	5.20	228.35	274.02	45.67				0.05		
	2/28/2022	13:11	41-37	16	3.80	274.02	319.69	45.67				0.05		
	2/28/2022	13:23	37-33	16	4.30	319.69	365.36	45.67				0.05		
	2/28/2022	13:32	33-30	21	5.10	365.36	399.00	33.64				0.04		
18	2/28/2022	12:31	65-61	76	5.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	12:38	61-57	21	5.40	45.67	91.34	45.67				0.05		
	2/28/2022	12:45	57-53	23	6.10	91.34	137.01	45.67				0.05		
	2/28/2022	12:55	53-49	22	5.60	137.01	182.68	45.67				0.05		
	2/28/2022	13:02	49-45	27	5.60	182.68	228.35	45.67				0.05		
	2/28/2022	13:11	45-41	30	8.10	228.35	274.02	45.67				0.05		
	2/28/2022	13:19	41-37	21	5.40	274.02	319.69	45.67				0.05		
	2/28/2022	13:31	37-33	42	8.80	319.69	365.36	45.67				0.05		
	2/28/2022	13:39	33-30	42	9.40	365.36	399.00	33.64				0.04		
19	2/28/2022	14:15	65-61	103	5.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	14:28	61-57	62	8.90	45.67	91.34	45.67				0.05		
	2/28/2022	14:44	57-53	35	6.10	91.34	137.01	45.67				0.05		
	2/28/2022	14:54	53-49	48	8.00	137.01	182.68	45.67				0.05		
	2/28/2022	15:05	49-45	38	7.60	182.68	228.35	45.67				0.05		
	2/28/2022	15:13	45-41	31	6.70	228.35	274.02	45.67				0.05		
	2/28/2022	15:28	41-37	35	7.40	274.02	319.69	45.67				0.05		
	2/28/2022	15:42	37-33	34	7.10	319.69	365.36	45.67				0.05		
	2/28/2022	15:50	33-30	57	9.60	365.36	399.00	33.64				0.04		
20	2/28/2022	14:42	65-61	67	3.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	14:54	61-57	56	5.60	45.67	91.34	45.67				0.05		
	2/28/2022	15:05	57-53	42	6.00	91.34	137.01	45.67				0.05		
	2/28/2022	15:15	53-49	37	5.70	137.01	182.68	45.67				0.05		
	2/28/2022	15:28	49-45	34	6.10	182.68	228.35	45.67				0.05		
	2/28/2022	15:42	45-41	20	4.80	228.35	274.02	45.67				0.05		
	2/28/2022	15:53	41-37	66	10.40	274.02	319.69	45.67				0.05		
	2/28/2022	16:00	37-33	72	9.40	319.69	365.36	45.67				0.05		
	2/28/2022	16:07	33-30	73	9.70	365.36	399.00	33.64				0.04		
21	2/28/2022	15:35	65-61	127	3.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	2/28/2022	15:55	61-57	100	1.90	45.67	59.00	13.33				0.05		
	3/1/2022	8:47	61-57	106	1.10	59.00	91.34	32.34				0.05		
	3/1/2022	9:15	57-53	112	1.50	91.34	137.01	45.67				0.05		
	3/1/2022	10:15	53-49	80	2.60	137.01	182.68	45.67				0.05		
	3/1/2022	10:35	49-45	62	2.40	182.68	228.35	45.67				0.05		
	3/1/2022	10:55	45-41	65	2.50	228.35	274.02	45.67				0.05		
	3/1/2022	11:15	41-37	70	2.40	274.02	319.69	45.67				0.05		
	3/1/2022	11:35	37-33	75	2.30	319.69	365.36	45.67				0.05		
	3/1/2022	11:58	33-30	75	2.40	365.36	399.00	33.64				0.04		
22	3/1/2022	9:01	65-61	125	2.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	9:20	61-57	68	8.40	45.67	91.34	45.67				0.05		
	3/1/2022	9:36	57-53	43	7.70	91.34	137.01	45.67				0.05		
	3/1/2022	9:42	53-49	24	6.00	137.01	182.68	45.67				0.05		
	3/1/2022	9:54	49-45	51	8.30	182.68	228.35	45.67				0.05		
	3/1/2022	10:05	45-41	54	8.50	228.35	274.02	45.67				0.05		
	3/1/2022	10:15	41-37	50	8.70	274.02	319.69	45.67				0.05		
	3/1/2022	10:30	37-33	40	7.60	319.69	365.36	45.67				0.05		
	3/1/2022	10:40	33-30	45	8.10	365.36	399.00	33.64				0.04		
23	3/1/2022	9:00	65-61	71	4.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	9:11	61-57	37	6.60	45.67	91.34	45.67				0.05		
	3/1/2022	9:22	57-53	52	8.00	91.34	137.01	45.67				0.05		
	3/1/2022	9:36	53-49	47	8.30	137.01	182.68	45.67				0.05		
	3/1/2022	9:42	49-45	22	5.00	182.68	228.35	45.67				0.05		
	3/1/2022	9:54	45-41	50	7.90	228.35	274.02	45.67				0.05		
	3/1/2022	10:05	41-37	51	9.00	274.02	319.69	45.67				0.05		
	3/1/2022	10:15	37-33	50	9.20	319.69	365.36	45.67				0.05		
	3/1/2022	10:25	33-30	50	8.90	365.36	399.00	33.64				0.04		
24	3/1/2022	10:33	65-61	61	4.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	10:43	61-57	80	6.30	45.67	91.34	45.67				0.05		
	3/1/2022	10:55	57-53	102	8.90	91.34	137.01	45.67				0.05		
	3/1/2022	11:02	53-49	92	8.00	137.01	182.68	45.67				0.05		
	3/1/2022	11:13	49-45	73	7.70	182.68	228.35	45.67				0.05		
	3/1/2022	11:22	45-41	58	6.50	228.35	274.02	45.67				0.05		
	3/1/2022	11:33	41-37	47	6.10	274.02	319.69	45.67				0.05		
	3/1/2022	11:42	37-33	47	6.00	319.69	365.36	45.67				0.05		
	3/1/2022	11:53	33-30	45	5.00	365.36	399.00	33.64				0.04		
25	3/1/2022	13:07	65-61	106	4.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	13:35	61-57	80	6.30	45.67	91.34	45.67				0.05		
	3/1/2022	13:42	57-53	71	7.10	91.34	137.01	45.67				0.05		
	3/1/2022	13:58	53-49	41	6.40	137.01	182.68	45.67				0.05		
	3/1/2022	14:16	49-45	27	5.30	182.68	228.35	45.67				0.05		
	3/1/2022	14:36	45-41	19	4.70	228.35	274.02	45.67				0.05		
	3/1/2022	14:50	41-37	34	6.30	274.02	319.69	45.67				0.05		
	3/1/2022	15:01	37-33	36	6.20	319.69	365.36	45.67				0.05		
	3/1/2022	15:15	33-30	38	6.70	365.36	399.00	33.64				0.04		
26	3/1/2022	11:05	65-61	90	2.80	0.00	45.67	45.67	399	159	119	0.05		4-Dropdown Screen
	3/1/2022	11:22	61-57	41	6.90	45.67	91.34	45.67				0.05		
	3/1/2022	11:35	57-53	56	8.30	91.34	137.01	45.67				0.05		
	3/1/2022	11:42	53-49	58	8.50	137.01	182.68	45.67				0.05		
	3/1/2022	11:53	49-45	42	7.30	182.68	228.35	45.67				0.05		
	3/1/2022	12:06	45-41	37	6.90	228.35	274.02	45.67				0.05		
	3/1/2022	12:22	41-37	35	6.60	274.02	319.69	45.67				0.05		
	3/1/2022	12:34	37-33	57	8.80	319.69	365.36	45.67				0.05		
	3/1/2022	12:43	33-30	57	8.80	365.36	399.00	33.64				0.04		
27	3/1/2022	11:21	65-61	137	2.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	11:37	61-57	75	3.30	45.67	91.34	45.67				0.05		
	3/1/2022	11:56	57-53	70	2.90	91.34	137.01	45.67				0.05		
	3/1/2022	12:22	53-49	59	2.30	137.01	182.68	45.67				0.05		
	3/1/2022	12:43	49-45	90	3.10	182.68	228.35	45.67				0.05		
	3/1/2022	13:10	45-41	105	4.10	228.35	274.02	45.67				0.05		
	3/1/2022	13:35	41-37	79	3.90	274.02	319.69	45.67				0.05		
	3/1/2022	13:58	37-33	40	1.80	319.69	365.36	45.67				0.05		
	3/1/2022	14:37	33-30	50	1.70	365.36	399.00	33.64				0.04		
28	3/1/2022	13:30	65-61	84	5.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	13:46	61-57	46	6.40	45.67	91.34	45.67				0.05		
	3/1/2022	13:58	57-53	40	6.20	91.34	137.01	45.67				0.05		
	3/1/2022	14:16	53-49	14	2.70	137.01	182.68	45.67				0.05		
	3/1/2022	14:36	49-45	19	4.30	182.68	228.35	45.67				0.05		
	3/1/2022	14:50	45-41	34	5.80	228.35	274.02	45.67				0.05		
	3/1/2022	15:01	41-37	37	6.10	274.02	319.69	45.67				0.05		
	3/1/2022	15:15	37-33	38	6.20	319.69	365.36	45.67				0.05		
	3/1/2022	15:27	33-30	40	6.00	365.36	399.00	33.64				0.04		

	3/1/2022	13:45	65-61	90	6.70	0.00	45.67	45.67				0.05		
	3/1/2022	13:58	61-57	42	6.10	45.67	91.34	45.67				0.05		
	3/1/2022	14:16	57-53	27	4.70	91.34	137.01	45.67				0.05		
	3/1/2022	14:36	53-49	19	4.20	137.01	182.68	45.67				0.05		
29	3/1/2022	14:50	49-45	35	5.60	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/1/2022	15:01	45-41	37	5.90	228.35	274.02	45.67				0.05		
	3/1/2022	15:15	41-37	38	6.20	274.02	319.69	45.67				0.05		
	3/1/2022	15:27	37-33	41	6.10	319.69	365.36	45.67				0.05		
	3/1/2022	15:36	33-30	43	6.50	365.36	399.00	33.64				0.04		
	3/1/2022	15:47	65-61	99	5.20	0.00	45.67	45.67				0.05		
	3/1/2022	15:58	61-57	115	10.00	45.67	91.34	45.67				0.05		
	3/1/2022	16:03	57-53	95	10.30	91.34	137.01	45.67				0.05		
	3/2/2022	9:27	53-49	64	7.30	137.01	182.68	45.67				0.05		
30	3/2/2022	9:40	49-45	48	5.10	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	9:53	45-41	78	5.90	228.35	274.02	45.67				0.05		
	3/2/2022	10:06	41-37	37	3.90	274.02	319.69	45.67				0.05		
	3/2/2022	10:17	37-33	51	6.80	319.69	365.36	45.67				0.05		
	3/2/2022	10:30	33-30	47	6.60	365.36	399.00	33.64				0.04		
	3/2/2022	9:15	65-61	35	5.10	0.00	45.67	45.67				0.05		
	3/2/2022	9:31	61-57	43	7.00	45.67	91.34	45.67				0.05		
	3/2/2022	9:39	57-53	20	5.00	91.34	137.01	45.67				0.05		
	3/2/2022	9:51	53-49	30	4.20	137.01	182.68	45.67				0.05		
31	3/2/2022	10:06	49-45	29	6.10	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	10:17	45-41	38	7.10	228.35	274.02	45.67				0.05		
	3/2/2022	10:33	41-37	48	7.80	274.02	319.69	45.67				0.05		
	3/2/2022	10:44	37-33	15	4.50	319.69	365.36	45.67				0.05		
	3/2/2022	10:51	33-30	71	9.10	365.36	399.00	33.64				0.04		
	3/2/2022	9:18	65-61	111	3.50	0.00	45.67	45.67				0.05		
	3/2/2022	9:38	61-57	125	3.20	45.67	91.34	45.67				0.05		
	3/2/2022	9:56	57-53	120	2.20	91.34	137.01	45.67				0.05		
	3/2/2022	10:40	53-49	86	2.60	137.01	182.68	45.67				0.05		
32	3/2/2022	11:12	49-45	89	2.70	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	11:35	45-41	89	2.80	228.35	274.02	45.67				0.05		
	3/2/2022	12:03	41-37	90	3.20	274.02	319.69	45.67				0.05		
	3/2/2022	12:15	37-33	105	3.40	319.69	365.36	45.67				0.05		
	3/2/2022	12:31	33-30	102	3.50	365.36	399.00	33.64				0.04		
	3/2/2022	9:21	65-61	135	1.70	0.00	45.67	45.67				0.05		
	3/2/2022	9:55	61-57	125	2.40	45.67	64.00	18.33				0.05	High pressures and no flow. Lifting to next interval. No success at new interval. Pulling out and redriving.	
	3/2/2022	10:44	57-53	130	3.70	64.00	137.01	73.01				0.05		
33	3/2/2022	11:11	53-49	81	7.40	137.01	182.68	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	11:25	49-45	84	8.30	182.68	228.35	45.67				0.05		
	3/2/2022	11:34	45-41	87	7.90	228.35	274.02	45.67				0.05		
	3/2/2022	11:47	41-37	85	7.20	274.02	319.69	45.67				0.05		
	3/2/2022	11:54	37-33	83	7.00	319.69	365.36	45.67				0.05		
	3/2/2022	12:03	33-30	93	7.90	365.36	399.00	33.64				0.04		
	3/2/2022	12:13	65-61	80	6.70	0.00	45.67	45.67				0.05		
	3/2/2022	12:23	61-57	44	7.50	45.67	91.34	45.67				0.05		
	3/2/2022	12:33	57-53	31	7.70	91.34	137.01	45.67				0.05		
	3/2/2022	12:47	53-49	41	9.00	137.01	182.68	45.67				0.05		
34	3/2/2022	12:55	49-45	31	8.20	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	13:03	45-41	37	9.00	228.35	274.02	45.67				0.05		
	3/2/2022	13:18	41-37	41	9.20	274.02	319.69	45.67				0.05		
	3/2/2022	13:25	37-33	48	8.90	319.69	365.36	45.67				0.05		
	3/2/2022	13:37	33-30	46	10.50	365.36	399.00	33.64				0.04		
	3/2/2022	12:09	65-61	110	5.00	0.00	45.67	45.67				0.05		
	3/2/2022	12:23	61-57	44	7.40	45.67	91.34	45.67				0.05		
	3/2/2022	12:33	57-53	76	6.00	91.34	137.01	45.67				0.05		
	3/2/2022	12:47	53-49	74	7.90	137.01	182.68	45.67				0.05		
35	3/2/2022	12:55	49-45	67	9.90	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	13:03	45-41	65	9.00	228.35	274.02	45.67				0.05		
	3/2/2022	13:18	41-37	58	9.20	274.02	319.69	45.67				0.05		
	3/2/2022	13:25	37-33	56	9.40	319.69	365.36	45.67				0.05		
	3/2/2022	13:37	33-30	46	8.50	365.36	399.00	33.64				0.04		
	3/2/2022	13:43	65-61	125	2.90	0.00	45.67	45.67				0.05		
	3/2/2022	15:01	61-58	24	5.60	45.67	79.19	33.52				0.04	Unable to achieve flow at high pressures. Lifting and redriving.	
	3/2/2022	15:13	58-55	51	7.70	79.19	112.71	33.52				0.04		
	3/2/2022	15:26	55-52	15	4.20	112.71	146.23	33.52				0.04		
	3/2/2022	15:33	52-49	17	6.10	146.23	179.75	33.52				0.04		
36	3/2/2022	15:44	49-46	15	6.10	179.75	213.27	33.52	399	159	119	0.04		Expendable Tip
	3/3/2022	8:55	46-43	37	4.90	213.27	246.79	33.52				0.04		
	3/3/2022	9:11	43-40	14	5.00	246.79	280.31	33.52				0.04		
	3/3/2022	9:25	40-37	16	4.50	280.31	313.83	33.52				0.04		
	3/3/2022	9:40	37-34	24	6.30	313.83	347.35	33.52				0.04		
	3/3/2022	9:55	34-31	30	7.60	347.35	380.87	33.52				0.04		
	3/3/2022	10:10	31-30	45	8.90	380.87	399.00	18.13				0.01		
	3/2/2022	13:49	65-61	110	4.10	0.00	45.67	45.67				0.05		
	3/2/2022	14:05	61-57	70	7.70	45.67	91.34	45.67				0.05		
	3/2/2022	14:17	57-53	69	7.70	91.34	137.01	45.67				0.05		
	3/2/2022	14:38	53-49	61	7.20	137.01	182.68	45.67				0.05		
37	3/2/2022	14:46	49-45	19	5.50	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/2/2022	15:09	45-41	35	6.40	228.35	274.02	45.67				0.05		
	3/3/2022	8:55	41-37	29	4.80	274.02	319.69	45.67				0.05		
	3/3/2022	9:11	37-33	15	4.90	319.69	365.36	45.67				0.05		
	3/3/2022	9:25	33-30	17	5.00	365.36	399.00	33.64				0.04		
	3/2/2022	14:42	65-61	97	5.30	0.00	45.67	45.67				0.05		
	3/2/2022	15:09	61-57	30	5.80	45.67	91.34	45.67				0.05		
	3/2/2022	15:26	57-53	40	6.30	91.34	137.01	45.67				0.05		
	3/2/2022	15:44	53-49	40	3.48	137.01	182.68	45.67				0.05		
38	3/3/2022	8:55	49-45	31	4.50	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	9:11	45-41	16	4.70	228.35	274.02	45.67				0.05		
	3/3/2022	9:25	41-37	20	5.10	274.02	319.69	45.67				0.05		
	3/3/2022	9:40	37-33	21	5.30	319.69	365.36	45.67				0.05		
	3/3/2022	9:55	33-30	31	5.40	365.36	399.00	33.64				0.04		
	3/2/2022	15:07	65-61	120	3.50	0.00	45.67	45.67				0.05		
	3/2/2022	15:28	61-57	33	3.80	45.67	91.34	45.67				0.05		
	3/3/2022	8:55	57-53	32	5.40	91.34	137.01	45.67				0.05		
	3/3/2022	9:11	53-49	16	4.90	137.01	182.68	45.67				0.05		
39	3/3/2022	9:25	49-45	21	4.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	9:40	45-41	21	3.80	228.35	274.02	45.67				0.05		
	3/3/2022	9:55	41-37	24	5.90	274.02	319.69	45.67				0.05		
	3/3/2022	10:10	37-33	44	7.50	319.69	365.36	45.67				0.05		
	3/3/2022	10:16	33-30	120	12.90	365.36	399.00	33.64				0.04		
	3/3/2022	10:58	65-61	63	5.00	0.00	45.67	45.67				0.05		
	3/3/2022	11:29	61-57	67	8.30	45.67	91.34	45.67				0.05		
	3/3/2022	11:43	57-53	28	6.20	91.34	137.01	45.67				0.05		
	3/3/2022	11:56	53-49	54	8.20	137.01	182.68	45.67				0.05		
40	3/3/2022	12:06	49-45	44	7.20	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	12:16	45-41	25	3.90	228.35	274.02	45.67				0.05		
	3/3/2022	12:28	41-37	30	6.90	274.02	319.69	45.67				0.05		
	3/3/2022	12:43	37-33	26	5.00	319.69	365.36	45.67				0.05		
	3/3/2022	12:53	33-30	22	5.00	365.36	399.00	33.64				0.04		
	3/3/2022	11:27	65-61	130	2.20	0.00	45.67	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/3/2022	12:04	61-57	88	6.20	45.67	91.34	45.67				0.05	Unable to achieve flow at high pressures. Lifting and redriving.	
	3/3/2022	12:19	57-53	16	5.00	91.34	137.01	45.67				0.05		
	3/3/2022	12:28	53-49	32	6.00	137.01	182.68	45.67				0.05		
41	3/3/2022	12:43	49-45	27	5.50	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	12:53	45-41	25	5.60	228.35	274.02	45.67				0.05		
	3/3/2022	13:08	41-37	52	6.80	274.02	319.69	45.67				0.05		
	3/3/2022	13:18	37-33	60	8.60	319.69	365.36	45.67				0.05		
	3/3/2022	13:28	33-30	85	11.30	365.36	399.00	33.64				0.04		
	3/3/2022	11:07	65-61	128	5.10	0.00	45.67	45.67				0.05		
	3/3/2022	11:43	61-57	72	5.60	45.67	91.34	45.67				0.05		
	3/3/2022	11:56	57-53	63	8.60	91.34	137.01	45.67				0.05		
	3/3/2022	12:06	53-49	33	6.40	137.01	182.68	45.67				0.05		
42	3/3/2022	12:16	49-45	46	7.30	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	12:28	45-41	31	6.00	228.35	274.02	45.67				0.05		
	3/3/2022	12:43	41-37	28	5.00	274.02	319.69	45.67				0.05		
	3/3/2022	12:53	37-33	26	4.90	319.69	365.36	45.67				0.05		
	3/3/2022	13:08	33-30	54	7.00	365.36	399.00	33.64				0.04		
	3/3/2022	11:38	65-61	130	3.00	0.00	45.67	45.67				0.05		
	3/3/2022	11:56	61-57	120	3.00	45.67	91.34	45.67				0.05		
	3/3/2022	12:16	57-53	81	5.00	91.34	137.01	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/3/2022	12:28	53-49	32	4.40	137.01	182.68	45.67				0.05		
43	3/3/2022	12:43	49-45	29	5.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	12:53	45-41	30	4.90	228.35	274.02	45.67				0.05		
	3/3/2022	13:08	41-37	55	6.80	274.02	319.69	45.67				0.05		
	3/3/2022	13:18	37-33	60	7.00	319.69	365.36	45.67				0.05		
	3/3/2022	13:28	33-30	106	7.90	365.36	399.00	33.64				0.04		

	3/3/2022	14:58	65-61	99	3.80	0.00	45.67	45.67				0.05		
	3/3/2022	15:15	61-57	70	8.40	45.67	91.34	45.67				0.05		
	3/3/2022	15:22	57-53	23	5.50	91.34	137.01	45.67				0.05		
	3/3/2022	15:31	53-49	25	6.30	137.01	182.68	45.67				0.05		
44	3/3/2022	15:47	49-45	80	8.70	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	15:59	45-41	17	5.40	228.35	274.02	45.67				0.05		
	3/3/2022	16:11	41-37	36	6.80	274.02	319.69	45.67				0.05		
	3/3/2022	16:17	37-33	27	6.00	319.69	365.36	45.67				0.05		
	3/3/2022	16:24	33-30	32	4.50	365.36	399.00	33.64				0.04		
	3/3/2022	15:03	65-61	102	3.10	0.00	45.67	45.67				0.05		
	3/3/2022	15:17	61-57	64	5.60	45.67	91.34	45.67				0.05		
	3/3/2022	15:28	57-53	30	5.20	91.34	137.01	45.67				0.05		
	3/3/2022	15:48	53-49	26	5.60	137.01	182.68	45.67				0.05		
45	3/3/2022	15:59	49-45	18	5.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	16:11	45-41	37	6.00	228.35	274.02	45.67				0.05		
	3/3/2022	16:17	41-37	29	5.30	274.02	319.69	45.67				0.05		
	3/3/2022	16:24	37-33	31	6.80	319.69	365.36	45.67				0.05		
	3/3/2022	16:32	33-30	53	8.40	365.36	399.00	33.64				0.04		
	3/3/2022	15:05	65-61	102	4.90	0.00	45.67	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/3/2022	15:14	61-57	56	5.70	45.67	91.34	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/3/2022	15:26	57-53	34	6.40	91.34	137.01	45.67				0.05		
	3/3/2022	15:34	53-49	21	5.80	137.01	182.68	45.67				0.05		
46	3/3/2022	15:48	49-45	27	5.60	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/3/2022	15:55	45-41	25	6.00	228.35	274.02	45.67				0.05		
	3/3/2022	16:04	41-37	21	5.90	274.02	319.69	45.67				0.05		
	3/3/2022	16:14	37-33	91	12.80	319.69	365.36	45.67				0.05		
	3/3/2022	16:20	33-30	23	4.00	365.36	399.00	33.64				0.04		
	3/3/2022	15:02	65-62	97	4.80	0.00	33.25	33.25				0.04		
	3/3/2022	15:12	62-59	70	4.20	33.25	66.50	33.25				0.04		
	3/3/2022	15:22	59-56	25	5.00	66.50	99.75	33.25				0.04		
	3/3/2022	15:31	56-53	26	5.40	99.75	133.00	33.25				0.04		
	3/3/2022	15:46	53-50	43	6.30	133.00	166.25	33.25				0.04		
47	3/3/2022	15:54	50-47	22	5.10	166.25	199.50	33.25	399	159	119	0.04		Expendable Tip
	3/3/2022	16:02	47-44	22	5.30	199.50	232.75	33.25				0.04		
	3/3/2022	16:09	44-41	35	6.50	232.75	266.00	33.25				0.04		
	3/3/2022	16:17	41-38	28	5.80	266.00	299.25	33.25				0.04		
	3/3/2022	16:24	38-35	32	6.00	299.25	332.50	33.25				0.04		
	3/3/2022	16:32	35-32	52	8.30	332.50	365.75	33.25				0.04		
	3/3/2022	16:39	32-30	120	11.80	365.75	399.00	33.25				0.04		
	3/4/2022	9:27	65-61	103	2.50	0.00	45.67	45.67				0.05		
	3/4/2022	9:52	61-57	93	4.80	45.67	91.34	45.67				0.05		
	3/4/2022	10:10	57-53	45	3.00	91.34	137.01	45.67				0.05		
	3/4/2022	10:24	53-49	25	4.10	137.01	182.68	45.67				0.05		
48	3/4/2022	10:36	49-45	26	3.70	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/4/2022	10:49	45-41	46	4.00	228.35	274.02	45.67				0.05		
	3/4/2022	11:01	41-37	44	3.00	274.02	304.00	29.98				0.05	Fair amount of surfacing out of bore. Lifting to next interval and continuing.	
	3/4/2022	11:12	37-33	36	4.00	304.00	365.36	61.36				0.05		
	3/4/2022	11:28	33-30	71	7.20	365.36	399.00	33.64				0.04		
	3/4/2022	9:23	65-61	120	1.50	0.00	23.00	23.00				0.05	Unable to achieve flow at high pressures. Lifting and rediriving. Fair amount of backpressure while lifting rods.	
	3/4/2022	9:50	61-58	123	4.00	23.00	65.00	42.00				0.04	Small amount of surfacing out of the bore. Sealed and continued.	
	3/4/2022	10:10	58-55	20	4.60	65.00	100.70	35.70				0.04		
	3/4/2022	10:24	55-52	48	6.00	100.70	136.40	35.70				0.04		
	3/4/2022	10:36	52-49	21	4.90	136.40	172.10	35.70				0.04		
49	3/4/2022	10:49	49-46	30	5.50	172.10	207.80	35.70	399	159	119	0.04		4'-Dropdown Screen
	3/4/2022	11:01	46-43	33	5.80	207.80	243.50	35.70				0.04		
	3/4/2022	11:12	43-40	26	5.20	243.50	279.20	35.70				0.04		
	3/4/2022	11:24	40-37	89	8.20	279.20	314.90	35.70				0.04		
	3/4/2022	11:29	37-34	62	7.70	314.90	350.60	35.70				0.04		
	3/4/2022	11:34	34-31	46	7.70	350.60	386.30	35.70				0.04		
	3/4/2022	11:39	31-30	125	13.00	386.30	399.00	12.70				0.01		
	3/4/2022	9:25	65-61	91	3.40	0.00	45.67	45.67				0.05		
	3/4/2022	9:47	61-57	41	6.90	45.67	91.34	45.67				0.05		
	3/4/2022	9:57	57-53	13	4.40	91.34	137.01	45.67				0.05		
	3/4/2022	10:10	53-49	25	5.60	137.01	182.68	45.67				0.05		
50	3/4/2022	10:24	49-45	33	4.70	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/4/2022	10:36	45-41	24	5.90	228.35	274.02	45.67				0.05		
	3/4/2022	10:49	41-37	30	6.30	274.02	319.69	45.67				0.05		
	3/4/2022	11:01	37-33	23	5.90	319.69	365.36	45.67				0.05		
	3/4/2022	11:12	33-30	26	6.30	365.36	399.00	33.64				0.04		
	3/4/2022	9:29	65-61	53	6.30	0.00	45.67	45.67				0.05		
	3/4/2022	9:47	61-57	46	8.10	45.67	91.34	45.67				0.05		
	3/4/2022	9:57	57-53	10	4.00	91.34	137.01	45.67				0.05		
	3/4/2022	10:10	53-49	32	6.80	137.01	182.68	45.67				0.05		
51	3/4/2022	10:24	49-45	38	6.50	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/4/2022	10:36	45-41	25	6.50	228.35	274.02	45.67				0.05		
	3/4/2022	10:49	41-37	10	4.60	274.02	319.69	45.67				0.05		
	3/4/2022	11:01	37-33	26	6.30	319.69	365.36	45.67				0.05		
	3/4/2022	11:12	33-30	16	5.10	365.36	399.00	33.64				0.04		
	3/4/2022	11:53	65-61	50	5.20	0.00	45.67	45.67				0.05		
	3/4/2022	12:05	61-57	31	6.30	45.67	91.34	45.67				0.05		
	3/4/2022	12:17	57-53	46	8.20	91.34	137.01	45.67				0.05		
	3/4/2022	12:30	53-49	30	6.10	137.01	182.68	45.67				0.05		
52	3/4/2022	12:44	49-45	25	6.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/4/2022	12:55	45-41	30	6.20	228.35	274.02	45.67				0.05		
	3/4/2022	13:06	41-37	21	5.60	274.02	319.69	45.67				0.05		
	3/4/2022	13:22	37-33	20	5.40	319.69	365.36	45.67				0.05		
	3/4/2022	13:35	33-30	23	5.70	365.36	399.00	33.64				0.04		
	3/4/2022	11:56	65-61	90	3.50	0.00	45.67	45.67				0.05		
	3/4/2022	11:17	61-57	46	5.70	45.67	91.34	45.67				0.05		
	3/4/2022	12:30	57-53	23	5.10	91.34	137.01	45.67				0.05		
	3/4/2022	12:44	53-49	27	6.10	137.01	182.68	45.67				0.05		
53	3/4/2022	12:55	49-45	33	5.20	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/4/2022	13:06	45-41	24	5.50	228.35	274.02	45.67				0.05		
	3/4/2022	13:22	41-37	24	5.50	274.02	319.69	45.67				0.05		
	3/4/2022	13:35	37-33	25	6.10	319.69	365.36	45.67				0.05		
	3/4/2022	13:48	33-30	41	8.40	365.36	399.00	33.64				0.04		
	3/4/2022	12:21	65-61	110	2.60	0.00	13.00	13.00				0.05	Fair amount of surfacing out of bore. Lifting to next interval and continuing.	
	3/4/2022	12:27	61-57	45	3.70	13.00	91.34	78.34				0.05		
	3/4/2022	12:55	57-53	45	5.90	91.34	137.01	45.67				0.05		
	3/4/2022	13:06	53-49	23	3.60	137.01	182.68	45.67				0.05		
54	3/4/2022	13:22	49-45	33	3.90	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/4/2022	13:35	45-41	26	3.00	228.35	274.02	45.67				0.05		
	3/4/2022	13:55	41-37	51	7.00	274.02	319.69	45.67				0.05		
	3/4/2022	14:00	37-33	55	7.90	319.69	365.36	45.67				0.05		
	3/4/2022	14:07	33-30	90	8.00	365.36	399.00	33.64				0.04		
	3/4/2022	12:19	65-62	50	5.40	0.00	34.20	34.20				0.04		
	3/4/2022	12:30	62-59	25	5.00	34.20	68.40	34.20				0.04		
	3/4/2022	12:44	59-56	25	5.40	68.40	102.60	34.20				0.04		
	3/4/2022	12:55	56-53	45	2.10	102.60	136.80	34.20				0.04		
	3/4/2022	13:06	53-50	25	4.80	136.80	171.00	34.20				0.04		
55	3/4/2022	13:22	50-47	35	5.10	171.00	205.20	34.20	399	159	119	0.04		Expendable Tip
	3/4/2022	13:35	47-44	26	4.80	205.20	239.40	34.20				0.04		
	3/4/2022	13:48	44-41	41	6.40	239.40	273.60	34.20				0.04		
	3/4/2022	13:55	41-38	64	8.20	273.60	307.80	34.20				0.04		
	3/4/2022	14:00	38-35	57	7.60	307.80	342.00	34.20				0.04		
	3/4/2022	14:07	35-32	90	10.40	342.00	376.20	34.20				0.04		
	3/4/2022	14:12	32-30	80	8.40	376.20	399.00	22.80				0.03		
	4/1/2022	9:08	65-61	55	4.20	0.00	45.67	45.67				0.05		
	4/1/2022	9:26	61-57	26	4.50	45.67	91.34	45.67				0.05		
	4/1/2022	9:39	57-53	31	5.30	91.34	137.01	45.67				0.05		
	4/1/2022	9:52	53-49	30	5.20	137.01	182.68	45.67				0.05		
56	4/1/2022	10:06	49-45	34	6.10	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/1/2022	10:17	45-41	35	5.80	228.35	274.02	45.67				0.05		
	4/1/2022	10:29	41-37	26	5.10	274.02	319.69	45.67				0.05		
	4/1/2022	10:41	37-33	28	4.70	319.69	365.36	45.67				0.05		
	4/1/2022	10:53	33-30	25	5.10	365.36	399.00	33.64				0.04		
	4/1/2022	9:08	65-61	57	4.10	0.00	45.67	45.67				0.05		
	4/1/2022	9:26	61-57	29	5.40	45.67	91.34	45.67				0.05		
	4/1/2022	9:39	57-53	28	5.50	91.34	137.01	45.67				0.05		
	4/1/2022	9:52	53-49	31	5.90	137.01	182.68	45.67				0.05		
57	4/1/2022	10:06	49-45	35	4.50	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/1/2022	10:17	45-41	30	5.50	228.35	274.02	45.67				0.05		
	4/1/2022	10:29	41-37	25	5.10	274.02	319.69	45.67				0.05		
	4/1/2022	10:41	37-33	30	5.60	319.69	365.36	45.67				0.05		
	4/1/2022	10:53	33-30	26	5.40	365.36	399.00	33.64				0.04		
	4/1/2022	9:08	65-61	23	4.30	0.00	45.67	45.67				0.05		
	4/1/2022	9:26	61-57	30	5.90	45.67	91.34	45.67				0.05		
	4/1/2022	9:39	57-53	30	4.80	91.34	137.01	45.67				0.05		
	4/1/2022	9:52	53-49	37	4.70	137.01	182.68	45.67				0.05		
58	4/1/2022	10:06	49-45	15	4.50	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/1/2022	10:17	45-41	23	5.10	228.35	274.02	45.67				0.05		
	4/1/2022	10:29	41-37	26	4.70	274.02	319.69	45.67				0.05		
	4/1/2022	10:41	37-33	30	4.10	319.69	365.36	45.67				0.05		
	4/1/2022	10:53	33-30	20	4.70	365.36	399.00	33.64				0.04		

	4/1/2022	9:08	65-61	46	4.40	0.00	45.67	45.67				0.05		
	4/1/2022	9:26	61-57	32	4.90	45.67	91.34	45.67				0.05		
	4/1/2022	9:39	57-53	32	5.10	91.34	137.01	45.67				0.05		
	4/1/2022	9:52	53-49	35	4.90	137.01	182.68	45.67				0.05		
59	4/1/2022	10:06	49-45	26	5.20	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/1/2022	10:17	45-41	38	4.00	228.35	274.02	45.67				0.05		
	4/1/2022	10:29	41-37	25	5.50	274.02	319.69	45.67				0.05		
	4/1/2022	10:41	37-33	32	5.20	319.69	365.36	45.67				0.05		
	4/1/2022	10:53	33-30	26	5.20	365.36	399.00	33.64				0.04		
	4/1/2022	12:16	65-61	38	4.70	0.00	45.67	45.67				0.05		
	4/1/2022	12:36	61-57	52	7.00	45.67	91.34	45.67				0.05		
	4/1/2022	12:48	57-53	46	5.60	91.34	137.01	45.67				0.05		
	4/1/2022	13:02	53-49	70	6.00	137.01	182.68	45.67				0.05		
60	4/1/2022	13:28	49-45	41	5.40	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/1/2022	13:42	45-41	36	5.80	228.35	274.02	45.67				0.05		
	4/1/2022	13:55	41-37	23	3.70	274.02	319.69	45.67				0.05		
	4/1/2022	14:09	37-33	37	4.40	319.69	365.36	45.67				0.05		
	4/1/2022	14:23	33-30	29	4.50	365.36	399.00	33.64				0.04		
	4/1/2022	12:16	65-61	54	3.60	0.00	45.67	45.67				0.05		
	4/1/2022	12:37	61-57	60	6.60	45.67	91.34	45.67				0.05		
	4/1/2022	12:48	57-53	31	4.60	91.34	137.01	45.67				0.05		
	4/1/2022	13:02	53-49	71	6.80	137.01	182.68	45.67				0.05		
61	4/1/2022	13:28	49-45	44	5.40	182.68	228.35	45.67	399	159	119	0.05		Expendable Tip
	4/1/2022	13:42	45-41	42	5.60	228.35	274.02	45.67				0.05		
	4/1/2022	13:55	41-37	38	6.30	274.02	319.69	45.67				0.05		
	4/1/2022	14:09	37-33	47	6.90	319.69	365.36	45.67				0.05		
	4/1/2022	14:23	33-30	30	5.60	365.36	399.00	33.64				0.04		
	4/1/2022	12:16	62-58	57	2.70	0.00	91.34	91.34				0.05	Unable to achieve flow at bottom interval. Lifted up to next interval and continued. Redristributing bottom intervals volume into this one.	
	4/1/2022	13:23	58-55	62	4.40	91.34	124.34	33.00				0.00	Unable to achieve flow. Lifting up and redriving with expedable tip.	
	4/1/2022	13:33	55-52	25	6.00	124.34	157.34	33.00				0.05		
	4/1/2022	13:42	52-49	43	4.30	157.34	190.34	33.00				0.05		
62	4/1/2022	13:55	49-46	95	2.20	190.34	212.00	21.66	399	159	119	0.05	Low flow rates at high pressures. Pulling up and redistributing remaining volume in the interval to the next.	Expendable Tip
	4/1/2022	14:09	46-43	62	4.50	212.00	256.34	44.34				0.05		
	4/1/2022	14:23	43-40	30	5.50	256.34	289.34	33.00				0.05		
	4/1/2022	14:31	40-37	41	6.40	289.34	322.34	33.00				0.05		
	4/1/2022	14:38	37-34	45	7.00	322.34	355.34	33.00				0.05		
	4/1/2022	14:46	34-30	50	8.20	355.34	399.00	43.66				0.05		
	4/1/2022	12:16	65-61	28	3.50	0.00	45.67	45.67				0.05		
	4/1/2022	12:36	61-57	27	5.60	45.67	91.34	45.67				0.05		
	4/1/2022	12:48	57-53	27	5.60	91.34	137.01	45.67				0.05		
	4/1/2022	13:02	53-49	39	6.30	137.01	182.68	45.67				0.05		
63	4/1/2022	13:28	49-45	28	5.40	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/1/2022	13:42	45-41	44	5.00	228.35	274.02	45.67				0.05		
	4/1/2022	13:55	41-37	39	5.80	274.02	319.69	45.67				0.05		
	4/1/2022	14:09	37-33	14	4.20	319.69	365.36	45.67				0.05		
	4/1/2022	14:23	33-30	29	6.60	365.36	399.00	33.64				0.04		
	4/4/2022	9:18	65-61	36	3.00	0.00	45.67	45.67				0.05		
	4/4/2022	9:35	61-57	25	4.60	45.67	91.34	45.67				0.05		
	4/4/2022	9:48	57-53	29	5.00	91.34	137.01	45.67				0.05		
	4/4/2022	10:00	53-49	32	5.10	137.01	182.68	45.67				0.05		
64	4/4/2022	10:13	49-45	34	5.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	10:27	45-41	32	5.00	228.35	274.02	45.67				0.05		
	4/4/2022	10:40	41-37	33	5.10	274.02	319.69	45.67				0.05		
	4/4/2022	10:54	37-33	31	5.00	319.69	365.36	45.67				0.05		
	4/4/2022	11:06	33-30	32	4.50	365.36	399.00	33.64				0.04		
	4/4/2022	9:18	65-61	22	3.10	0.00	45.67	45.67				0.05		
	4/4/2022	9:35	61-57	32	4.90	45.67	91.34	45.67				0.05		
	4/4/2022	9:48	57-53	35	5.50	91.34	137.01	45.67				0.05		
	4/4/2022	10:00	53-49	32	5.10	137.01	182.68	45.67				0.05		
65	4/4/2022	10:13	49-45	35	5.40	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	10:27	45-41	32	5.00	228.35	274.02	45.67				0.05		
	4/4/2022	10:40	41-37	33	5.40	274.02	319.69	45.67				0.05		
	4/4/2022	10:54	37-33	32	5.40	319.69	365.36	45.67				0.05		
	4/4/2022	11:06	33-30	32	5.10	365.36	399.00	33.64				0.04		
	4/4/2022	9:18	65-61	30	4.10	0.00	45.67	45.67				0.05		
	4/4/2022	9:35	61-57	30	5.60	45.67	91.34	45.67				0.05		
	4/4/2022	9:48	57-53	27	5.10	91.34	137.01	45.67				0.05		
	4/4/2022	10:00	53-49	33	5.30	137.01	182.68	45.67				0.05		
66	4/4/2022	10:13	49-45	29	5.20	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	10:27	45-41	27	5.50	228.35	274.02	45.67				0.05		
	4/4/2022	10:40	41-37	26	4.70	274.02	319.69	45.67				0.05		
	4/4/2022	10:54	37-33	27	5.10	319.69	365.36	45.67				0.05		
	4/4/2022	11:06	33-30	32	5.60	365.36	399.00	33.64				0.04		
	4/4/2022	9:18	65-61	26	2.70	0.00	45.67	45.67				0.05		
	4/4/2022	9:35	61-57	48	4.20	45.67	91.34	45.67				0.05		
	4/4/2022	9:48	57-53	52	6.50	91.34	137.01	45.67				0.05		
	4/4/2022	10:00	53-49	54	5.10	137.01	182.68	45.67				0.05		
67	4/4/2022	10:13	49-45	35	5.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	10:27	45-41	33	4.90	228.35	274.02	45.67				0.05		
	4/4/2022	10:40	41-37	34	4.70	274.02	319.69	45.67				0.05		
	4/4/2022	10:54	37-33	32	5.30	319.69	365.36	45.67				0.05		
	4/4/2022	11:06	33-30	30	5.30	365.36	399.00	33.64				0.04		
	4/4/2022	11:45	65-61	133	5.10	0.00	45.67	45.67				0.05		
	4/4/2022	11:58	61-57	82	8.00	45.67	91.34	45.67				0.05		
	4/4/2022	12:12	57-53	58	7.10	91.34	137.01	45.67				0.05		
	4/4/2022	12:22	53-49	64	7.60	137.01	182.68	45.67				0.05		
68	4/4/2022	12:32	49-45	67	7.40	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	12:40	45-41	60	7.70	228.35	274.02	45.67				0.05		
	4/4/2022	12:47	41-37	55	7.70	274.02	319.69	45.67				0.05		
	4/4/2022	12:55	37-33	50	7.00	319.69	365.36	45.67				0.05		
	4/4/2022	13:02	33-30	52	7.40	365.36	399.00	33.64				0.04		
	4/4/2022	14:14	65-61	75	3.30	0.00	45.67	45.67				0.05		
	4/4/2022	14:29	61-57	50	3.00	45.67	91.34	45.67				0.05		
	4/4/2022	14:46	57-53	45	3.80	91.34	137.01	45.67				0.05		
	4/4/2022	15:02	53-49	41	5.00	137.01	158.00	20.99				0.00	Flow dropped to zero part way through the interval. No flow at next interval. Redriving with expendable tip.	
69	4/4/2022	15:32	49-46	103	6.90	158.00	198.17	40.17	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	15:52	46-43	29	5.10	198.17	238.33	40.17				0.05		
	4/4/2022	16:26	43-40	15	4.30	238.33	278.50	40.17				0.05		
	4/4/2022	16:40	40-37	26	5.30	278.50	318.66	40.17				0.05		
	4/4/2022	16:51	37-34	73	9.30	318.66	358.83	40.17				0.05		
	4/4/2022	16:56	34-30	69	9.30	358.83	399.00	40.17				0.05		
	4/4/2022	14:14	65-61	38	3.70	0.00	45.67	45.67				0.05		
	4/4/2022	14:29	61-57	40	6.10	45.67	91.34	45.67				0.05		
	4/4/2022	14:46	57-53	33	5.40	91.34	137.01	45.67				0.05		
	4/4/2022	15:02	53-49	46	5.50	137.01	182.68	45.67				0.05		
70	4/4/2022	13:15	49-45	57	6.90	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	15:35	45-41	25	5.10	228.35	274.02	45.67				0.05		
	4/4/2022	15:52	41-37	39	6.40	274.02	319.69	45.67				0.05		
	4/4/2022	16:25	37-33	29	5.50	319.69	365.36	45.67				0.05		
	4/4/2022	16:40	33-30	26	5.30	365.36	399.00	33.64				0.04		
	4/4/2022	14:14	65-61	65	6.60	0.00	45.67	45.67				0.05		
	4/4/2022	14:29	61-57	29	5.80	45.67	91.34	45.67				0.05		
	4/4/2022	14:46	57-53	31	5.80	91.34	137.01	45.67				0.05		
	4/4/2022	15:02	53-49	35	6.50	137.01	182.68	45.67				0.05		
71	4/4/2022	13:15	49-45	40	6.80	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	15:35	45-41	36	5.90	228.35	274.02	45.67				0.05		
	4/4/2022	15:52	41-37	12	5.70	274.02	319.69	45.67				0.05		
	4/4/2022	16:25	37-33	24	5.30	319.69	365.36	45.67				0.05		
	4/4/2022	16:40	33-30	22	5.30	365.36	399.00	33.64				0.04		
	4/4/2022	14:14	65-61	69	5.60	0.00	45.67	45.67				0.05		
	4/4/2022	14:29	61-57	45	5.50	45.67	91.34	45.67				0.05		
	4/4/2022	14:46	57-53	35	5.30	91.34	137.01	45.67				0.05		
	4/4/2022	15:02	53-49	44	6.10	137.01	182.68	45.67				0.05		
72	4/4/2022	13:15	49-45	58	7.00	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/4/2022	15:35	45-41	43	5.80	228.35	274.02	45.67				0.05		
	4/4/2022	15:52	41-37	26	4.20	274.02	319.69	45.67				0.05		
	4/4/2022	16:25	37-33	32	4.90	319.69	365.36	45.67				0.05		
	4/4/2022	16:40	33-30	44	3.80	365.36	399.00	33.64				0.04		
	4/5/2022	9:27	65-61	81	5.20	0.00	45.67	45.67				0.05		
	4/5/2022	9:47	61-57	47	6.30	45.67	91.34	45.67				0.05		
	4/5/2022	10:03	57-53	26	4.60	91.34	137.01	45.67				0.05		
	4/5/2022	10:32	53-49	31	5.30	137.01	182.68	45.67				0.05		
73	4/5/2022	10:49	49-45	38	5.60	182.68	228.35	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	11:04	45-41	37	5.70	228.35	274.02	45.67				0.05		
	4/5/2022	11:19	41-37	52	5.80	274.02	319.69	45.67				0.05		
	4/5/2022	11:34	37-33	47	6.30	319.69	365.36	45.67				0.05		
	4/5/2022	11:46	33-30	45	6.30	365.36	399.00	33.64				0.04		

74	4/5/2022	9:27	65-61	90	3.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	9:47	61-57	43	5.40	45.67	91.34	45.67				0.05		
	4/5/2022	10:03	57-53	88	4.60	91.34	137.01	45.67				0.05		
	4/5/2022	10:32	53-49	24	4.90	137.01	182.68	45.67				0.05		
	4/5/2022	10:49	49-45	29	4.80	182.68	228.35	45.67				0.05		
	4/5/2022	11:04	45-41	22	4.20	228.35	274.02	45.67				0.05		
	4/5/2022	11:19	41-37	35	5.00	274.02	319.69	45.67				0.05		
	4/5/2022	11:34	37-33	25	4.60	319.69	365.36	45.67				0.05		
	4/5/2022	11:46	33-30	46	6.80	365.36	399.00	33.64				0.04		
75	4/5/2022	9:27	65-61	98	2.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	9:47	61-57	52	5.40	45.67	91.34	45.67				0.05		
	4/5/2022	10:03	57-53	58	5.60	91.34	137.01	45.67				0.05		
	4/5/2022	10:32	53-49	43	5.20	137.01	182.68	45.67				0.05		
	4/5/2022	10:49	49-45	45	5.70	182.68	228.35	45.67				0.05		
	4/5/2022	11:04	45-41	51	6.40	228.35	274.02	45.67				0.05		
	4/5/2022	11:19	41-37	50	5.90	274.02	319.69	45.67				0.05		
	4/5/2022	11:34	37-33	51	6.30	319.69	365.36	45.67				0.05		
	4/5/2022	11:46	33-30	47	6.00	365.36	399.00	33.64				0.04		
76	4/5/2022	9:27	65-61	97	2.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	9:47	61-57	57	3.20	45.67	91.34	45.67				0.05		
	4/5/2022	10:03	57-53	97	3.00	91.34	137.01	45.67				0.05		
	4/5/2022	10:32	53-49	77	3.30	137.01	182.68	45.67				0.05		
	4/5/2022	10:49	49-45	76	3.00	182.68	228.35	45.67				0.05		
	4/5/2022	11:04	45-41	81	3.10	228.35	274.02	45.67				0.05		
	4/5/2022	11:19	41-37	78	2.90	274.02	319.69	45.67				0.05		
	4/5/2022	11:34	37-33	68	2.40	319.69	365.36	45.67				0.05		
	4/5/2022	11:46	33-30	95	3.00	365.36	399.00	33.64				0.04		
77	4/5/2022	12:57	65-61	9	2.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	13:14	61-57	11	4.00	45.67	91.34	45.67				0.05		
	4/5/2022	13:26	57-53	33	5.70	91.34	137.01	45.67				0.05		
	4/5/2022	13:42	53-49	23	4.90	137.01	182.68	45.67				0.05		
	4/5/2022	13:57	49-45	26	5.00	182.68	228.35	45.67				0.05		
	4/5/2022	14:09	45-41	32	5.30	228.35	274.02	45.67				0.05		
	4/5/2022	14:22	41-37	28	5.10	274.02	319.69	45.67				0.05		
	4/5/2022	14:36	37-33	37	6.00	319.69	365.36	45.67				0.05		
	4/5/2022	14:47	33-30	29	5.60	365.36	399.00	33.64				0.04		
78	4/5/2022	12:57	65-61	31	3.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	13:14	61-57	24	4.70	45.67	91.34	45.67				0.05		
	4/5/2022	13:26	57-53	28	5.00	91.34	137.01	45.67				0.05		
	4/5/2022	13:42	53-49	39	5.20	137.01	182.68	45.67				0.05		
	4/5/2022	13:57	49-45	40	6.10	182.68	228.35	45.67				0.05		
	4/5/2022	14:09	45-41	32	5.30	228.35	274.02	45.67				0.05		
	4/5/2022	14:22	41-37	28	4.90	274.02	319.69	45.67				0.05		
	4/5/2022	14:36	37-33	33	5.50	319.69	365.36	45.67				0.05		
	4/5/2022	14:47	33-30	29	5.10	365.36	399.00	33.64				0.04		
79	4/5/2022	12:57	65-61	22	3.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	13:14	61-57	22	4.50	45.67	91.34	45.67				0.05		
	4/5/2022	13:26	57-53	25	4.60	91.34	137.01	45.67				0.05		
	4/5/2022	13:42	53-49	26	5.00	137.01	182.68	45.67				0.05		
	4/5/2022	13:57	49-45	49	4.40	182.68	228.35	45.67				0.05		
	4/5/2022	14:09	45-41	33	4.50	228.35	274.02	45.67				0.05		
	4/5/2022	14:22	41-37	28	5.30	274.02	319.69	45.67				0.05		
	4/5/2022	14:36	37-33	42	3.80	319.69	365.36	45.67				0.05		
	4/5/2022	14:47	33-30	25	5.50	365.36	399.00	33.64				0.04		
80	4/5/2022	12:57	65-61	86	3.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	13:14	61-57	33	4.70	45.67	91.34	45.67				0.05		
	4/5/2022	13:26	57-53	36	3.80	91.34	137.01	45.67				0.05		
	4/5/2022	13:42	53-49	39	5.60	137.01	182.68	45.67				0.05		
	4/5/2022	13:57	49-45	46	4.60	182.68	228.35	45.67				0.05		
	4/5/2022	14:09	45-41	33	5.20	228.35	274.02	45.67				0.05		
	4/5/2022	14:22	41-37	29	4.90	274.02	319.69	45.67				0.05		
	4/5/2022	14:36	37-33	49	3.90	319.69	365.36	45.67				0.05		
	4/5/2022	14:47	33-30	43	3.80	365.36	399.00	33.64				0.04		
81	4/5/2022	15:52	65-61	40	5.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	16:07	61-57	30	5.20	45.67	91.34	45.67				0.05		
	4/5/2022	16:22	57-53	37	5.60	91.34	137.01	45.67				0.05		
	4/5/2022	16:45	53-49	33	5.30	137.01	182.68	45.67				0.05		
	4/6/2022	8:35	49-45	29	4.80	182.68	228.35	45.67				0.05		
	4/6/2022	8:51	45-41	29	5.10	228.35	274.02	45.67				0.05		
	4/6/2022	9:02	41-37	38	5.90	274.02	319.69	45.67				0.05		
	4/6/2022	9:13	37-33	43	6.00	319.69	365.36	45.67				0.05		
	4/6/2022	9:25	33-30	43	5.60	365.36	399.00	33.64				0.04		
82	4/5/2022	15:52	65-61	72	3.90	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	16:07	61-57	46	5.00	45.67	91.34	45.67				0.05		
	4/5/2022	16:22	57-53	44	5.80	91.34	137.01	45.67				0.05		
	4/5/2022	16:45	53-49	33	4.80	137.01	182.68	45.67				0.05		
	4/6/2022	8:35	49-45	43	4.40	182.68	228.35	45.67				0.05		
	4/6/2022	8:51	45-41	33	4.20	228.35	274.02	45.67				0.05		
	4/6/2022	9:02	41-37	45	4.70	274.02	319.69	45.67				0.05		
	4/6/2022	9:13	37-33	55	4.80	319.69	365.36	45.67				0.05		
	4/6/2022	9:25	33-30	45	4.10	365.36	399.00	33.64				0.04		
83	4/5/2022	15:52	65-61	72	4.70	0.00	45.67	45.67	399	159	119	0.05		Expendable Tip
	4/5/2022	16:07	61-57	78	3.00	45.67	77.00	31.33				0.05	High pressures and no flow. Lifting to next interval. No success at new interval. Pulling out and redriving. Remaining volume to be redistributed in next interval.	
	4/5/2022	16:41	57-54	65	6.70	77.00	150.00	73.00				0.00		
	4/6/2022	8:35	54-51	34	5.40	150.00	181.13	31.13				0.05		
	4/6/2022	8:51	51-48	30	5.40	181.13	212.25	31.13				0.05		
	4/6/2022	9:02	48-45	30	5.50	212.25	243.38	31.13				0.05		
	4/6/2022	9:13	45-42	33	5.80	243.38	274.50	31.13				0.05		
	4/6/2022	9:25	42-39	45	7.00	274.50	305.63	31.13				0.05		
	4/6/2022	9:35	39-36	88	9.80	305.63	336.75	31.13				0.05		
	4/6/2022	9:41	36-33	85	9.90	336.75	367.88	31.13				0.05		
	4/6/2022	9:48	33-30	85	10.00	367.88	399.00	31.13				0.04		
84	4/5/2022	15:52	65-61	36	4.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/5/2022	16:07	61-57	37	5.50	45.67	91.34	45.67				0.05		
	4/5/2022	16:22	57-53	45	6.60	91.34	137.01	45.67				0.05		
	4/5/2022	16:45	53-49	34	5.60	137.01	182.68	45.67				0.05		
	4/6/2022	8:35	49-45	34	4.90	182.68	228.35	45.67				0.05		
	4/6/2022	8:51	45-41	29	5.20	228.35	274.02	45.67				0.05		
	4/6/2022	9:02	41-37	33	5.60	274.02	319.69	45.67				0.05		
	4/6/2022	9:13	37-33	24	4.60	319.69	365.36	45.67				0.05		
	4/6/2022	9:25	33-30	25	4.90	365.36	399.00	33.64				0.04		
85	4/6/2022	10:33	65-61	60	5.20	0.00	45.67	45.67	399	159	119	0.05		Expendable Tip
	4/6/2022	10:49	61-57	49	4.60	45.67	91.34	45.67				0.05		
	4/6/2022	11:28	57-54	116	6.80	91.34	125.56	34.22				0.00	Unable to achieve flow at this interval. Pulling up and redriving with expendable tip.	
	4/6/2022	11:41	54-51	33	5.20	125.56	159.78	34.22				0.05		
	4/6/2022	12:04	51-48	52	6.20	159.78	194.00	34.22				0.05		
	4/6/2022	12:16	48-45	39	4.60	194.00	228.22	34.22				0.05		
	4/6/2022	12:28	45-42	55	6.60	228.22	262.44	34.22				0.05		
	4/6/2022	12:40	42-39	95	8.70	262.44	296.66	34.22				0.05		
	4/6/2022	12:46	39-36	87	8.60	296.66	330.88	34.22				0.05		
	4/6/2022	12:52	36-33	90	8.70	330.88	365.10	34.22				0.05		
	4/6/2022	12:59	33-30	89	8.80	365.10	399.00	33.90				0.04		
86	4/6/2022	10:33	65-61	79	3.90	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/6/2022	10:49	61-57	53	5.50	45.67	91.34	45.67				0.05		
	4/6/2022	11:05	57-53	58	5.70	91.34	137.01	45.67				0.05		
	4/6/2022	11:17	53-49	70	6.90	137.01	182.68	45.67				0.05		
	4/6/2022	11:32	49-45	60	6.40	182.68	228.35	45.67				0.05		
	4/6/2022	11:41	45-41	34	4.70	228.35	274.02	45.67				0.05		
	4/6/2022	12:04	41-37	32	4.50	274.02	319.69	45.67				0.05		
	4/6/2022	12:16	37-33	40	6.20	319.69	365.36	45.67				0.05		
	4/6/2022	12:28	33-30	55	5.20	365.36	399.00	33.64				0.04		
87	4/6/2022	10:33	65-61	39	4.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/6/2022	10:49	61-57	53	5.30	45.67	91.34	45.67				0.05		
	4/6/2022	11:05	57-53	58	7.80	91.34	137.01	45.67				0.05		
	4/6/2022	11:17	53-49	56	6.80	137.01	182.68	45.67				0.05		
	4/6/2022	11:32	49-45	60	7.30	182.68	228.35	45.67				0.05		
	4/6/2022	11:41	45-41	30	5.50	228.35	274.02	45.67				0.05		
	4/6/2022	12:04	41-37	26	5.20	274.02	319.69	45.67				0.05		
	4/6/2022	12:16	37-33	40	5.70	319.69	365.36	45.67				0.05		
	4/6/2022	12:28	33-30	55	4.30	365.36	399.00	33.64				0.04		
88	4/6/2022	10:33	65-61	26	4.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/6/2022	10:49	61-57	55	7.10	45.67	91.34	45.67				0.05		
	4/6/2022	11:05	57-53	58	7.60	91.34	137.01	45.67				0.05		
	4/6/2022	11:17	53-49	52	6.90	137.01	182.68	45.67				0.05		
	4/6/2022	11:32	49-45	60	7.80	182.68	228.35	45.67				0.05		
	4/6/2022	11:41	45-41	29	5.30	228.35	274.02	45.67				0.05		
	4/6/2022	12:04	41-37	33	5.70	274.02	319.69	45.67				0.05		
	4/6/2022	12:16	37-33	40	6.20	319.69	365.36	45.67				0.05		
	4/6/2022	12:28	33-30	34	5.60	365.36	399.00	33.64				0.04		

	4/6/2022	13:38	65-61	56	5.30	0.00	45.67	45.67				0.05		
	4/6/2022	13:50	61-57	36	5.10	45.67	91.34	45.67				0.05		
	4/6/2022	14:04	57-53	32	4.90	91.34	137.01	45.67				0.05		
	4/6/2022	14:15	53-49	34	5.10	137.01	182.68	45.67				0.05		
89	4/6/2022	14:27	49-45	32	5.00	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/6/2022	14:38	45-41	30	4.80	228.35	274.02	45.67				0.05		
	4/6/2022	14:55	41-37	33	4.70	274.02	319.69	45.67				0.05		
	4/6/2022	15:07	37-33	44	5.60	319.69	365.36	45.67				0.05		
	4/6/2022	15:19	33-30	42	5.70	365.36	399.00	33.64				0.04		
	4/6/2022	13:38	65-61	65	4.40	0.00	45.67	45.67				0.05		
	4/6/2022	13:50	61-57	36	4.90	45.67	91.34	45.67				0.05		
	4/6/2022	14:04	57-53	35	4.90	91.34	137.01	45.67				0.05		
	4/6/2022	14:15	53-49	35	4.80	137.01	182.68	45.67				0.05		
90	4/6/2022	14:27	49-45	32	4.80	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/6/2022	14:38	45-41	36	5.10	228.35	274.02	45.67				0.05		
	4/6/2022	14:55	41-37	33	4.90	274.02	319.69	45.67				0.05		
	4/6/2022	15:07	37-33	44	5.40	319.69	365.36	45.67				0.05		
	4/6/2022	15:19	33-30	43	5.30	365.36	399.00	33.64				0.04		
	4/6/2022	13:38	65-61	55	4.20	0.00	45.67	45.67				0.05		
	4/6/2022	13:50	61-57	25	5.00	45.67	91.34	45.67				0.05		
	4/6/2022	14:04	57-53	32	5.70	91.34	137.01	45.67				0.05		
	4/6/2022	14:15	53-49	30	5.50	137.01	182.68	45.67				0.05		
91	4/6/2022	14:27	49-45	32	5.70	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/6/2022	14:38	45-41	29	5.70	228.35	274.02	45.67				0.05		
	4/6/2022	14:55	41-37	33	5.90	274.02	319.69	45.67				0.05		
	4/6/2022	15:07	37-33	33	6.00	319.69	365.36	45.67				0.05		
	4/6/2022	15:19	33-30	23	4.90	365.36	399.00	33.64				0.04		
	4/6/2022	13:38	65-61	59	6.00	0.00	45.67	45.67				0.05		
	4/6/2022	13:50	61-57	36	5.10	45.67	91.34	45.67				0.05		
	4/6/2022	14:04	57-53	32	4.80	91.34	137.01	45.67				0.05		
	4/6/2022	14:15	53-49	35	5.00	137.01	182.68	45.67				0.05		
92	4/6/2022	14:27	49-45	33	4.90	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/6/2022	14:38	45-41	31	4.90	228.35	274.02	45.67				0.05		
	4/6/2022	14:55	41-37	34	5.00	274.02	319.69	45.67				0.05		
	4/6/2022	15:07	37-33	31	4.70	319.69	365.36	45.67				0.05		
	4/6/2022	15:19	33-30	44	5.90	365.36	399.00	33.64				0.04		
	4/7/2022	8:49	65-61	106	4.40	0.00	45.67	45.67				0.05		
	4/7/2022	9:05	61-57	55	4.80	45.67	91.34	45.67				0.05		
	4/7/2022	9:18	57-53	36	5.60	91.34	137.01	45.67				0.05		
	4/7/2022	9:31	53-49	34	5.20	137.01	182.68	45.67				0.05		
93	4/7/2022	9:41	49-45	32	5.50	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	9:51	45-41	32	5.60	228.35	274.02	45.67				0.05		
	4/7/2022	10:04	41-37	42	6.50	274.02	319.69	45.67				0.05		
	4/7/2022	10:16	37-33	28	5.30	319.69	365.36	45.67				0.05		
	4/7/2022	10:27	33-30	52	5.10	365.36	399.00	33.64				0.04		
	4/7/2022	8:49	65-61	75	2.70	0.00	45.67	45.67				0.05		
	4/7/2022	9:05	61-57	46	5.40	45.67	91.34	45.67				0.05		
	4/7/2022	9:18	57-53	50	5.30	91.34	137.01	45.67				0.05		
	4/7/2022	9:31	53-49	44	5.40	137.01	182.68	45.67				0.05		
94	4/7/2022	9:41	49-45	44	5.60	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	9:51	45-41	36	5.00	228.35	274.02	45.67				0.05		
	4/7/2022	10:04	41-37	58	6.50	274.02	319.69	45.67				0.05		
	4/7/2022	10:16	37-33	40	5.30	319.69	365.36	45.67				0.05		
	4/7/2022	10:27	33-30	52	5.80	365.36	399.00	33.64				0.04		
	4/7/2022	8:49	65-61	26	4.40	0.00	45.67	45.67				0.05		
	4/7/2022	9:05	61-57	42	5.70	45.67	91.34	45.67				0.05		
	4/7/2022	9:18	57-53	33	5.10	91.34	137.01	45.67				0.05		
	4/7/2022	9:31	53-49	43	5.70	137.01	182.68	45.67				0.05		
95	4/7/2022	9:41	49-45	43	5.80	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	9:51	45-41	37	5.10	228.35	274.02	45.67				0.05		
	4/7/2022	10:04	41-37	63	7.40	274.02	319.69	45.67				0.05		
	4/7/2022	10:16	37-33	40	5.30	319.69	365.36	45.67				0.05		
	4/7/2022	10:27	33-30	29	4.70	365.36	399.00	33.64				0.04		
	4/7/2022	8:49	65-61	30	4.40	0.00	45.67	45.67				0.05		
	4/7/2022	9:05	61-57	41	5.60	45.67	91.34	45.67				0.05		
	4/7/2022	9:18	57-53	44	5.80	91.34	137.01	45.67				0.05		
	4/7/2022	9:31	53-49	33	5.20	137.01	182.68	45.67				0.05		
96	4/7/2022	9:41	49-45	34	5.10	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	9:51	45-41	38	5.50	228.35	274.02	45.67				0.05		
	4/7/2022	10:04	41-37	48	6.30	274.02	319.69	45.67				0.05		
	4/7/2022	10:16	37-33	41	5.80	319.69	365.36	45.67				0.05		
	4/7/2022	10:27	33-30	37	5.50	365.36	399.00	33.64				0.04		
	4/7/2022	11:48	65-61	96	4.60	0.00	45.67	45.67				0.05		
	4/7/2022	12:07	61-57	40	5.10	45.67	91.34	45.67				0.05		
	4/7/2022	12:24	57-53	41	5.40	91.34	137.01	45.67				0.05		
	4/7/2022	12:36	53-49	42	5.40	137.01	182.68	45.67				0.05		
97	4/7/2022	12:49	49-45	40	5.30	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	13:00	45-41	70	7.30	228.35	274.02	45.67				0.05		
	4/7/2022	13:15	41-37	42	5.60	274.02	319.69	45.67				0.05		
	4/7/2022	13:29	37-33	46	5.70	319.69	365.36	45.67				0.05		
	4/7/2022	13:43	33-30	32	5.00	365.36	399.00	33.64				0.04		
	4/7/2022	11:48	65-61	76	4.90	0.00	45.67	45.67				0.05		
	4/7/2022	12:07	61-57	33	4.80	45.67	91.34	45.67				0.05		
	4/7/2022	12:24	57-53	41	5.50	91.34	137.01	45.67				0.05		
	4/7/2022	12:36	53-49	42	5.40	137.01	182.68	45.67				0.05		
98	4/7/2022	12:49	49-45	39	5.20	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	13:00	45-41	53	6.30	228.35	274.02	45.67				0.05		
	4/7/2022	13:15	41-37	44	5.80	274.02	319.69	45.67				0.05		
	4/7/2022	13:29	37-33	46	5.60	319.69	365.36	45.67				0.05		
	4/7/2022	13:43	33-30	41	5.60	365.36	399.00	33.64				0.04		
	4/7/2022	13:52	65-61	106	5.10	0.00	45.67	45.67				0.05		
	4/7/2022	14:01	61-57	115	8.00	45.67	91.34	45.67				0.05		
	4/7/2022	14:08	57-53	114	9.10	91.34	137.01	45.67				0.05		
	4/7/2022	14:15	53-49	115	9.00	137.01	182.68	45.67				0.05		
99	4/7/2022	14:21	49-45	116	9.00	182.68	228.35	45.67	399	159	119	0.05		4"-Dropdown Screen
	4/7/2022	14:28	45-41	123	8.60	228.35	274.02	45.67				0.05		
	4/7/2022	14:35	41-37	125	6.70	274.02	319.69	45.67				0.05		
	4/7/2022	14:42	37-33	108	8.20	319.69	365.36	45.67				0.05		
	4/7/2022	14:52	33-30	119	7.80	365.36	399.00	33.64				0.04		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
39501	15750	11813	47.25

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
Offsite Deep Only Southern Barrier
Table 2

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	3/10/2022	11:01	65-61	140	1.20	0.00	45.67	45.67	399	159	119	0.05	Lifted slightly higher at beginning of point to achieve flow.	4'-Dropdown Screen
	3/10/2022	11:43	61-57	100	1.90	45.67	91.34	45.67				0.05		
	3/10/2022	12:01	57-53	97	2.00	91.34	137.01	45.67				0.05		
	3/10/2022	12:18	53-49	55	3.40	137.01	182.68	45.67				0.05		
	3/10/2022	12:31	49-45	95	3.40	182.68	228.35	45.67				0.05		
	3/10/2022	12:47	45-41	92	3.60	228.35	274.02	45.67				0.05		
	3/10/2022	13:02	41-37	104	3.80	274.02	319.69	45.67				0.05		
	3/10/2022	13:18	37-33	130	4.70	319.69	365.36	45.67				0.05		
	3/10/2022	13:37	33-30	125	4.20	365.36	399.00	33.64				0.05		
2	3/10/2022	14:56	61-57	102	2.40	0.00	51.48	51.48	399	159	119	0.06	Saw refusal at 61' bgs.	4'-Dropdown Screen
	3/10/2022	15:16	57-53	135	3.20	51.48	102.96	51.48				0.06	Small amount of surfacing out of the bore. Sealed and continued.	
	3/10/2022	15:33	53-49	69	3.30	102.96	154.44	51.48				0.06		
	3/10/2022	15:48	49-45	88	3.70	154.44	205.92	51.48				0.06		
	3/10/2022	16:03	45-41	90	3.60	205.92	257.40	51.48				0.06		
	3/10/2022	16:18	41-37	86	3.50	257.40	308.88	51.48				0.06	Small amount of surfacing out of the bore. Sealed and continued.	
	3/10/2022	16:35	37-33	60	3.40	308.88	360.36	51.48				0.06		
	3/10/2022	16:52	33-30	60	3.50	360.36	399.00	38.64				0.04		
3	3/10/2022	11:01	65-61	133	1.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/10/2022	11:43	61-57	24	4.00	45.67	91.34	45.67				0.05		
	3/10/2022	12:01	57-53	60	4.90	91.34	137.01	45.67				0.05		
	3/10/2022	12:18	53-49	58	7.00	137.01	182.68	45.67				0.05		
	3/10/2022	12:31	49-45	99	4.80	182.68	228.35	45.67				0.05		
	3/10/2022	12:47	45-41	105	6.50	228.35	274.02	45.67				0.05		
	3/10/2022	13:02	41-37	103	4.80	274.02	319.69	45.67				0.05		
	3/10/2022	13:18	37-33	130	5.60	319.69	365.36	45.67				0.05		
	3/10/2022	13:37	33-30	130	5.50	365.36	399.00	33.64				0.05		
4	3/10/2022	11:01	65-61	83	4.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/10/2022	11:43	61-57	29	4.10	45.67	91.34	45.67				0.05		
	3/10/2022	12:01	57-53	78	7.00	91.34	137.01	45.67				0.05		
	3/10/2022	12:18	53-49	50	7.00	137.01	182.68	45.67				0.05		
	3/10/2022	12:31	49-45	97	7.80	182.68	228.35	45.67				0.05		
	3/10/2022	12:47	45-41	108	6.00	228.35	274.02	45.67				0.05		
	3/10/2022	13:02	41-37	102	7.70	274.02	319.69	45.67				0.05		
	3/10/2022	13:18	37-33	125	5.50	319.69	365.36	45.67				0.05		
	3/10/2022	13:37	33-30	120	5.30	365.36	399.00	33.64				0.05		
5	3/10/2022	11:01	65-61	137	3.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/10/2022	11:43	61-57	119	3.20	45.67	91.34	45.67				0.05		
	3/10/2022	12:01	57-53	96	3.40	91.34	137.01	45.67				0.05		
	3/10/2022	12:18	53-49	65	3.70	137.01	182.68	45.67				0.05		
	3/10/2022	12:31	49-45	99	3.80	182.68	228.35	45.67				0.05		
	3/10/2022	12:47	45-41	115	4.20	228.35	274.02	45.67				0.05		
	3/10/2022	13:02	41-37	105	4.50	274.02	319.69	45.67				0.05		
	3/10/2022	13:18	37-33	130	4.60	319.69	365.36	45.67				0.05		
	3/10/2022	13:37	33-30	130	4.70	365.36	399.00	33.64				0.05		
6	3/10/2022	14:59	65-61	83	3.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/10/2022	15:19	61-57	85	3.50	45.67	91.34	45.67				0.05		
	3/10/2022	15:33	57-53	66	4.20	91.34	137.01	45.67				0.00		
	3/10/2022	15:48	53-49	90	4.50	137.01	182.68	45.67				0.05		
	3/10/2022	16:03	49-45	88	4.10	182.68	228.35	45.67				0.05		
	3/10/2022	16:18	45-41	86	3.90	228.35	274.02	45.67				0.05		
	3/10/2022	16:35	41-37	56	3.80	274.02	319.69	45.67				0.05		
	3/10/2022	16:52	37-33	58	3.90	319.69	365.36	45.67				0.05		
	3/10/2022	17:05	33-30	90	6.80	365.36	399.00	33.64				0.05		
7	3/10/2022	14:57	65-61	86	3.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/10/2022	15:19	61-57	34	7.00	45.67	91.34	45.67				0.05		
	3/10/2022	15:33	57-53	30	6.40	91.34	137.01	45.67				0.05		
	3/10/2022	15:48	53-49	20	6.20	137.01	182.68	45.67				0.05		
	3/10/2022	16:03	49-45	22	5.80	182.68	228.35	45.67				0.05		
	3/10/2022	16:18	45-41	45	5.00	228.35	274.02	45.67				0.05		
	3/10/2022	16:35	41-37	50	4.70	274.02	319.69	45.67				0.05		
	3/10/2022	16:52	37-33	50	5.10	319.69	365.36	45.67				0.05		
	3/10/2022	17:05	33-30	70	7.50	365.36	399.00	33.64				0.05		
8	3/10/2022	15:01	65-61	15	3.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/10/2022	15:19	61-57	25	6.60	45.67	91.34	45.67				0.05		
	3/10/2022	15:33	57-53	10	4.30	91.34	137.01	45.67				0.05		
	3/10/2022	15:48	53-49	12	5.20	137.01	182.68	45.67				0.05		
	3/10/2022	16:03	49-45	10	5.10	182.68	228.35	45.67				0.05		
	3/10/2022	16:18	45-41	11	5.30	228.35	274.02	45.67				0.05		
	3/10/2022	16:35	41-37	30	6.50	274.02	319.69	45.67				0.05		
	3/10/2022	16:52	37-33	30	6.20	319.69	365.36	45.67				0.05		
	3/10/2022	17:05	33-30	55	7.80	365.36	399.00	33.64				0.05		
9	3/11/2022	9:21	65-61	15	4.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	9:33	61-57	18	5.90	45.67	91.34	45.67				0.05		
	3/11/2022	9:48	57-53	17	5.90	91.34	137.01	45.67				0.05		
	3/11/2022	10:00	53-49	16	5.80	137.01	182.68	45.67				0.05		
	3/11/2022	10:12	49-45	12	5.40	182.68	228.35	45.67				0.05		
	3/11/2022	10:24	45-41	8	4.40	228.35	274.02	45.67				0.05		
	3/11/2022	10:36	41-37	10	4.80	274.02	319.69	45.67				0.05		
	3/11/2022	10:47	37-33	9	4.90	319.69	365.36	45.67				0.05		
	3/11/2022	11:01	33-30	26	6.50	365.36	399.00	33.64				0.05		
10	3/11/2022	9:18	65-61	15	5.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	9:33	61-57	30	7.00	45.67	91.34	45.67				0.05		
	3/11/2022	9:48	57-53	18	5.30	91.34	137.01	45.67				0.05		
	3/11/2022	10:00	53-49	17	5.10	137.01	182.68	45.67				0.05		
	3/11/2022	10:12	49-45	10	4.30	182.68	228.35	45.67				0.05		
	3/11/2022	10:24	45-41	15	5.10	228.35	274.02	45.67				0.05		
	3/11/2022	10:36	41-37	24	5.40	274.02	319.69	45.67				0.05		
	3/11/2022	10:47	37-33	16	5.80	319.69	365.36	45.67				0.05		
	3/11/2022	11:01	33-30	15	5.40	365.36	399.00	33.64				0.05		
11	3/11/2022	9:21	65-61	15	4.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	9:33	61-57	31	5.70	45.67	91.34	45.67				0.05		
	3/11/2022	9:48	57-53	19	4.60	91.34	137.01	45.67				0.05		
	3/11/2022	10:00	53-49	17	5.70	137.01	182.68	45.67				0.05		
	3/11/2022	10:12	49-45	8	4.70	182.68	228.35	45.67				0.05		
	3/11/2022	10:24	45-41	12	5.70	228.35	274.02	45.67				0.05		
	3/11/2022	10:36	41-37	11	5.20	274.02	319.69	45.67				0.05		
	3/11/2022	10:47	37-33	9	5.00	319.69	365.36	45.67				0.05		
	3/11/2022	11:01	33-30	6	4.70	365.36	399.00	33.64				0.05		
12	3/11/2022	9:18	65-61	15	3.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	9:33	61-57	18	4.30	45.67	91.34	45.67				0.05		
	3/11/2022	9:48	57-53	18	4.50	91.34	137.01	45.67				0.05		
	3/11/2022	10:00	53-49	17	4.30	137.01	182.68	45.67				0.05		
	3/11/2022	10:12	49-45	26	5.40	182.68	228.35	45.67				0.05		
	3/11/2022	10:24	45-41	32	5.00	228.35	274.02	45.67				0.05		
	3/11/2022	10:36	41-37	33	5.00	274.02	319.69	45.67				0.05		
	3/11/2022	10:47	37-33	33	4.40	319.69	365.36	45.67				0.05		
	3/11/2022	11:01	33-30	35	4.00	365.36	399.00	33.64				0.05		
13	3/11/2022	12:21	65-61	112	3.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	12:38	61-57	37	4.90	45.67	91.34	45.67				0.05		
	3/11/2022	12:53	57-53	13	4.70	91.34	137.01	45.67				0.00		
	3/11/2022	13:08	53-49	14	5.30	137.01	182.68	45.67				0.05		
	3/11/2022	13:22	49-45	14	5.50	182.68	228.35	45.67				0.05		
	3/11/2022	13:35	45-41	19	6.40	228.35	274.02	45.67				0.05		
	3/11/2022	13:49	41-37	18	5.20	274.02	319.69	45.67				0.05		
	3/11/2022	14:03	37-33	16	6.00	319.69	365.36	45.67				0.05		
	3/11/2022	14:16	33-30	15	5.90	365.36	399.00	33.64				0.05		
14	3/11/2022	12:18	65-61	112	3.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	12:38	61-57	98	3.90	45.67	91.34	45.67				0.05		
	3/11/2022	12:53	57-53	63	4.10	91.34	137.01	45.67				0.05		
	3/11/2022	13:08	53-49	80	4.20	137.01	182.68	45.67				0.05		
	3/11/2022	13:22	49-45	68	3.70	182.68	228.35	45.67				0.05		
	3/11/2022	13:35	45-41	94	3.40	228.35	274.02	45.67				0.05		
	3/11/2022	13:49	41-37	77	4.30	274.02	319.69	45.67				0.05		
	3/11/2022	14:03	37-33	88	4.90	319.69	365.36	45.67				0.05		
	3/11/2022	14:16	33-30	80	3.60	365.36	399.00	33.64				0.05		
15	3/11/2022	12:22	65-61	110	3.40	0.00	45.67	45.67	399	159	119	0.05		4-Dropdown Screen
	3/11/2022	12:38	61-57	12	5.20	45.67	91.34	45.67				0.05		
	3/11/2022	12:53	57-53	21	6.60	91.34	137.01	45.67				0.05		
	3/11/2022	13:08	53-49	9	5.00	137.01	182.68	45.67				0.05		
	3/11/2022	13:22	49-45	16	6.20	182.68	228.35	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/11/2022	13:35	45-41	15	5.70	228.35	274.02	45.67				0.05		
	3/11/2022	13:49	41-37	17	6.60	274.02	319.69	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/11/2022	14:03	37-33	8	4.90	319.69	365.36	45.67				0.05		
	3/11/2022	14:16	33-30	8	4.90	365.36	399.00	33.64				0.05		
16	3/11/2022	12:20	65-61	80	3.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/11/2022	12:38	61-57	100	4.00	45.67	91.34	45.67				0.05		
	3/11/2022	12:53	57-53	64	4.00	91.34	137.01	45.67				0.05		
	3/11/2022	13:08	53-49	77	4.90	137.01	182.68	45.67				0.05		
	3/11/2022	13:22	49-45	55	6.00	182.68	228.35	45.67				0.05	Small amount of surfacing out of the bore. Sealed and continued.	
	3/11/2022	13:35	45-41	95	4.60	228.35	274.02	45.67				0.05		
	3/11/2022	13:49	41-37	76	5.40	274.02	319.69	45.67				0.05		
	3/11/2022	14:03	37-33	120	4.20	319.69	365.36	45.67				0.05		
	3/11/2022	14:16	33-30	120	4.10	365.36	399.00	33.64				0.05		
17	3/28/2022	10:12	65-61	45	3.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	10:35	61-57	22	4.90	45.67	91.34	45.67				0.05		
	3/28/2022	10:55	57-53	3	3.20	91.34	137.01	45.67				0.05		
	3/28/2022	11:14	53-49	20	5.40	137.01	182.68	45.67				0.05		
	3/28/2022	11:30	49-45	46	7.90	182.68	228.35	45.67				0.05		
	3/28/2022	11:49	45-41	58	8.10	228.35	274.02	45.67				0.05		
	3/28/2022	12:05	41-37	52	8.00	274.02	319.69	45.67				0.05		
	3/28/2022	12:24	37-33	52	8.20	319.69	365.36	45.67				0.05		
	3/28/2022	12:42	33-30	52	8.30	365.36	399.00	33.64				0.05		

18	3/28/2022	10:12	65-61	101	4.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	10:35	61-57	86	4.00	45.67	91.34	45.67				0.05		
	3/28/2022	10:55	57-53	100	5.40	91.34	137.01	45.67				0.05		
	3/28/2022	11:14	53-49	130	3.80	137.01	182.68	45.67				0.05		
	3/28/2022	11:30	49-45	142	3.40	182.68	228.35	45.67				0.05		
	3/28/2022	11:49	45-41	140	3.50	228.35	274.02	45.67				0.05		
	3/28/2022	12:05	41-37	126	4.00	274.02	319.69	45.67				0.05		
	3/28/2022	12:24	37-33	135	3.90	319.69	365.36	45.67				0.05		
	3/28/2022	12:42	33-30	145	3.60	365.36	399.00	33.64				0.05		
19	3/28/2022	10:12	65-61	140	2.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	10:35	61-57	112	3.30	45.67	91.34	45.67				0.05		
	3/28/2022	10:55	57-53	115	4.80	91.34	137.01	45.67				0.05		
	3/28/2022	11:14	53-49	104	4.70	137.01	182.68	45.67				0.05		
	3/28/2022	11:30	49-45	140	3.40	182.68	228.35	45.67				0.05		
	3/28/2022	11:49	45-41	135	3.20	228.35	274.02	45.67				0.05		
	3/28/2022	12:05	41-37	140	3.80	274.02	319.69	45.67				0.05		
	3/28/2022	12:24	37-33	132	3.20	319.69	365.36	45.67				0.05		
	3/28/2022	12:42	33-30	144	3.90	365.36	399.00	33.64				0.05		
20	3/28/2022	10:12	65-61	125	2.90	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	10:35	61-57	110	2.90	45.67	91.34	45.67				0.05		
	3/28/2022	10:55	57-53	110	3.20	91.34	137.01	45.67				0.05		
	3/28/2022	11:14	53-49	90	2.90	137.01	182.68	45.67				0.05		
	3/28/2022	11:30	49-45	140	3.30	182.68	228.35	45.67				0.05		
	3/28/2022	11:49	45-41	135	3.20	228.35	274.02	45.67				0.05		
	3/28/2022	12:05	41-37	150	3.30	274.02	319.69	45.67				0.05		
	3/28/2022	12:24	37-33	130	3.10	319.69	365.36	45.67				0.05		
	3/28/2022	12:42	33-30	140	3.60	365.36	399.00	33.64				0.05		
21	3/28/2022	14:25	65-61	104	4.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	14:43	61-57	78	3.60	45.67	91.34	45.67				0.05		
	3/28/2022	14:58	57-53	54	4.80	91.34	137.01	45.67				0.05		
	3/28/2022	15:14	53-49	110	3.20	137.01	182.68	45.67				0.05		
	3/28/2022	15:34	49-45	115	3.90	182.68	228.35	45.67				0.05		
	3/28/2022	15:45	45-41	120	3.90	228.35	274.02	45.67				0.05		
	3/28/2022	15:59	41-37	125	3.30	274.02	319.69	45.67				0.05		
	3/28/2022	16:12	37-33	113	4.40	319.69	365.36	45.67				0.05		
	3/28/2022	16:22	33-30	99	6.30	365.36	399.00	33.64				0.05		
22	3/28/2022	14:25	65-61	105	3.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	14:43	61-57	54	4.50	45.67	91.34	45.67				0.05		
	3/28/2022	14:58	57-53	15	5.00	91.34	137.01	45.67				0.05		
	3/28/2022	15:14	53-49	19	5.10	137.01	182.68	45.67				0.05		
	3/28/2022	15:34	49-45	17	4.80	182.68	228.35	45.67				0.05		
	3/28/2022	15:45	45-41	15	5.10	228.35	274.02	45.67				0.05		
	3/28/2022	15:59	41-37	15	5.50	274.02	319.69	45.67				0.05		
	3/28/2022	16:12	37-33	14	5.20	319.69	365.36	45.67				0.05		
	3/28/2022	16:22	33-30	11	4.90	365.36	399.00	33.64				0.05		
23	3/28/2022	14:25	65-61	63	4.90	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	14:43	61-57	37	6.50	45.67	91.34	45.67				0.05		
	3/28/2022	14:58	57-53	26	5.80	91.34	137.01	45.67				0.05		
	3/28/2022	15:14	53-49	22	5.20	137.01	182.68	45.67				0.05		
	3/28/2022	15:34	49-45	20	6.00	182.68	228.35	45.67				0.05		
	3/28/2022	15:45	45-41	23	6.10	228.35	274.02	45.67				0.05		
	3/28/2022	15:59	41-37	13	4.80	274.02	319.69	45.67				0.05		
	3/28/2022	16:12	37-33	12	4.70	319.69	365.36	45.67				0.05		
	3/28/2022	16:22	33-30	8	4.30	365.36	399.00	33.64				0.05		
24	3/28/2022	14:25	65-61	44	4.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/28/2022	14:43	61-57	30	5.40	45.67	91.34	45.67				0.05		
	3/28/2022	14:58	57-53	32	5.90	91.34	137.01	45.67				0.05		
	3/28/2022	15:14	53-49	24	5.40	137.01	182.68	45.67				0.05		
	3/28/2022	15:34	49-45	16	4.90	182.68	228.35	45.67				0.05		
	3/28/2022	15:45	45-41	17	5.00	228.35	274.02	45.67				0.05		
	3/28/2022	15:59	41-37	25	6.10	274.02	319.69	45.67				0.05		
	3/28/2022	16:12	37-33	24	6.00	319.69	365.36	45.67				0.05		
	3/28/2022	16:22	33-30	20	5.50	365.36	399.00	33.64				0.05		
25	3/29/2022	9:29	65-61	113	2.20	0.00	45.67	45.67	399	159	119	0.05		Expendable Tip
	3/29/2022	10:03	61-58	90	6.70	45.67	79.86	34.19				0.04	Saw no flow at high pressures. Unable to achieve flow. Lifting and redrilling.	
	3/29/2022	10:17	58-55	22	5.00	79.86	114.05	34.19				0.04		
	3/29/2022	10:28	55-52	22	5.40	114.05	148.24	34.19				0.04		
	3/29/2022	10:38	52-49	29	5.70	148.24	182.43	34.19				0.04		
	3/29/2022	10:50	49-46	23	5.30	182.43	216.62	34.19				0.04		
	3/29/2022	11:00	46-43	22	5.50	216.62	250.81	34.19				0.04		
	3/29/2022	11:12	43-40	22	5.40	250.81	285.00	34.19				0.04		
	3/29/2022	11:22	40-37	122	13.70	285.00	319.19	34.19				0.04		
	3/29/2022	11:27	37-34	117	13.30	319.19	353.38	34.19				0.04		
	3/29/2022	11:34	34-30	115	13.20	353.38	399.00	45.62				0.04		
26	3/29/2022	9:29	65-61	58	4.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	9:50	61-57	51	6.60	45.67	91.34	45.67				0.05		
	3/29/2022	10:03	57-53	10	3.10	91.34	137.01	45.67				0.05		
	3/29/2022	10:17	53-49	22	5.20	137.01	182.68	45.67				0.05		
	3/29/2022	10:28	49-45	21	5.60	182.68	228.35	45.67				0.05		
	3/29/2022	10:38	45-41	28	4.90	228.35	274.02	45.67				0.05		
	3/29/2022	10:50	41-37	22	5.50	274.02	319.69	45.67				0.05		
	3/29/2022	11:00	37-33	22	5.20	319.69	365.36	45.67				0.05		
	3/29/2022	11:12	33-30	22	5.00	365.36	399.00	33.64				0.05		
27	3/29/2022	9:29	65-61	94	3.30	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	9:50	61-57	27	5.50	45.67	91.34	45.67				0.05		
	3/29/2022	10:03	57-53	14	4.00	91.34	137.01	45.67				0.05		
	3/29/2022	10:17	53-49	23	5.30	137.01	182.68	45.67				0.05		
	3/29/2022	10:28	49-45	22	5.30	182.68	228.35	45.67				0.05		
	3/29/2022	10:38	45-41	29	5.30	228.35	274.02	45.67				0.05		
	3/29/2022	10:50	41-37	23	5.50	274.02	319.69	45.67				0.05		
	3/29/2022	11:00	37-33	22	5.50	319.69	365.36	45.67				0.05		
	3/29/2022	11:12	33-30	22	5.50	365.36	399.00	33.64				0.05		
28	3/29/2022	9:29	65-61	54	4.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	9:50	61-57	36	6.70	45.67	91.34	45.67				0.05		
	3/29/2022	10:03	57-53	21	5.20	91.34	137.01	45.67				0.05		
	3/29/2022	10:17	53-49	22	5.10	137.01	182.68	45.67				0.05		
	3/29/2022	10:28	49-45	20	5.60	182.68	228.35	45.67				0.05		
	3/29/2022	10:38	45-41	23	5.80	228.35	274.02	45.67				0.05		
	3/29/2022	10:50	41-37	21	5.30	274.02	319.69	45.67				0.05		
	3/29/2022	11:00	37-33	20	5.60	319.69	365.36	45.67				0.05		
	3/29/2022	11:12	33-30	21	5.50	365.36	399.00	33.64				0.05		
29	3/29/2022	12:24	65-61	18	4.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	12:42	61-57	29	6.10	45.67	91.34	45.67				0.05		
	3/29/2022	12:57	57-53	28	5.40	91.34	137.01	45.67				0.05		
	3/29/2022	13:11	53-49	24	5.20	137.01	182.68	45.67				0.05		
	3/29/2022	13:27	49-45	41	7.40	182.68	228.35	45.67				0.05		
	3/29/2022	13:41	45-41	44	8.00	228.35	274.02	45.67				0.05		
	3/29/2022	13:52	41-37	17	5.00	274.02	319.69	45.67				0.05		
	3/29/2022	14:04	37-33	27	5.40	319.69	365.36	45.67				0.05		
	3/29/2022	14:17	33-30	27	6.20	365.36	399.00	33.64				0.05		
30	3/29/2022	12:24	65-61	57	3.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	12:42	61-57	62	4.00	45.67	91.34	45.67				0.05		
	3/29/2022	12:57	57-53	68	5.30	91.34	137.01	45.67				0.05		
	3/29/2022	13:11	53-49	37	4.00	137.01	182.68	45.67				0.05		
	3/29/2022	13:39	49-46	60	5.90	182.68	216.84	34.16				0.05	Saw no flow at high pressures. Unable to achieve flow. Lifting and redrilling with an expendable tip.	
	3/29/2022	13:52	46-43	25	5.70	216.84	250.99	34.16				0.05		
	3/29/2022	14:04	43-40	22	5.50	250.99	285.15	34.16				0.05		
	3/29/2022	14:17	40-37	36	7.10	285.15	319.30	34.16				0.05		
	3/29/2022	14:26	37-34	118	12.60	319.30	353.46	34.16				0.05		
	3/29/2022	14:32	34-30	113	12.80	353.46	399.00	45.55				0.05		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
11970	4773	3580	14.32

Patriot Engineering-Houghland Canning
3DME Injection Summary Log
Offsite Deep Only Western Barrier
Table 3

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	3/29/2022	12:29	65-61	58	3.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	12:42	61-57	60	5.60	45.67	91.34	45.67				0.05		
	3/29/2022	12:57	57-53	74	5.40	91.34	137.01	45.67				0.05		
	3/29/2022	13:11	53-49	31	5.60	137.01	182.68	45.67				0.05		
	3/29/2022	13:27	49-45	41	6.40	182.68	228.35	45.67				0.05		
	3/29/2022	13:37	45-41	75	8.10	228.35	274.02	45.67				0.05		
	3/29/2022	13:52	41-37	34	4.30	274.02	319.69	45.67				0.05		
	3/29/2022	14:04	37-33	43	4.00	319.69	365.36	45.67				0.05		
	3/29/2022	14:17	33-30	24	4.00	365.36	399.00	33.64				0.05		
2	3/29/2022	12:29	65-61	55	3.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	12:42	61-57	36	5.70	45.67	91.34	45.67				0.05		
	3/29/2022	12:57	57-53	23	4.90	91.34	137.01	45.67				0.05		
	3/29/2022	13:11	53-49	32	5.60	137.01	182.68	45.67				0.05		
	3/29/2022	13:27	49-45	39	6.20	182.68	228.35	45.67				0.05		
	3/29/2022	13:37	45-41	73	8.20	228.35	274.02	45.67				0.05		
	3/29/2022	13:52	41-37	33	5.30	274.02	319.69	45.67				0.05		
	3/29/2022	14:04	37-33	33	5.50	319.69	365.36	45.67				0.05		
	3/29/2022	14:17	33-30	20	4.10	365.36	399.00	33.64				0.05		
3	3/29/2022	15:20	65-61	22	3.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	15:38	61-57	32	5.10	45.67	91.34	45.67				0.05		
	3/29/2022	16:16	57-53	29	5.50	91.34	137.01	45.67				0.05		
	3/29/2022	16:29	53-49	29	5.20	137.01	182.68	45.67				0.05		
	3/30/2022	8:39	49-45	34	5.40	182.68	228.35	45.67				0.05		
	3/30/2022	8:53	45-41	31	5.30	228.35	274.02	45.67				0.05		
	3/30/2022	9:04	41-37	36	5.10	274.02	319.69	45.67				0.05		
	3/30/2022	9:16	37-33	56	5.20	319.69	365.36	45.67				0.05		
	3/30/2022	9:26	33-30	26	5.30	365.36	399.00	33.64				0.05		
4	3/29/2022	15:20	65-61	55	5.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	15:38	61-57	32	4.90	45.67	91.34	45.67				0.05		
	3/29/2022	16:16	57-53	31	5.40	91.34	137.01	45.67				0.05		
	3/29/2022	16:29	53-49	32	5.40	137.01	182.68	45.67				0.05		
	3/30/2022	8:39	49-45	36	5.20	182.68	228.35	45.67				0.05		
	3/30/2022	8:53	45-41	33	5.10	228.35	274.02	45.67				0.05		
	3/30/2022	9:04	41-37	39	5.40	274.02	319.69	45.67				0.05		
	3/30/2022	9:16	37-33	58	5.30	319.69	365.36	45.67				0.05		
	3/30/2022	9:26	33-30	28	5.10	365.36	399.00	33.64				0.05		
5	3/29/2022	15:20	65-61	15	3.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	15:38	61-57	28	5.50	45.67	91.34	45.67				0.05		
	3/29/2022	16:16	57-53	32	5.60	91.34	137.01	45.67				0.05		
	3/29/2022	16:29	53-49	33	5.30	137.01	182.68	45.67				0.05		
	3/30/2022	8:39	49-45	35	5.30	182.68	228.35	45.67				0.05		
	3/30/2022	8:53	45-41	33	5.90	228.35	274.02	45.67				0.05		
	3/30/2022	9:04	41-37	45	5.60	274.02	319.69	45.67				0.05		
	3/30/2022	9:16	37-33	50	4.60	319.69	365.36	45.67				0.05		
	3/30/2022	9:26	33-30	28	5.30	365.36	399.00	33.64				0.05		
6	3/29/2022	15:20	65-61	55	5.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/29/2022	15:38	61-57	25	5.50	45.67	91.34	45.67				0.05		
	3/29/2022	16:16	57-53	33	4.80	91.34	137.01	45.67				0.05		
	3/29/2022	16:29	53-49	33	5.50	137.01	182.68	45.67				0.05		
	3/30/2022	8:39	49-45	37	4.90	182.68	228.35	45.67				0.05		
	3/30/2022	8:53	45-41	19	5.10	228.35	274.02	45.67				0.05		
	3/30/2022	9:04	41-37	46	5.30	274.02	319.69	45.67				0.05		
	3/30/2022	9:16	37-33	58	5.50	319.69	365.36	45.67				0.05		
	3/30/2022	9:26	33-30	29	6.00	365.36	399.00	33.64				0.05		
7	3/30/2022	10:28	65-61	68	3.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	10:41	61-57	30	5.60	45.67	91.34	45.67				0.05		
	3/30/2022	10:52	57-53	28	5.40	91.34	137.01	45.67				0.05		
	3/30/2022	11:04	53-49	34	5.30	137.01	182.68	45.67				0.05		
	3/30/2022	11:16	49-45	26	5.40	182.68	228.35	45.67				0.05		
	3/30/2022	11:31	45-41	34	5.10	228.35	274.02	45.67				0.05		
	3/30/2022	11:42	41-37	28	5.60	274.02	319.69	45.67				0.05		
	3/30/2022	11:54	37-33	30	5.80	319.69	365.36	45.67				0.05		
	3/30/2022	12:04	33-30	20	4.90	365.36	399.00	33.64				0.05		
8	3/30/2022	10:28	65-61	44	4.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	10:41	61-57	32	5.00	45.67	91.34	45.67				0.05		
	3/30/2022	10:52	57-53	35	5.20	91.34	137.01	45.67				0.05		
	3/30/2022	11:04	53-49	45	5.40	137.01	182.68	45.67				0.05		
	3/30/2022	11:16	49-45	28	5.00	182.68	228.35	45.67				0.05		
	3/30/2022	11:31	45-41	35	5.40	228.35	274.02	45.67				0.05		
	3/30/2022	11:42	41-37	32	5.40	274.02	319.69	45.67				0.05		
	3/30/2022	11:54	37-33	27	4.90	319.69	365.36	45.67				0.05		
	3/30/2022	12:04	33-30	22	4.50	365.36	399.00	33.64				0.05		
9	3/30/2022	10:28	65-61	42	5.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	10:41	61-57	25	5.30	45.67	91.34	45.67				0.05		
	3/30/2022	10:52	57-53	34	5.70	91.34	137.01	45.67				0.05		
	3/30/2022	11:04	53-49	52	5.00	137.01	182.68	45.67				0.05		
	3/30/2022	11:16	49-45	27	5.50	182.68	228.35	45.67				0.05		
	3/30/2022	11:31	45-41	25	5.20	228.35	274.02	45.67				0.05		
	3/30/2022	11:42	41-37	27	5.00	274.02	319.69	45.67				0.05		
	3/30/2022	11:54	37-33	37	4.90	319.69	365.36	45.67				0.05		
	3/30/2022	12:04	33-30	21	5.10	365.36	399.00	33.64				0.05		
10	3/30/2022	10:28	65-61	36	4.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	10:41	61-57	26	5.70	45.67	91.34	45.67				0.05		
	3/30/2022	10:52	57-53	27	5.20	91.34	137.01	45.67				0.05		
	3/30/2022	11:04	53-49	44	5.60	137.01	182.68	45.67				0.05		
	3/30/2022	11:16	49-45	23	5.30	182.68	228.35	45.67				0.05		
	3/30/2022	11:31	45-41	22	5.60	228.35	274.02	45.67				0.05		
	3/30/2022	11:42	41-37	37	5.20	274.02	319.69	45.67				0.05		
	3/30/2022	11:54	37-33	25	6.00	319.69	365.36	45.67				0.05		
	3/30/2022	12:04	33-30	22	4.90	365.36	399.00	33.64				0.05		
11	3/30/2022	13:05	65-61	73	4.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	13:17	61-57	32	5.60	45.67	91.34	45.67				0.05		
	3/30/2022	13:36	57-53	36	5.70	91.34	137.01	45.67				0.05		
	3/30/2022	13:47	53-49	29	4.70	137.01	182.68	45.67				0.05		
	3/30/2022	14:00	49-45	28	5.30	182.68	228.35	45.67				0.05		
	3/30/2022	14:13	45-41	28	5.50	228.35	274.02	45.67				0.05		
	3/30/2022	14:27	41-37	27	5.30	274.02	319.69	45.67				0.05		
	3/30/2022	14:38	37-33	27	5.40	319.69	365.36	45.67				0.05		
	3/30/2022	14:51	33-30	37	5.70	365.36	399.00	33.64				0.05		
12	3/30/2022	13:05	65-61	72	4.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	13:17	61-57	27	5.30	45.67	91.34	45.67				0.05		
	3/30/2022	13:36	57-53	30	5.60	91.34	137.01	45.67				0.05		
	3/30/2022	13:47	53-49	29	5.30	137.01	182.68	45.67				0.05		
	3/30/2022	14:00	49-45	29	5.10	182.68	228.35	45.67				0.05		
	3/30/2022	14:13	45-41	27	5.20	228.35	274.02	45.67				0.05		
	3/30/2022	14:27	41-37	25	5.30	274.02	319.69	45.67				0.05		
	3/30/2022	14:38	37-33	28	5.40	319.69	365.36	45.67				0.05		
	3/30/2022	14:51	33-30	28	5.60	365.36	399.00	33.64				0.05		
13	3/30/2022	13:05	65-61	25	3.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	13:17	61-57	33	5.90	45.67	91.34	45.67				0.05		
	3/30/2022	13:36	57-53	39	4.90	91.34	137.01	45.67				0.05		
	3/30/2022	13:47	53-49	28	5.50	137.01	182.68	45.67				0.05		
	3/30/2022	14:00	49-45	28	5.10	182.68	228.35	45.67				0.05		
	3/30/2022	14:13	45-41	34	5.60	228.35	274.02	45.67				0.05		
	3/30/2022	14:27	41-37	33	6.20	274.02	319.69	45.67				0.05		
	3/30/2022	14:38	37-33	28	5.50	319.69	365.36	45.67				0.05		
	3/30/2022	14:51	33-30	29	5.80	365.36	399.00	33.64				0.05		
14	3/30/2022	13:05	65-61	77	3.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	13:17	61-57	34	4.80	45.67	91.34	45.67				0.05		
	3/30/2022	13:36	57-53	32	5.10	91.34	137.01	45.67				0.05		
	3/30/2022	13:47	53-49	27	5.90	137.01	182.68	45.67				0.05		
	3/30/2022	14:00	49-45	28	5.30	182.68	228.35	45.67				0.05		
	3/30/2022	14:13	45-41	27	5.30	228.35	274.02	45.67				0.05		
	3/30/2022	14:27	41-37	26	4.90	274.02	319.69	45.67				0.05		
	3/30/2022	14:38	37-33	28	5.30	319.69	365.36	45.67				0.05		
	3/30/2022	14:51	33-30	29	5.60	365.36	399.00	33.64				0.05		
15	3/30/2022	15:54	65-61	65	4.00	0.00	45.67	45.67	399	159	119	0.05		Expendable Tip
	3/30/2022	16:15	61-57	60	4.50	45.67	91.34	45.67				0.05		
	3/30/2022	16:30	57-53	100	3.50	91.34	103.00	11.66				0.05		
	3/31/2022	9:23	57-54	125	6.40	103.00	137.00	34.00				0.04	Unable to achieve flow. Lifting up and redriving with expedable tip.	
	3/31/2022	9:28	54-51	26	5.30	137.00	169.75	32.75				0.04		
	3/31/2022	9:40	51-48	16	4.30	169.75	202.50	32.75				0.04		
	3/31/2022	9:50	48-45	25	5.30	202.50	235.25	32.75				0.04		
	3/31/2022	10:01	45-42	26	5.30	235.25	268.00	32.75				0.04		
	3/31/2022	10:12	42-39	26	5.30	268.00	300.75	32.75				0.04		
	3/31/2022	10:21	39-36	78	9.60	300.75	333.50	32.75				0.04		
	3/31/2022	10:27	36-33	69	9.20	333.50	366.25	32.75				0.04		
	3/31/2022	10:34	33-30	63	9.20	366.25	399.00	32.75				0.04		

16	3/30/2022	15:54	65-61	66	4.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	16:15	61-57	30	5.40	45.67	91.34	45.67				0.05		
	3/30/2022	16:30	57-53	47	6.70	91.34	117.00	25.66				0.05		
	3/31/2022	8:53	57-53	34	5.80	117.00	137.01	20.01				0.00		
	3/31/2022	9:05	53-49	38	6.20	137.01	182.68	45.67				0.05		
	3/31/2022	9:28	49-45	31	5.80	182.68	228.35	45.67				0.05		
	3/31/2022	9:40	45-41	35	4.50	228.35	274.02	45.67				0.05		
	3/31/2022	9:50	41-37	25	5.40	274.02	319.69	45.67				0.05		
	3/31/2022	10:01	37-33	31	5.90	319.69	365.36	45.67				0.05		
	3/31/2022	10:12	33-30	26	5.40	365.36	399.00	33.64				0.04		
17	3/30/2022	15:54	65-61	23	5.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	16:15	61-57	37	5.30	45.67	91.34	45.67				0.05		
	3/30/2022	16:30	57-53	39	5.80	91.34	114.00	22.66				0.05		
	3/31/2022	8:53	57-53	23	3.70	114.00	137.01	23.01				0.00		
	3/31/2022	9:05	53-49	31	6.10	137.01	182.68	45.67				0.05		
	3/31/2022	9:28	49-45	32	5.50	182.68	228.35	45.67				0.05		
	3/31/2022	9:40	45-41	35	6.60	228.35	274.02	45.67				0.05		
	3/31/2022	9:50	41-37	26	5.70	274.02	319.69	45.67				0.05		
	3/31/2022	10:01	37-33	31	6.10	319.69	365.36	45.67				0.05		
	3/31/2022	10:12	33-30	28	5.70	365.36	399.00	33.64				0.04		
18	3/30/2022	15:54	65-61	56	4.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	3/30/2022	16:15	61-57	33	5.90	45.67	91.34	45.67				0.05		
	3/30/2022	16:30	57-53	39	5.70	91.34	114.00	22.66				0.05		
	3/31/2022	8:53	57-53	33	5.40	114.00	137.01	23.01				0.00		
	3/31/2022	9:05	53-49	33	6.60	137.01	182.68	45.67				0.05		
	3/31/2022	9:28	49-45	32	5.90	182.68	228.35	45.67				0.05		
	3/31/2022	9:40	45-41	36	7.00	228.35	274.02	45.67				0.05		
	3/31/2022	9:50	41-37	27	5.90	274.02	319.69	45.67				0.05		
	3/31/2022	10:01	37-33	43	5.10	319.69	365.36	45.67				0.05		
	3/31/2022	10:12	33-30	28	6.10	365.36	399.00	33.64				0.04		
19	3/31/2022	13:26	65-61	40	3.70	0.00	45.00	45.00	399	159	119	0.05		4'-Dropdown Screen
	3/31/2022	14:07	61-57	19	4.20	45.00	80.00	35.00				0.05	Mechanical troubles. Will resume points at another time. All remiaing volume left in the interval will be redistributed to the next.	
	4/11/2022	9:57	57-53	73	3.10	80.00	137.01	57.01				0.05		
	4/11/2022	10:16	53-49	85	4.40	137.01	182.68	45.67				0.05		
	4/11/2022	10:29	49-45	34	6.40	182.68	228.35	45.67				0.05		
	4/11/2022	10:38	45-41	33	6.60	228.35	274.02	45.67				0.05		
	4/11/2022	10:47	41-37	55	8.00	274.02	319.69	45.67				0.05		
	4/11/2022	10:56	37-33	60	7.80	319.69	365.36	45.67				0.05		
	4/11/2022	11:05	33-30	46	7.40	365.36	399.00	33.64				0.04		
20	3/31/2022	13:26	65-61	40	3.90	0.00	45.00	45.00	399	159	119	0.05		4'-Dropdown Screen
	3/31/2022	14:07	61-57	18	4.30	45.00	96.00	51.00				0.05	Mechanical troubles. Will resume points at another time.	
	4/11/2022	9:57	57-53	64	5.30	96.00	137.01	41.01				0.05		
	4/11/2022	10:16	53-49	25	6.10	137.01	182.68	45.67				0.05		
	4/11/2022	10:29	49-45	30	6.70	182.68	228.35	45.67				0.05		
	4/11/2022	10:38	45-41	30	6.80	228.35	274.02	45.67				0.05		
	4/11/2022	10:47	41-37	43	7.80	274.02	319.69	45.67				0.05		
	4/11/2022	10:56	37-33	62	7.50	319.69	365.36	45.67				0.05		
	4/11/2022	11:05	33-30	45	7.50	365.36	399.00	33.64				0.04		
21	3/31/2022	13:26	65-61	41	2.10	0.00	45.00	45.00	399	159	119	0.05		4'-Dropdown Screen
	3/31/2022	14:07	61-57	19	3.10	45.00	91.00	46.00				0.05	Mechanical troubles. Will resume points at another time.	
	4/11/2022	13:18	57-53	44	6.00	91.00	137.01	46.01				0.05		
	4/11/2022	13:32	53-49	92	10.10	137.01	182.68	45.67				0.05		
	4/11/2022	13:42	49-45	73	9.30	182.68	228.35	45.67				0.05		
	4/11/2022	13:53	45-41	91	10.60	228.35	274.02	45.67				0.05		
	4/11/2022	14:11	41-37	101	11.00	274.02	319.69	45.67				0.05		
	4/11/2022	14:22	37-33	98	11.00	319.69	365.36	45.67				0.05		
	4/11/2022	14:31	33-30	102	9.80	365.36	399.00	33.64				0.04		
22	3/31/2022	13:26	65-61	42	2.10	0.00	45.00	45.00	399	159	119	0.05		4'-Dropdown Screen
	3/31/2022	14:07	61-57	19	3.00	45.00	86.00	41.00				0.05	Mechanical troubles. Will resume points at another time. All remiaing volume left in the interval will be redistributed to the next.	
	4/11/2022	13:18	57-53	78	5.80	86.00	137.01	51.01				0.05		
	4/11/2022	13:32	53-49	107	6.70	137.01	182.68	45.67				0.05		
	4/11/2022	13:42	49-45	95	7.40	182.68	228.35	45.67				0.05		
	4/11/2022	13:53	45-41	135	7.00	228.35	274.02	45.67				0.05		
	4/11/2022	14:11	41-37	111	6.90	274.02	319.69	45.67				0.05		
	4/11/2022	14:22	37-33	125	5.60	319.69	365.36	45.67				0.05		
	4/11/2022	14:31	33-30	110	7.50	365.36	399.00	33.64				0.04		
23	4/11/2022	15:36	65-61	99	5.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/11/2022	15:46	61-57	75	9.00	45.67	91.34	45.67				0.05		
	4/11/2022	15:55	57-53	70	8.90	91.34	137.01	45.67				0.05		
	4/11/2022	16:03	53-49	81	9.80	137.01	182.68	45.67				0.05		
	4/11/2022	16:10	49-45	83	9.30	182.68	228.35	45.67				0.05		
	4/11/2022	16:17	45-41	93	8.90	228.35	274.02	45.67				0.05		
	4/11/2022	16:25	41-37	68	9.00	274.02	319.69	45.67				0.05		
	4/11/2022	16:33	37-33	74	8.90	319.69	365.36	45.67				0.05		
	4/11/2022	16:41	33-30	71	8.30	365.36	399.00	33.64				0.04		
24	4/11/2022	15:36	65-61	91	5.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/11/2022	15:46	61-57	54	8.60	45.67	91.34	45.67				0.05		
	4/11/2022	15:55	57-53	53	8.70	91.34	137.01	45.67				0.05		
	4/11/2022	16:03	53-49	106	8.80	137.01	182.68	45.67				0.05		
	4/11/2022	16:10	49-45	81	10.10	182.68	228.35	45.67				0.05		
	4/11/2022	16:17	45-41	71	9.70	228.35	274.02	45.67				0.05		
	4/11/2022	16:25	41-37	55	8.70	274.02	319.69	45.67				0.05		
	4/11/2022	16:33	37-33	61	9.00	319.69	365.36	45.67				0.05		
	4/11/2022	16:41	33-30	71	9.40	365.36	399.00	33.64				0.04		
25	4/12/2022	9:33	65-61	72	7.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	9:42	61-57	70	9.00	45.67	91.34	45.67				0.05		
	4/12/2022	9:50	57-53	70	8.90	91.34	137.01	45.67				0.05		
	4/12/2022	10:00	53-49	79	9.00	137.01	182.68	45.67				0.05		
	4/12/2022	10:08	49-45	72	9.20	182.68	228.35	45.67				0.05		
	4/12/2022	10:17	45-41	80	9.30	228.35	274.02	45.67				0.05		
	4/12/2022	10:25	41-37	125	8.00	274.02	319.69	45.67				0.05		
	4/12/2022	10:36	37-33	120	8.50	319.69	365.36	45.67				0.05		
	4/12/2022	11:00	33-30	30	5.80	365.36	399.00	33.64				0.04		
26	4/12/2022	9:33	65-61	44	8.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	9:42	61-57	67	9.00	45.67	91.34	45.67				0.05		
	4/12/2022	9:50	57-53	114	8.50	91.34	137.01	45.67				0.05		
	4/12/2022	10:00	53-49	81	9.00	137.01	182.68	45.67				0.05		
	4/12/2022	10:08	49-45	104	8.70	182.68	228.35	45.67				0.05		
	4/12/2022	10:17	45-41	114	7.50	228.35	274.02	45.67				0.05		
	4/12/2022	10:25	41-37	124	8.00	274.02	319.69	45.67				0.05		
	4/12/2022	10:37	37-33	129	8.90	319.69	365.36	45.67				0.05		
	4/12/2022	11:00	33-30	19	4.90	365.36	399.00	33.64				0.04		
27	4/12/2022	12:15	65-61	86	9.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	12:22	61-57	74	9.20	45.67	91.34	45.67				0.05		
	4/12/2022	12:31	57-53	86	9.80	91.34	137.01	45.67				0.05		
	4/12/2022	12:40	53-49	81	9.00	137.01	182.68	45.67				0.05		
	4/12/2022	12:49	49-45	84	9.30	182.68	228.35	45.67				0.05		
	4/12/2022	12:57	45-41	21	4.70	228.35	274.02	45.67				0.05		
	4/12/2022	13:11	41-37	26	4.60	274.02	319.69	45.67				0.05		
	4/12/2022	13:23	37-33	50	7.50	319.69	365.36	45.67				0.05		
	4/12/2022	13:36	33-30	40	7.20	365.36	399.00	33.64				0.04		
28	4/12/2022	12:15	65-61	78	10.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	12:22	61-57	73	10.70	45.67	91.34	45.67				0.05		
	4/12/2022	12:31	57-53	70	9.10	91.34	137.01	45.67				0.05		
	4/12/2022	12:40	53-49	82	11.00	137.01	182.68	45.67				0.05		
	4/12/2022	12:49	49-45	67	9.80	182.68	228.35	45.67				0.05		
	4/12/2022	12:57	45-41	38	5.80	228.35	274.02	45.67				0.05		
	4/12/2022	13:11	41-37	21	4.80	274.02	319.69	45.67				0.05		
	4/12/2022	13:23	37-33	50	7.40	319.69	365.36	45.67				0.05		
	4/12/2022	13:36	33-30	32	7.00	365.36	399.00	33.64				0.04		
29	4/12/2022	10:41	65-61	109	5.00	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	11:00	61-57	33	4.40	45.67	91.34	45.67				0.05		
	4/12/2022	11:14	57-53	84	7.90	91.34	137.01	45.67				0.05		
	4/12/2022	11:23	53-49	106	7.60	137.01	182.68	45.67				0.05		
	4/12/2022	11:31	49-45	96	8.10	182.68	228.35	45.67				0.05		
	4/12/2022	11:39	45-41	89	7.90	228.35	274.02	45.67				0.05		
	4/12/2022	11:48	41-37	84	7.40	274.02	319.69	45.67				0.05		
	4/12/2022	11:55	37-33	84	7.00	319.69	365.36	45.67				0.05		
	4/12/2022	12:04	33-30	65	8.30	365.36	399.00	33.64				0.04		
30	4/12/2022	10:41	65-61	107	3.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	11:00	61-57	32	4.60	45.67	91.34	45.67				0.05		
	4/12/2022	11:14	57-53	85	9.00	91.34	137.01	45.67				0.05		
	4/12/2022	11:23	53-49	75	8.10	137.01	182.68	45.67				0.05		
	4/12/2022	11:31	49-45	95	7.60	182.68	228.35	45.67				0.05		
	4/12/2022	11:39	45-41	91	8.40	228.35	274.02	45.67				0.05		
	4/12/2022	11:48	41-37	85	8.60	274.02	319.69	45.67				0.05		
	4/12/2022	11:55	37-33	82	8.60	319.69	365.36	45.67				0.05		
	4/12/2022	12:04	33-30	65	7.00	365.36	399.00	33.64				0.04		
31	4/12/2022	12:57	65-61	76	5.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	13:11	61-57	43	6.30	45.67	91.34	45.67				0.05		
	4/12/2022	13:23	57-53	52	6.80	91.34	137.01	45.67				0.05		
	4/12/2022	13:36	53-49	58	7.50	137.01	182.68	45.67				0.05		
	4/12/2022	13:47	49-45	90	7.50	182.68	228.35	45.67				0.05		
	4/12/2022	13:56	45-41	85	9.20	228.35	274.02	45.67				0.05		
	4/12/2022	14:07	41-37	90	10.10	274.02	319.69	45.67				0.05		
	4/12/2022	14:16	37-33	57	7.40	319.69	365.36	45.67				0.05		
	4/12/2022	14:25	33-30	58	8.00	365.36	399.00	33.64				0.04		
32	4/12/2022	12:57	62-58	81	3.60	0.00	91.34	91.34	399	159	119	0.11	Had to lift up several feet to achieve flow. Volume will be redistributed into the next interval.	4'-Dropdown Screen
	4/12/2022	1:37	56-52	85	4.90	91.34	138.67	47.33				0.05	Unable to achieve flow. Pulled up and continued. Will redistribute volume.	
	4/12/2022	13:47	52-48	115	8.20	138.67	186.00	47.33				0.05	Small amount of backpressure after completion of the interval.	
	4/12/2022	13:56	48-44	104	6.90	186.00	233.34	47.33				0.05	Small amount of backpressure after completion of the interval.	
	4/12/2022	14:07	44-40	117	6.90	233.34	280.67	47.33				0.05	Small amount of backpressure after completion of the interval.	
	4/12/2022	14:16	40-36	111	8.20	280.67	328.00	47.33				0.05	Small amount of backpressure after completion of the interval.	
	4/12/2022	14:25	36-32	110	8.50	328.00	375.33	47.33				0.05	Small amount of backpressure after completion of the interval.	
	4/12/2022	14:32	32-30	97	8.00	375.33	399.00	23.67				0.03		
33	4/12/2022	14:59	65-61	49	6.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	15:17	61-57	35	6.00	45.67	91.34	45.67				0.05		
	4/12/2022	15:30	57-53	27	5.30	91.34	137.01	45.67				0.05		
	4/12/2022	15:46	53-49	32	5.40	137.01	182.68	45.67				0.05		
	4/12/2022	16:03	49-45	31	4.80	182.68	206.00	23.32				0.00		
	4/13/2022	8:50	49-45	38	5.90	206.00	233.34	27.34				0.05		
	4/13/2022	8:58	45-41	60	7.70	233.34	280.67	47.33				0.05		
	4/13/2022	9:06	41-37	46	6.60	280.67	328.00	47.33				0.05		
	4/13/2022	9:24	37-33	20	4.60	328.00	375.33	47.33				0.05		
	4/13/2022	9:38	33-30	30	5.70	375.33	399.00	23.67				0.04		

34	4/12/2022	15:17	65-61	52	5.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	15:30	61-57	28	5.20	45.67	91.34	45.67				0.05		
	4/12/2022	15:46	57-53	32	5.10	91.34	137.01	45.67				0.05		
	4/12/2022	16:03	53-49	32	5.20	137.01	162.00	24.99				0.05		
	4/13/2022	8:50	53-49	40	6.30	162.00	182.68	20.68				0.00		
	4/13/2022	8:58	49-45	60	7.20	182.68	228.35	45.67				0.05		
	4/13/2022	9:06	45-41	64	7.70	228.35	274.02	45.67				0.05		
	4/13/2022	9:24	41-37	32	5.30	274.02	319.69	45.67				0.05		
	4/13/2022	9:38	37-33	32	5.90	319.69	365.36	45.67				0.05		
	4/13/2022	9:48	33-30	58	7.80	365.36	399.00	33.64				0.04		
35	4/12/2022	14:42	65-61	99	9.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	14:50	61-57	77	8.70	45.67	91.34	45.67				0.05		
	4/12/2022	14:59	57-53	29	5.30	91.34	137.01	45.67				0.05		
	4/12/2022	15:08	53-49	76	8.40	137.01	182.68	45.67				0.05		
	4/12/2022	15:17	49-45	26	4.50	182.68	228.35	45.67				0.05		
	4/12/2022	15:30	45-41	28	5.00	228.35	274.02	45.67				0.05		
	4/12/2022	15:46	41-37	31	5.00	274.02	319.69	45.67				0.05		
	4/12/2022	16:03	37-33	32	5.60	319.69	365.36	45.67				0.05		
	4/12/2022	16:13	33-30	68	7.50	365.36	399.00	33.64				0.04		
36	4/12/2022	14:42	65-61	104	7.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/12/2022	14:50	61-57	64	9.70	45.67	91.34	45.67				0.05		
	4/12/2022	14:59	57-53	41	8.10	91.34	137.01	45.67				0.05		
	4/12/2022	15:08	53-49	60	9.60	137.01	182.68	45.67				0.05		
	4/12/2022	15:17	49-45	23	5.50	182.68	228.35	45.67				0.05		
	4/12/2022	15:30	45-41	23	5.20	228.35	274.02	45.67				0.05		
	4/12/2022	15:46	41-37	24	5.30	274.02	319.69	45.67				0.05		
	4/12/2022	16:03	37-33	27	5.70	319.69	365.36	45.67				0.05		
	4/12/2022	16:13	33-30	65	7.80	365.36	399.00	33.64				0.04		
37	4/13/2022	9:12	65-61	100	4.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/13/2022	9:24	61-57	42	4.60	45.67	91.34	45.67				0.05		
	4/13/2022	9:38	57-53	35	4.60	91.34	137.01	45.67				0.05		
	4/13/2022	9:48	53-49	61	6.80	137.01	182.68	45.67				0.05		
	4/13/2022	9:58	49-45	82	8.60	182.68	228.35	45.67				0.05		
	4/13/2022	10:06	45-41	94	8.50	228.35	274.02	45.67				0.05		
	4/13/2022	10:16	41-37	74	9.10	274.02	319.69	45.67				0.05		
	4/13/2022	10:23	37-33	111	6.60	319.69	365.36	45.67				0.05		
	4/13/2022	10:35	33-30	112	6.50	365.36	399.00	33.64				0.04		
38	4/13/2022	9:12	65-61	75	6.20	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/13/2022	9:24	61-57	41	5.10	45.67	91.34	45.67				0.05		
	4/13/2022	9:38	57-53	36	5.20	91.34	137.01	45.67				0.05		
	4/13/2022	9:48	53-49	61	6.50	137.01	182.68	45.67				0.05		
	4/13/2022	9:58	49-45	90	9.60	182.68	228.35	45.67				0.05		
	4/13/2022	10:06	45-41	83	9.20	228.35	274.02	45.67				0.05		
	4/13/2022	10:16	41-37	79	8.90	274.02	319.69	45.67				0.05		
	4/13/2022	10:23	37-33	79	7.30	319.69	365.36	45.67				0.05		
	4/13/2022	10:35	33-30	48	6.80	365.36	399.00	33.64				0.04		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
15162	6045	4534	18.14

Patriot Engineering-Houghland Canning

3DME Injection Summary Log

Offsite Deep Only Northern Barrier

Table 4

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	4/7/2022	11:48	65-61	74	4.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/7/2022	12:07	61-57	31	4.30	45.67	91.34	45.67				0.05		
	4/7/2022	12:24	57-53	43	5.30	91.34	137.01	45.67				0.05		
	4/7/2022	12:36	53-49	39	4.90	137.01	182.68	45.67				0.05		
	4/7/2022	12:49	49-45	46	5.40	182.68	228.35	45.67				0.05		
	4/7/2022	13:00	45-41	76	7.40	228.35	274.02	45.67				0.05		
	4/7/2022	13:15	41-37	38	5.20	274.02	319.69	45.67				0.05		
	4/7/2022	13:29	37-33	55	4.80	319.69	365.36	45.67				0.05		
	4/7/2022	13:43	33-30	43	5.40	365.36	399.00	33.64				0.04		
2	4/7/2022	11:48	65-61	99	2.50	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/7/2022	12:07	61-57	41	5.00	45.67	91.34	45.67				0.05		
	4/7/2022	12:24	57-53	38	4.10	91.34	137.01	45.67				0.05		
	4/7/2022	12:36	53-49	39	4.90	137.01	182.68	45.67				0.05		
	4/7/2022	12:49	49-45	53	5.30	182.68	228.35	45.67				0.05		
	4/7/2022	13:00	45-41	48	5.30	228.35	274.02	45.67				0.05		
	4/7/2022	13:15	41-37	42	3.90	274.02	319.69	45.67				0.05		
	4/7/2022	13:29	37-33	70	4.30	319.69	365.36	45.67				0.05		
	4/7/2022	13:43	33-30	52	5.20	365.36	399.00	33.64				0.04		
3	4/7/2022	14:48	65-61	91	6.80	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/7/2022	15:08	61-57	94	7.60	45.67	91.34	45.67				0.05		
	4/7/2022	15:16	57-53	93	8.00	91.34	137.01	45.67				0.05		
	4/7/2022	15:26	53-49	90	7.90	137.01	182.68	45.67				0.05		
	4/7/2022	15:35	49-45	85	7.80	182.68	228.35	45.67				0.05		
	4/8/2022	8:54	45-41	28	5.00	228.35	274.02	45.67				0.05		
	4/8/2022	9:05	41-37	51	5.70	274.02	319.69	45.67				0.05		
	4/8/2022	9:16	37-33	38	3.90	319.69	365.36	45.67				0.05		
	4/8/2022	9:29	33-30	88	7.80	365.36	399.00	33.64				0.04		
4	4/7/2022	14:48	65-61	110	5.60	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/7/2022	15:08	61-57	78	7.60	45.67	91.34	45.67				0.05		
	4/7/2022	15:16	57-53	92	8.70	91.34	137.01	45.67				0.05		
	4/7/2022	15:26	53-49	90	7.00	137.01	182.68	45.67				0.05		
	4/7/2022	15:35	49-45	90	7.30	182.68	228.35	45.67				0.05		
	4/7/2022	16:10	45-41	55	6.10	228.35	274.02	45.67				0.05		
	4/8/2022	8:54	41-37	32	6.10	274.02	319.69	45.67				0.05		
	4/8/2022	9:05	37-33	55	6.60	319.69	365.36	45.67				0.05		
	4/8/2022	9:16	33-30	64	6.20	365.36	399.00	33.64				0.04		
5	4/8/2022	10:26	65-61	75	6.40	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/8/2022	10:38	61-57	71	6.90	45.67	91.34	45.67				0.05		
	4/8/2022	10:51	57-53	66	6.70	91.34	137.01	45.67				0.05		
	4/8/2022	11:12	53-49	62	6.50	137.01	182.68	45.67				0.05		
	4/8/2022	11:23	49-45	55	6.10	182.68	228.35	45.67				0.05		
	4/8/2022	11:41	45-41	56	6.20	228.35	274.02	45.67				0.05		
	4/8/2022	11:51	41-37	57	6.00	274.02	319.69	45.67				0.05		
	4/8/2022	12:01	37-33	74	5.00	319.69	365.36	45.67				0.05		
	4/8/2022	12:11	33-30	60	6.40	365.36	399.00	33.64				0.04		
6	4/8/2022	10:26	65-61	83	5.70	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/8/2022	10:38	61-57	72	7.00	45.67	91.34	45.67				0.05		
	4/8/2022	10:51	57-53	71	7.20	91.34	137.01	45.67				0.05		
	4/8/2022	11:12	53-49	63	6.80	137.01	182.68	45.67				0.05		
	4/8/2022	11:23	49-45	56	6.30	182.68	228.35	45.67				0.05		
	4/8/2022	11:42	45-41	56	6.40	228.35	274.02	45.67				0.05		
	4/8/2022	11:51	41-37	57	6.50	274.02	319.69	45.67				0.05		
	4/8/2022	12:01	37-33	63	7.00	319.69	365.36	45.67				0.05		
	4/8/2022	12:11	33-30	61	5.50	365.36	399.00	33.64				0.04		
7	4/8/2022	10:51	65-61	70	5.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/8/2022	11:12	61-57	65	6.20	45.67	91.34	45.67				0.05		
	4/8/2022	11:23	57-53	58	5.90	91.34	137.01	45.67				0.05		
	4/8/2022	11:42	53-49	56	5.80	137.01	182.68	45.67				0.05		
	4/8/2022	11:51	49-45	57	5.80	182.68	228.35	45.67				0.05		
	4/8/2022	12:01	45-41	63	6.40	228.35	274.02	45.67				0.05		
	4/8/2022	12:11	41-37	60	6.20	274.02	319.69	45.67				0.05		
	4/8/2022	13:26	37-33	102	8.10	319.69	365.36	45.67				0.05		
	4/8/2022	12:33	33-30	104	8.40	365.36	399.00	33.64				0.04		
8	4/7/2022	15:50	60-56	125	3.30	0.00	53.20	53.20	399	159	119	0.05	Unable to achieve flow. Lifted up until flow was achieved.	Expendable Tip
	4/8/2022	8:50	56-53	135	7.30	53.20	93.10	39.90				0.05	Unable to achieve flow again. Redriving with expendable tip and continuing.	
	4/8/2022	9:05	53-50	55	3.40	93.10	133.00	39.90				0.05		
	4/8/2022	9:16	50-47	72	5.10	133.00	172.90	39.90				0.05		
	4/8/2022	9:29	47-44	117	5.60	172.90	212.80	39.90				0.05		
	4/8/2022	9:40	44-41	74	6.70	212.80	252.70	39.90				0.05		
	4/8/2022	9:48	41-38	76	6.90	252.70	292.60	39.90				0.05		
	4/8/2022	9:57	38-35	90	7.60	292.60	332.50	39.90				0.05		
	4/8/2022	10:07	35-32	76	7.00	332.50	372.40	39.90				0.05		
	4/8/2022	10:16	32-30	120	8.90	372.40	399.00	26.60				0.01		
9	4/7/2022	15:50	65-61	126	6.10	0.00	45.67	45.67	399	159	119	0.05		4'-Dropdown Screen
	4/8/2022	8:54	61-57	52	5.20	45.67	91.34	45.67				0.05		
	4/8/2022	9:05	57-53	56	6.10	91.34	137.01	45.67				0.05		
	4/8/2022	9:16	53-49	65	6.60	137.01	182.68	45.67				0.05		
	4/8/2022	9:29	49-45	77	7.30	182.68	228.35	45.67				0.05		
	4/8/2022	9:40	45-41	74	7.20	228.35	274.02	45.67				0.05		
	4/8/2022	9:48	41-37	78	7.20	274.02	319.69	45.67				0.05		
	4/8/2022	9:57	37-33	92	7.70	319.69	365.36	45.67				0.05		
	4/8/2022	10:07	33-30	78	7.10	365.36	399.00	33.64				0.04		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
3591	1432	1074	4.30

Patriot Engineering-Houghland Canning

3DME Injection Summary Log

Offsite Shallow and Deep Northern Barrier

Table 5

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	4/13/2022	10:57	65-61	85	3.70	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/13/2022	11:15	61-57	141	5.60	49.95	99.90	49.95				0.05		
	4/13/2022	11:27	57-53	107	6.80	99.90	149.85	49.95				0.05		
	4/13/2022	11:36	53-49	113	8.00	149.85	199.80	49.95				0.05		
	4/13/2022	11:45	49-45	114	8.60	199.80	249.75	49.95				0.05		
	4/13/2022	11:57	45-41	27	4.90	249.75	299.70	49.95				0.05		
	4/13/2022	12:07	41-37	34	4.80	299.70	349.65	49.95				0.05		
	4/13/2022	12:24	37-33	22	4.60	349.65	399.60	49.95				0.05		
	4/13/2022	12:46	33-29	40	4.30	399.60	432.00	32.40				0.05		
	4/14/2022	8:55	29-25	21	2.70	432.00	449.55	17.55				0.00		
	4/14/2022	9:03	29-25	30	5.50	449.55	499.50	49.95				0.05		
	4/14/2022	9:16	25-21	22	5.10	499.50	549.45	49.95				0.05		
	4/14/2022	9:29	21-17	27	5.60	549.45	599.40	49.95				0.05		
	4/14/2022	9:42	17-13	32	5.00	599.40	649.35	49.95				0.05		
	4/14/2022	9:54	13-10	29	5.40	649.35	686.82	37.47				0.04	Small amount of surfacing out of bore.	
2	4/13/2022	10:57	65-61	126	3.10	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/13/2022	11:15	61-57	135	5.00	49.95	99.90	49.95				0.05		
	4/13/2022	11:27	57-53	106	7.80	99.90	149.85	49.95				0.05		
	4/13/2022	11:36	53-49	92	7.30	149.85	199.80	49.95				0.05		
	4/13/2022	11:45	49-45	97	8.10	199.80	249.75	49.95				0.05		
	4/13/2022	11:57	45-41	57	5.50	249.75	299.70	49.95				0.05		
	4/13/2022	12:07	41-37	36	6.00	299.70	349.65	49.95				0.05		
	4/13/2022	12:24	37-33	21	4.80	349.65	399.60	49.95				0.05		
	4/13/2022	12:46	33-29	17	4.40	399.60	435.00	35.40				0.05		
	4/14/2022	8:55	29-25	18	3.70	435.00	449.55	14.55				0.00		
	4/14/2022	9:03	29-25	30	5.80	449.55	499.50	49.95				0.05		
	4/14/2022	9:16	25-21	21	5.10	499.50	549.45	49.95				0.05		
	4/14/2022	9:29	21-17	31	5.00	549.45	599.40	49.95				0.05		
	4/14/2022	9:42	17-13	30	5.50	599.40	649.35	49.95				0.05		
	4/14/2022	9:54	13-10	22	4.70	649.35	686.82	37.47				0.04		
3	4/14/2022	10:51	65-61	96	2.80	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/14/2022	11:03	61-57	97	6.50	49.95	99.90	49.95				0.05		
	4/14/2022	11:09	57-53	97	6.90	99.90	149.85	49.95				0.05		
	4/14/2022	11:21	53-49	86	6.70	149.85	199.80	49.95				0.05		
	4/14/2022	11:30	49-45	88	7.10	199.80	249.75	49.95				0.05		
	4/14/2022	11:40	45-41	44	6.80	249.75	299.70	49.95				0.05		
	4/14/2022	11:54	41-37	23	4.90	299.70	349.65	49.95				0.05		
	4/14/2022	12:10	37-33	29	5.50	349.65	399.60	49.95				0.05		
	4/14/2022	12:23	33-29	31	5.80	399.60	449.55	49.95				0.05		
	4/14/2022	12:36	29-25	25	5.30	449.55	499.50	49.95				0.05		
	4/14/2022	12:49	25-21	20	4.80	499.50	549.45	49.95				0.05		
	4/14/2022	13:02	21-17	30	5.60	549.45	599.40	49.95				0.05		
	4/14/2022	13:16	17-13	27	5.50	599.40	649.35	49.95				0.05		
	4/14/2022	13:33	13-10	28	5.50	649.35	686.82	37.47				0.04		
4	4/14/2022	10:51	65-61	135	3.90	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/14/2022	11:03	61-57	121	7.20	49.95	99.90	49.95				0.05		
	4/14/2022	11:09	57-53	109	7.00	99.90	149.85	49.95				0.05		
	4/14/2022	11:21	53-49	101	7.20	149.85	199.80	49.95				0.05		
	4/14/2022	11:30	49-45	92	6.80	199.80	249.75	49.95				0.05		
	4/14/2022	11:40	45-41	115	8.50	249.75	299.70	49.95				0.05		
	4/14/2022	11:54	41-37	40	5.80	299.70	349.65	49.95				0.05		
	4/14/2022	12:10	37-33	28	5.60	349.65	399.60	49.95				0.05		
	4/14/2022	12:23	33-29	29	5.60	399.60	449.55	49.95				0.05		
	4/14/2022	12:36	29-25	21	5.00	449.55	499.50	49.95				0.05		
	4/14/2022	12:49	25-21	32	6.00	499.50	549.45	49.95				0.05		
	4/14/2022	13:02	21-17	29	5.70	549.45	599.40	49.95				0.05		
	4/14/2022	13:16	17-13	25	5.30	599.40	649.35	49.95				0.05		
	4/14/2022	13:33	13-10	28	5.70	649.35	686.82	37.47				0.04		
5	4/13/2022	11:52	65-61	128	5.00	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/13/2022	12:07	61-57	71	4.70	49.95	99.90	49.95				0.05		
	4/13/2022	12:24	57-53	55	4.60	99.90	149.85	49.95				0.05		
	4/13/2022	12:46	53-49	39	6.20	149.85	199.80	49.95				0.05		
	4/14/2022	9:03	49-45	28	4.30	199.80	249.75	49.95				0.05		
	4/14/2022	9:16	45-41	38	5.50	249.75	299.70	49.95				0.05		
	4/14/2022	9:29	41-37	34	5.30	299.70	349.65	49.95				0.05		
	4/14/2022	9:42	37-33	31	5.50	349.65	399.60	49.95				0.05		
	4/14/2022	9:54	33-29	28	5.30	399.60	449.55	49.95				0.05		
	4/14/2022	10:06	29-25	88	9.10	449.55	499.50	49.95				0.05		
	4/14/2022	10:13	25-21	94	10.10	499.50	549.45	49.95				0.05		
	4/14/2022	10:21	21-17	98	9.90	549.45	599.40	49.95				0.05		
	4/14/2022	10:29	17-13	120	10.10	599.40	649.35	49.95				0.05		
	4/14/2022	10:37	13-10	75	8.60	649.35	686.82	37.47				0.04		
6	4/13/2022	11:52	65-61	93	5.00	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/13/2022	12:07	61-57	47	5.30	49.95	99.90	49.95				0.05		
	4/13/2022	12:24	57-53	22	5.60	99.90	149.85	49.95				0.05		
	4/13/2022	12:46	53-49	22	5.20	149.85	192.00	42.15				0.05		
	4/14/2022	8:55	53-49	14	4.30	192.00	199.80	7.80				0.00		
	4/14/2022	9:03	49-45	28	5.90	199.80	249.75	49.95				0.05		
	4/14/2022	9:16	45-41	27	5.80	249.75	299.70	49.95				0.05		
	4/14/2022	9:29	41-37	25	5.80	299.70	349.65	49.95				0.05		
	4/14/2022	9:42	37-33	17	5.30	349.65	399.60	49.95				0.05		
	4/14/2022	9:54	33-29	25	5.90	399.60	449.55	49.95				0.05		
	4/14/2022	10:06	29-25	59	8.80	449.55	499.50	49.95				0.05		
	4/14/2022	10:13	25-21	56	9.80	499.50	549.45	49.95				0.05		
	4/14/2022	10:21	21-17	63	10.10	549.45	599.40	49.95				0.05		
	4/14/2022	10:29	17-13	58	9.70	599.40	649.35	49.95				0.05		
	4/14/2022	10:37	13-10	50	8.60	649.35	686.82	37.47				0.04		
7	4/14/2022	11:42	65-61	116	4.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/14/2022	11:54	61-57	73	5.20	49.95	99.90	49.95				0.05		
	4/14/2022	12:10	57-53	29	5.20	99.90	149.85	49.95				0.05		
	4/14/2022	12:23	53-49	35	4.90	149.85	199.80	49.95				0.05		
	4/14/2022	12:36	49-45	42	5.50	199.80	249.75	49.95				0.05		
	4/14/2022	12:49	45-41	33	5.70	249.75	299.70	49.95				0.05		
	4/14/2022	13:02	41-37	29	5.20	299.70	349.65	49.95				0.05		
	4/14/2022	13:16	37-33	29	5.50	349.65	399.60	49.95				0.05		
	4/14/2022	13:33	33-29	29	5.20	399.60	449.55	49.95				0.05		
	4/14/2022	13:45	29-25	92	9.60	449.55	499.50	49.95				0.05		
	4/14/2022	13:53	25-21	81	9.50	499.50	549.45	49.95				0.05		
	4/14/2022	14:03	21-17	96	9.10	549.45	599.40	49.95				0.05		
	4/14/2022	14:13	17-13	86	9.00	599.40	649.35	49.95				0.05		
	4/14/2022	14:22	13-10	86	8.90	649.35	686.82	37.47				0.04	Fair amount of surfacing out of small holes in the surface up to 2' East of the point. Lowered flow and continued. Surfacing lessened.	
8	4/14/2022	11:42	65-61	90	6.10	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/14/2022	11:54	61-57	58	5.90	49.95	99.90	49.95				0.05		
	4/14/2022	12:10	57-53	19	5.50	99.90	149.85	49.95				0.05		
	4/14/2022	12:23	53-49	23	5.50	149.85	199.80	49.95				0.05		
	4/14/2022	12:36	49-45	32	5.90	199.80	249.75	49.95				0.05		
	4/14/2022	12:49	45-41	19	5.30	249.75	299.70	49.95				0.05		
	4/14/2022	13:02	41-37	30	5.40	299.70	349.65	49.95				0.05		
	4/14/2022	13:16	37-33	17	5.40	349.65	399.60	49.95				0.05		
	4/14/2022	13:33	33-29	19	5.50	399.60	449.55	49.95				0.05		
	4/14/2022	13:45	29-25	76	9.40	449.55	499.50	49.95				0.05		
	4/14/2022	13:53	25-21	48	9.20	499.50	549.45	49.95				0.05		
	4/14/2022	14:03	21-17	59	9.70	549.45	599.40	49.95				0.05		
	4/14/2022	14:13	17-13	71	8.90	599.40	649.35	49.95				0.05		
	4/14/2022	14:22	13-10	65	8.90	649.35	686.82	37.47				0.04		
9	4/14/2022	14:33	65-61	137	2.90	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/14/2022	14:48	61-57	131	8.80	49.95	99.90	49.95				0.05		
	4/14/2022	14:57	57-53	95	8.40	99.90	149.85	49.95				0.05		
	4/14/2022	15:07	53-49	61	8.00	149.85	199.80	49.95				0.05		
	4/14/2022	15:40	49-45	40	6.70	199.80	249.75	49.95				0.05		
	4/14/2022	15:52	45-41	43	6.20	249.75	299.70	49.95				0.05		
	4/14/2022	16:07	41-37	44	4.80	299.70	349.65	49.95				0.05		
	4/14/2022	16:19	37-33	35	5.10	349.65	399.60	49.95				0.05		
	4/14/2022	16:37	33-29	26	4.70	399.60	421.00	21.40				0.05		
	4/15/2022	9:10	33-29	16	2.80	421.00	449.55	28.55				0.00		
	4/15/2022	9:32	29-25	64	6.40	449.55	499.50	49.95				0.05		
	4/15/2022	10:12	25-21	68	6.60	499.50	549.45	49.95				0.05		
	4/15/2022	10:26	21-17	28	5.30	549.45	599.40	49.95				0.05		
	4/15/2022	10:39	17-13	33	5.80	599.40	649.35	49.95				0.05		
	4/15/2022	10:53	13-10	28	5.60	649.35	686.82	37.47				0.04		
10	4/14/2022	14:33	65-61	80	4.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/14/2022	14:48	61-57	90	7.90	49.95	99.90	49.95				0.05		
	4/14/2022	14:57	57-53	92	8.30	99.90	149.85	49.95				0.05		
	4/14/2022	15:07	53-49	62	8.10	149.85	199.80	49.95				0.05		
	4/14/2022	15:40	49-45	43	5.40	199.80	249.75	49.95				0.05		
	4/14/2022	15:52	45-41	58	6.80	249.75	299.70	49.95				0.05		
	4/14/2022	16:07	41-37	44	5.90	299.70	349.65	49.95				0.05		
	4/14/2022	16:19	37-33	40	6.10	349.65	399.60	49.95				0.05		
	4/14/2022	16:37	33-29	33	5.80	399.60	425.00	25.40				0.05		
	4/15/2022	9:10	33-29	17	3.30	425.00	449.55	24.55				0.00		
	4/15/2022	9:32	29-25	19	4.50	449.55	499.50	49.95				0.05		
	4/15/2022	10:12	25-21	26	5.30	499.50	549.45	49.95				0.05		
	4/15/2022	10:26	21-17	22	4.90	549.45	599.40	49.95				0.05		
	4/15/2022	10:39	17-13	38	6.60	599.40	649.35	49.95				0.05		
	4/15/2022	10:53	13-10	25	5.40	649.35	686.82	37.47				0.04		

	4/14/2022	15:38	65-61	73	5.90	0.00	49.95	49.95				0.05		
	4/14/2022	15:52	61-57	131	2.60	49.95	99.90	49.95				0.05		
	4/14/2022	16:07	57-53	145	3.70	99.90	149.85	49.95				0.05		
	4/14/2022	16:19	53-49	58	4.30	149.85	199.80	49.95				0.05		
	4/14/2022	16:37	49-45	65	4.00	199.80	213.00	13.20				0.05		
	4/15/2022	9:10	49-45	18	2.30	213.00	249.75	36.75				0.00		
	4/15/2022	9:32	45-41	107	5.10	249.75	299.70	49.95				0.05		
11	4/15/2022	10:12	41-37	73	6.10	299.70	349.65	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/15/2022	10:26	37-33	107	5.80	349.65	399.60	49.95				0.05		
	4/15/2022	10:39	33-29	65	4.00	399.60	449.55	49.95				0.05		
	4/15/2022	10:53	29-25	45	3.80	449.55	499.50	49.95				0.05		
	4/15/2022	11:09	25-21	77	8.20	499.50	549.45	49.95				0.05		
	4/15/2022	11:18	21-17	143	6.90	549.45	599.40	49.95				0.05		
	4/15/2022	11:26	17-13	140	7.00	599.40	649.35	49.95				0.05		
	4/15/2022	11:42	13-10	125	5.60	649.35	686.82	37.47				0.04		
	4/14/2022	15:38	65-61	92	4.60	0.00	49.95	49.95				0.05		
	4/14/2022	15:52	61-57	84	5.40	49.95	99.90	49.95				0.05		
	4/14/2022	16:07	57-53	87	6.40	99.90	149.85	49.95				0.05		
	4/14/2022	16:19	53-49	71	5.40	149.85	199.80	49.95				0.05		
	4/14/2022	16:37	49-45	39	6.30	199.80	226.00	26.20				0.05		
	4/15/2022	9:10	49-45	18	3.50	226.00	249.75	23.75				0.00		
	4/15/2022	9:32	45-41	26	4.60	249.75	299.70	49.95				0.05		
12	4/15/2022	10:12	41-37	34	4.50	299.70	349.65	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/15/2022	10:26	37-33	76	4.60	349.65	399.60	49.95				0.05		
	4/15/2022	10:39	33-29	20	4.10	399.60	449.55	49.95				0.05		
	4/15/2022	10:53	29-25	45	6.20	449.55	499.50	49.95				0.05		
	4/15/2022	11:09	25-21	72	8.10	499.50	549.45	49.95				0.05		
	4/15/2022	11:18	21-17	97	9.80	549.45	599.40	49.95				0.05		
	4/15/2022	11:26	17-13	83	8.50	599.40	649.35	49.95				0.05		
	4/15/2022	11:42	13-10	118	10.70	649.35	686.82	37.47				0.04		
	4/15/2022	12:20	65-61	127	3.30	0.00	49.95	49.95				0.05		
	4/15/2022	12:34	61-57	119	5.90	49.95	99.90	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/15/2022	12:48	57-53	95	6.30	99.90	149.85	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/15/2022	13:00	53-49	67	5.60	149.85	199.80	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/15/2022	13:13	49-45	65	5.40	199.80	249.75	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/15/2022	13:25	45-41	65	5.60	249.75	299.70	49.95				0.05	Fair amount of backpressure after completion of the interval.	
13	4/15/2022	13:36	41-37	80	6.70	299.70	349.65	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/15/2022	13:47	37-33	57	5.20	349.65	399.60	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/15/2022	13:59	33-29	95	5.80	399.60	449.55	49.95				0.05		
	4/15/2022	14:10	29-25	44	6.70	449.55	499.50	49.95				0.05		
	4/15/2022	14:20	25-21	37	6.60	499.50	549.45	49.95				0.05		
	4/15/2022	14:30	21-17	43	7.00	549.45	599.40	49.95				0.05		
	4/15/2022	14:40	17-13	43	6.70	599.40	649.35	49.95				0.05		
	4/15/2022	14:49	13-10	33	6.00	649.35	686.82	37.47				0.04		
	4/15/2022	12:20	65-61	123	5.10	0.00	49.95	49.95				0.05		
	4/15/2022	12:34	61-57	88	6.40	49.95	99.90	49.95				0.05		
	4/15/2022	12:48	57-53	71	6.60	99.90	149.85	49.95				0.05		
	4/15/2022	13:00	53-49	53	6.30	149.85	199.80	49.95				0.05		
	4/15/2022	13:13	49-45	42	6.80	199.80	249.75	49.95				0.05		
	4/15/2022	13:25	45-41	28	6.40	249.75	299.70	49.95				0.05		
14	4/15/2022	13:36	41-37	64	5.90	299.70	349.65	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/15/2022	13:47	37-33	35	7.30	349.65	399.60	49.95				0.05		
	4/15/2022	13:59	33-29	15	4.50	399.60	449.55	49.95				0.05		
	4/15/2022	14:10	29-25	7	3.90	449.55	499.50	49.95				0.05		
	4/15/2022	14:20	25-21	20	5.30	499.50	549.45	49.95				0.05		
	4/15/2022	14:30	21-17	25	6.30	549.45	599.40	49.95				0.05		
	4/15/2022	14:40	17-13	29	6.60	599.40	649.35	49.95				0.05		
	4/15/2022	14:49	13-10	35	6.70	649.35	686.82	37.47				0.04		
	4/15/2022	12:20	65-61	136	3.50	0.00	49.95	49.95				0.05		
	4/15/2022	12:34	61-57	98	6.20	49.95	99.90	49.95				0.05		
	4/15/2022	12:48	57-53	95	6.30	99.90	149.85	49.95				0.05		
	4/15/2022	13:00	53-49	59	6.00	149.85	199.80	49.95				0.05		
	4/15/2022	13:13	49-45	41	6.20	199.80	249.75	49.95				0.05		
	4/15/2022	13:25	45-41	44	6.50	249.75	299.70	49.95				0.05		
15	4/15/2022	13:36	41-37	41	6.10	299.70	349.65	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/15/2022	13:47	37-33	45	6.40	349.65	399.60	49.95				0.05		
	4/15/2022	13:59	33-29	53	7.20	399.60	449.55	49.95				0.05		
	4/15/2022	14:10	29-25	44	6.80	449.55	499.50	49.95				0.05		
	4/15/2022	14:20	25-21	38	6.10	499.50	549.45	49.95				0.05		
	4/15/2022	14:30	21-17	44	6.70	549.45	599.40	49.95				0.05		
	4/15/2022	14:40	17-13	44	6.70	599.40	649.35	49.95				0.05		
	4/15/2022	14:49	13-10	36	5.60	649.35	686.82	37.47				0.04		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVI:	Total Litres of BDI:
10302	4118	3088	11.18

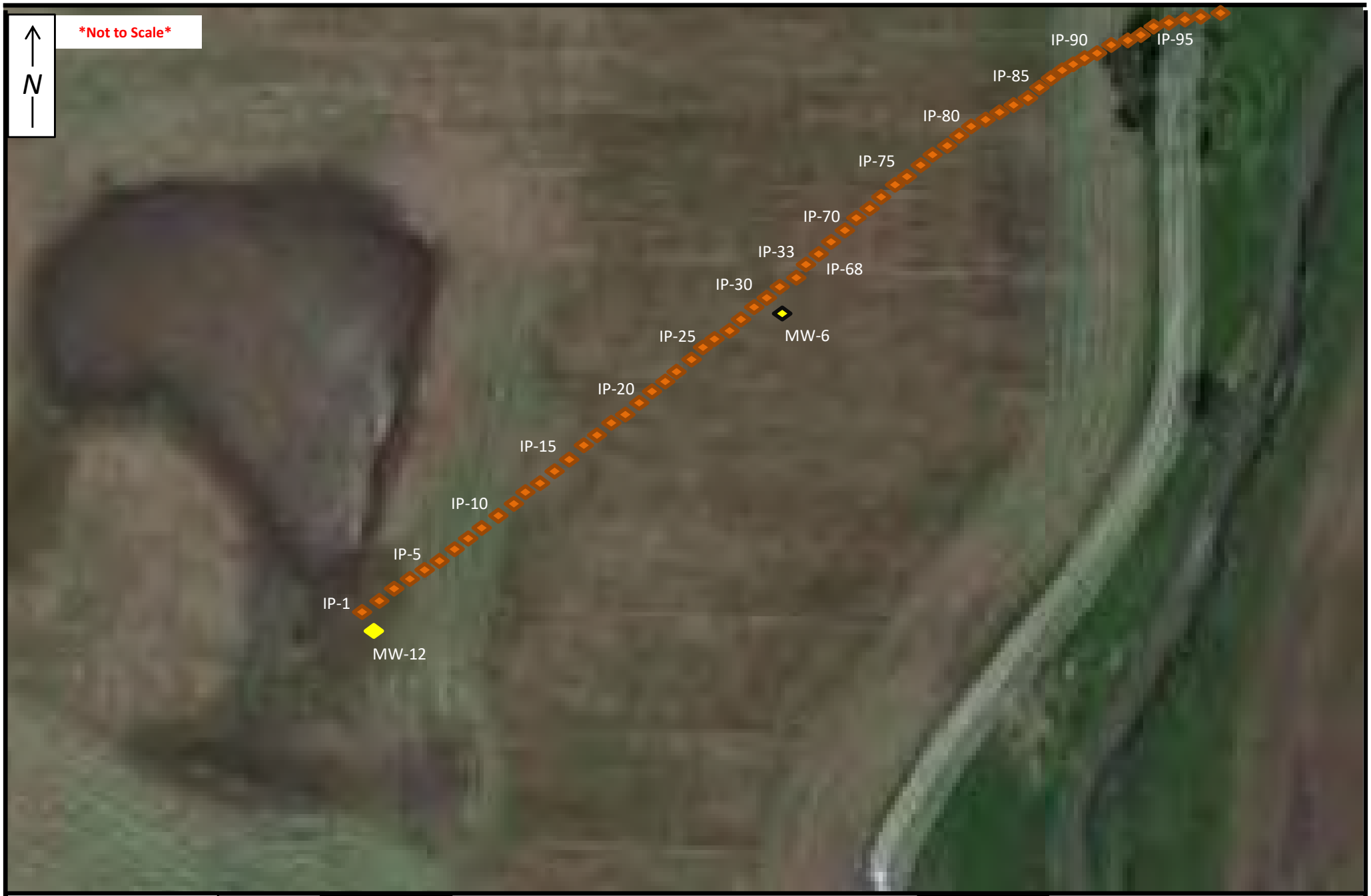
Patriot Engineering-Houghland Canning
3DME Injection Summary Log
Offsite Shallow and Deep Southern Barrier
Table 6

Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Volume of 3DME Injected			Total Gallons Per Location	Pounds of 3DME Injected Per Location	Pounds of ZVI Per Location	Liters of BDI Per Interval	Comments	Injection Tooling
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval						
1	4/19/2022	9:32	65-61	121	4.10	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	10:02	61-57	129	5.50	49.95	99.90	49.95				0.05		
	4/19/2022	10:21	57-53	146	4.50	99.90	149.85	49.95				0.05		
	4/19/2022	10:41	53-49	34	6.20	149.85	199.80	49.95				0.05		
	4/19/2022	11:00	49-45	15	5.20	199.80	249.75	49.95				0.05		
	4/19/2022	11:18	45-41	30	5.70	249.75	299.70	49.95				0.05		
	4/19/2022	11:42	41-37	17	5.60	299.70	349.65	49.95				0.05		
	4/19/2022	11:58	37-33	33	6.80	349.65	399.60	49.95				0.05		
	4/19/2022	12:16	33-29	54	6.70	399.60	449.55	49.95				0.05		
	4/19/2022	12:45	29-25	50	4.30	449.55	499.50	49.95				0.05		
	4/19/2022	12:57	25-21	37	8.80	499.50	549.45	49.95				0.05		
	4/19/2022	13:11	21-17	24	7.40	549.45	599.40	49.95				0.05		
	4/19/2022	13:24	17-13	13	6.40	599.40	649.35	49.95				0.05		
	4/19/2022	13:37	13-10	21	6.80	649.35	686.82	37.47				0.04		
2	4/19/2022	9:32	65-61	61	4.20	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	10:02	61-57	18	5.20	49.95	99.90	49.95				0.05		
	4/19/2022	10:21	57-53	30	7.90	99.90	149.85	49.95				0.05	Small amount of surfacing out of bore. Lowered flow and continued..	
	4/19/2022	10:41	53-49	24	6.10	149.85	199.80	49.95				0.05		
	4/19/2022	11:00	49-45	21	5.90	199.80	249.75	49.95				0.05		
	4/19/2022	11:18	45-41	19	5.70	249.75	299.70	49.95				0.05		
	4/19/2022	11:42	41-37	32	5.90	299.70	349.65	49.95				0.05		
	4/19/2022	11:58	37-33	34	7.30	349.65	399.60	49.95				0.05		
	4/19/2022	12:16	33-29	30	6.50	399.60	449.55	49.95				0.05		
	4/19/2022	12:45	29-25	45	7.60	449.55	499.50	49.95				0.05		
	4/19/2022	12:57	25-21	10	4.30	499.50	549.45	49.95				0.05		
	4/19/2022	13:11	21-17	55	7.60	549.45	599.40	49.95				0.05		
	4/19/2022	13:24	17-13	22	6.30	599.40	649.35	49.95				0.05		
	4/19/2022	13:37	13-10	24	6.90	649.35	686.82	37.47				0.04		
3	4/19/2022	9:32	65-61	117	2.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	10:02	61-57	123	3.90	49.95	99.90	49.95				0.05		
	4/19/2022	10:21	57-53	43	5.00	99.90	149.85	49.95				0.05		
	4/19/2022	10:41	53-49	10	4.50	149.85	199.80	49.95				0.05		
	4/19/2022	11:00	49-45	22	6.10	199.80	249.75	49.95				0.05		
	4/19/2022	11:18	45-41	18	5.70	249.75	299.70	49.95				0.05		
	4/19/2022	11:42	41-37	11	4.70	299.70	349.65	49.95				0.05		
	4/19/2022	11:58	37-33	7	3.40	349.65	399.60	49.95				0.05		
	4/19/2022	12:16	33-29	23	6.80	399.60	449.55	49.95				0.05		
	4/19/2022	12:45	29-25	24	7.20	449.55	499.50	49.95				0.05		
	4/19/2022	12:57	25-21	25	7.00	499.50	549.45	49.95				0.05		
	4/19/2022	13:11	21-17	10	4.60	549.45	599.40	49.95				0.05		
	4/19/2022	13:24	17-13	20	6.50	599.40	649.35	49.95				0.05		
	4/19/2022	13:37	13-10	32	7.00	649.35	686.82	37.47				0.04		
4	4/19/2022	9:32	65-61	123	1.60	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	10:02	61-57	121	5.20	49.95	99.90	49.95				0.05	Small amount of surfacing out of bore. Lowered flow and continued..	
	4/19/2022	10:21	57-53	130	2.40	99.90	149.85	49.95				0.05		
	4/19/2022	10:41	53-49	81	3.80	149.85	199.80	49.95				0.05		
	4/19/2022	11:00	49-45	61	3.60	199.80	249.75	49.95				0.05		
	4/19/2022	11:18	45-41	63	4.40	249.75	299.70	49.95				0.05		
	4/19/2022	11:42	41-37	51	3.60	299.70	349.65	49.95				0.05		
	4/19/2022	11:58	37-33	76	3.80	349.65	399.60	49.95				0.05		
	4/19/2022	12:16	33-29	71	3.80	399.60	449.55	49.95				0.05		
	4/19/2022	12:45	29-25	110	3.50	449.55	499.50	49.95				0.05		
	4/19/2022	12:57	25-21	105	3.40	499.50	549.45	49.95				0.05		
	4/19/2022	13:11	21-17	135	3.20	549.45	599.40	49.95				0.05		
	4/19/2022	13:24	17-13	140	3.20	599.40	649.35	49.95				0.05		
	4/19/2022	13:37	13-10	140	2.90	649.35	686.82	37.47				0.04		
5	4/19/2022	14:39	65-61	44	4.80	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	14:58	61-57	42	5.30	49.95	99.90	49.95				0.05		
	4/19/2022	15:15	57-53	19	5.80	99.90	149.85	49.95				0.05		
	4/19/2022	15:30	53-49	16	6.20	149.85	199.80	49.95				0.05		
	4/19/2022	15:45	49-45	20	6.40	199.80	249.75	49.95				0.05		
	4/19/2022	15:59	45-41	16	5.80	249.75	299.70	49.95				0.05		
	4/19/2022	16:13	41-37	20	5.90	299.70	349.65	49.95				0.05		
	4/19/2022	16:26	37-33	14	5.10	349.65	399.60	49.95				0.05		
	4/19/2022	16:39	33-29	13	5.80	399.60	449.55	49.95				0.05		
	4/20/2022	8:52	29-25	17	6.60	449.55	499.50	49.95				0.05		
	4/20/2022	9:07	25-21	5	4.30	499.50	549.45	49.95				0.05		
	4/20/2022	9:25	21-17	10	4.80	549.45	599.40	49.95				0.05		
	4/20/2022	9:36	17-13	13	5.60	599.40	649.35	49.95				0.05		
	4/20/2022	9:48	13-10	10	5.40	649.35	686.82	37.47				0.04		
6	4/19/2022	14:39	65-61	21	6.00	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	14:58	61-57	9	4.50	49.95	99.90	49.95				0.05		
	4/19/2022	15:15	57-53	12	5.10	99.90	149.85	49.95				0.05		
	4/19/2022	15:30	53-49	10	4.60	149.85	199.80	49.95				0.05		
	4/19/2022	15:45	49-45	11	5.00	199.80	249.75	49.95				0.05		
	4/19/2022	15:59	45-41	18	5.90	249.75	299.70	49.95				0.05		
	4/19/2022	16:13	41-37	21	6.30	299.70	349.65	49.95				0.05		
	4/19/2022	16:26	37-33	14	5.20	349.65	399.60	49.95				0.05		
	4/19/2022	16:39	33-29	13	5.50	399.60	449.55	49.95				0.05		
	4/20/2022	8:52	29-25	18	6.50	449.55	499.50	49.95				0.05		
	4/20/2022	9:07	25-21	11	5.40	499.50	549.45	49.95				0.05		
	4/20/2022	9:25	21-17	4	3.40	549.45	599.40	49.95				0.05		
	4/20/2022	9:36	17-13	8	4.60	599.40	649.35	49.95				0.05		
	4/20/2022	9:48	13-10	10	4.70	649.35	686.82	37.47				0.04		
7	4/19/2022	14:39	65-61	125	4.70	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	14:58	61-57	12	4.80	49.95	99.90	49.95				0.05		
	4/19/2022	15:15	57-53	13	5.20	99.90	149.85	49.95				0.05		
	4/19/2022	15:30	53-49	24	6.20	149.85	199.80	49.95				0.05		
	4/19/2022	15:45	49-45	21	6.00	199.80	249.75	49.95				0.05		
	4/19/2022	15:59	45-41	17	5.40	249.75	299.70	49.95				0.05		
	4/19/2022	16:13	41-37	15	3.10	299.70	349.65	49.95				0.05		
	4/19/2022	16:26	37-33	14	5.10	349.65	399.60	49.95				0.05		
	4/19/2022	16:39	33-29	14	5.50	399.60	449.55	49.95				0.05		
	4/20/2022	8:52	29-25	25	4.30	449.55	499.50	49.95				0.05		
	4/20/2022	9:07	25-21	36	5.00	499.50	549.45	49.95				0.05		
	4/20/2022	9:25	21-17	30	6.40	549.45	599.40	49.95				0.05		
	4/20/2022	9:36	17-13	21	5.30	599.40	649.35	49.95				0.05		
	4/20/2022	9:48	13-10	35	5.70	649.35	686.82	37.47				0.04		
8	4/19/2022	14:39	65-61	126	3.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/19/2022	14:58	61-57	78	3.60	49.95	99.90	49.95				0.05		
	4/19/2022	15:15	57-53	69	4.90	99.90	149.85	49.95				0.05		
	4/19/2022	15:30	53-49	74	4.30	149.85	199.80	49.95				0.05		
	4/19/2022	15:45	49-45	84	4.10	199.80	249.75	49.95				0.05		
	4/19/2022	15:59	45-41	44	4.00	249.75	299.70	49.95				0.05		
	4/19/2022	16:13	41-37	112	5.90	299.70	349.65	49.95				0.05		
	4/19/2022	16:26	37-33	14	4.80	349.65	399.60	49.95				0.05		
	4/19/2022	16:39	33-29	13	5.10	399.60	449.55	49.95				0.05		
	4/20/2022	8:52	29-25	82	3.90	449.55	499.50	49.95				0.05		
	4/20/2022	9:07	25-21	78	5.00	499.50	549.45	49.95				0.05		
	4/20/2022	9:25	21-17	76	6.70	549.45	599.40	49.95				0.05		
	4/20/2022	9:36	17-13	80	6.20	599.40	649.35	49.95				0.05		
	4/20/2022	9:48	13-10	85	5.30	649.35	686.82	37.47				0.04		
9	4/20/2022	10:59	65-61	116	5.70	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	11:17	61-57	7	4.50	49.95	99.90	49.95				0.05		
	4/20/2022	11:32	57-53	12	5.20	99.90	149.85	49.95				0.05		
	4/20/2022	11:46	53-49	10	4.90	149.85	199.80	49.95				0.05		
	4/20/2022	11:58	49-45	27	5.70	199.80	249.75	49.95				0.05		
	4/20/2022	12:10	45-41	17	5.90	249.75	299.70	49.95				0.05		
	4/20/2022	12:23	41-37	15	5.30	299.70	349.65	49.95				0.05		
	4/20/2022	12:38	37-33	13	5.20	349.65	399.60	49.95				0.05		
	4/20/2022	13:02	33-29	9	5.20	399.60	449.55	49.95				0.05		
	4/20/2022	13:14	29-25	15	5.80	449.55	499.50	49.95				0.05		
	4/20/2022	13:26	25-21	35	5.50	499.50	549.45	49.95				0.05		
	4/20/2022	13:41	21-17	12	5.30	549.45	599.40	49.95				0.05		
	4/20/2022	13:53	17-13	16	6.40	599.40	649.35	49.95				0.05		
	4/20/2022	14:04	13-10	24	6.40	649.35	686.82	37.47				0.04		
10	4/20/2022	10:59	65-61	110	4.70	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	11:17	61-57	10	3.10	49.95	99.90	49.95				0.05		
	4/20/2022	11:32	57-53	9	4.60	99.90	149.85	49.95				0.05		
	4/20/2022	11:46	53-49	53	5.60	149.85	199.80	49.95				0.05		
	4/20/2022	11:58	49-45	36	5.30	199.80	249.75	49.95				0.05		
	4/20/2022	12:10	45-41	51	5.10	249.75	299.70	49.95				0.05		
	4/20/2022	12:23	41-37	46	4.50	299.70	349.65	49.95				0.05		
	4/20/2022	12:38	37-33	25	5.60	349.65	399.60	49.95				0.05		
	4/20/2022	13:02	33-29	15	5.90	399.60	449.55	49.95				0.05		
	4/20/2022	13:14	29-25	34	4.20	449.55	499.50	49.95				0.05		
	4/20/2022	13:26	25-21	60	5.20	499.50	549.45	49.95				0.05		
	4/20/2022	13:41	21-17	21	5.90	549.45	599.40	49.95				0.05		
	4/20/2022	13:53	17-13	3	3.50	599.40	649.35	49.95				0.05		
	4/20/2022	14:04	13-10	12	4.90	649.35	686.82	37.47				0.04		
11	4/20/2022	10:59	65-61	132	2.30	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	11:17	61-57	110	8.30	49.95	99.90	49.95				0.05		
	4/20/2022	11:32	57-53	43	5.40	99.90	149.85	49.95				0.05		
	4/20/2022	11:46	53-49	42	4.70	149.85	199.80	49.95				0.05		
	4/20/2022	11:58	49-45	34	5.00	199.80	249.75	49.95				0.05		
	4/20/2022	12:10	45-41	28	5.80	249.75	299.70	49.95				0.05		
	4/20/2022	12:23	41-37	26	5.90	299.70	349.65	49.95				0.05		
	4/20/2022	12:38	37-33	25	5.70	349.65	399.60	49.95				0.05		
	4/20/2022	13:02	33-29	15	4.90	399.60	449.55	49.95				0.05		
	4/20/2022	13:14	29-25	20	5.30	449.55	499.50	49.95				0.05		
	4/20/2022	13:26	25-21	20	5.20	499.50	549.45	49.95				0.05		
	4/20/2022	13:41	21-17	20	5.40	549.45	599.40	49.95				0.05		
	4/20/2022	13:53	17-13	35	6.30	599.40	649.35	49.95				0.05		
	4/20/2022	14:04	13-10	38	5.20	649.35	686.82	37.47				0.04		
12	4/20/2022	10:59	65-61	128	5.70	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	11:17	61-57	114	5.20	49.95	99.90	49.95				0.05		
	4/20/2022	11:32	57-53	42	6.10	99.90	149.85	49.95				0.05		
	4/20/2022	11:46	53-49	18	5.70	149.85	199.80	49.95				0.05		
	4/20/2022	11:58	49-45	15	5.00	199.80	249.75	49.95				0.05		
	4/20/2022	12:10	45-41	11	4.60	249.75	299.70	49.95				0.05		
	4/20/2022	12:23	41-37	16	4.80	299.70	349.65	49.95				0.05		
	4/20/2022	12:38	37-33	28	4.70	349.65	399.60	49.95				0.05		
	4/20/2022	13:02	33-29	16	5.50	399.60	449.55	49.95				0.05		
	4/20/2022	13:14	29-25	18	5.90	449.55	499.50	49.95				0.05		
	4/20/2022	13:26	25-21	33	5.30	499.50	549.45	49.95				0.05		
	4/20/2022	13:41	21-17	18	5.40	549.45	599.40	49.95				0.05		
	4/20/2022	13:53	17-13	18	6.00	599.40	649.35	49.95				0.05		
	4/20/2022	14:04	13-10	15	5.50	649.35	686.82	37.47				0.04		

13	4/20/2022	15:19	65-61	126	2.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	15:35	61-57	76	4.50	49.95	99.90	49.95				0.05		
	4/20/2022	15:48	57-53	76	4.30	99.90	149.85	49.95				0.05		
	4/20/2022	16:02	53-49	89	4.30	149.85	199.80	49.95				0.05		
	4/20/2022	16:15	49-45	66	4.60	199.80	249.75	49.95				0.05		
	4/20/2022	16:30	45-41	50	5.30	249.75	299.70	49.95				0.05		
	4/21/2022	8:50	41-37	22	4.80	299.70	349.65	49.95				0.05		
	4/21/2022	9:07	37-33	43	5.10	349.65	399.60	49.95				0.05		
	4/21/2022	9:19	33-29	24	5.80	399.60	449.55	49.95				0.05		
	4/21/2022	9:34	29-25	24	6.00	449.55	499.50	49.95				0.05		
	4/21/2022	9:48	25-21	40	6.70	499.50	549.45	49.95				0.05		
	4/21/2022	10:01	21-17	47	6.00	549.45	599.40	49.95				0.05		
	4/21/2022	10:15	17-13	50	6.20	599.40	649.35	49.95				0.05		
	4/21/2022	10:29	13-10	34	7.10	649.35	686.82	37.47				0.04		
14	4/20/2022	15:19	65-61	66	5.90	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	15:35	61-57	13	4.50	49.95	99.90	49.95				0.05		
	4/20/2022	15:48	57-53	21	6.10	99.90	149.85	49.95				0.05		
	4/20/2022	16:02	53-49	26	5.70	149.85	199.80	49.95				0.05		
	4/20/2022	16:15	49-45	43	6.90	199.80	249.75	49.95				0.05		
	4/20/2022	16:30	45-41	24	6.40	249.75	299.70	49.95				0.05		
	4/21/2022	8:50	41-37	20	5.80	299.70	349.65	49.95				0.05		
	4/21/2022	9:07	37-33	13	5.20	349.65	399.60	49.95				0.05		
	4/21/2022	9:19	33-29	20	5.80	399.60	449.55	49.95				0.05		
	4/21/2022	9:34	29-25	17	5.40	449.55	499.50	49.95				0.05		
	4/21/2022	9:48	25-21	23	5.90	499.50	549.45	49.95				0.05		
	4/21/2022	10:01	21-17	25	6.50	549.45	599.40	49.95				0.05		
	4/21/2022	10:15	17-13	22	6.40	599.40	649.35	49.95				0.05		
	4/21/2022	10:29	13-10	22	6.70	649.35	686.82	37.47				0.04		
15	4/20/2022	15:19	65-61	115	5.00	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	15:35	61-57	76	4.60	49.95	99.90	49.95				0.05		
	4/20/2022	15:48	57-53	57	4.30	99.90	149.85	49.95				0.05		
	4/20/2022	16:02	53-49	42	5.50	149.85	199.80	49.95				0.05		
	4/20/2022	16:15	49-45	16	4.80	199.80	249.75	49.95				0.05		
	4/20/2022	16:30	45-41	21	5.30	249.75	299.70	49.95				0.05		
	4/21/2022	8:50	41-37	29	5.90	299.70	349.65	49.95				0.05		
	4/21/2022	9:07	37-33	25	5.80	349.65	399.60	49.95				0.05		
	4/21/2022	9:19	33-29	25	5.60	399.60	449.55	49.95				0.05		
	4/21/2022	9:34	29-25	29	5.50	449.55	499.50	49.95				0.05		
	4/21/2022	9:48	25-21	43	5.90	499.50	549.45	49.95				0.05		
	4/21/2022	10:01	21-17	49	5.40	549.45	599.40	49.95				0.05		
	4/21/2022	10:15	17-13	34	6.90	599.40	649.35	49.95				0.05		
	4/21/2022	10:29	13-10	31	7.00	649.35	686.82	37.47				0.04		
16	4/20/2022	15:19	65-61	123	3.90	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/20/2022	15:35	61-57	77	5.80	49.95	99.90	49.95				0.05		
	4/20/2022	15:48	57-53	79	5.30	99.90	149.85	49.95				0.05		
	4/20/2022	16:02	53-49	91	5.70	149.85	199.80	49.95				0.05		
	4/20/2022	16:15	49-45	70	5.00	199.80	249.75	49.95				0.05		
	4/20/2022	16:30	45-41	53	4.90	249.75	299.70	49.95				0.05		
	4/21/2022	8:50	41-37	31	3.60	299.70	349.65	49.95				0.05		
	4/21/2022	9:07	37-33	77	5.00	349.65	399.60	49.95				0.05		
	4/21/2022	9:19	33-29	58	4.50	399.60	449.55	49.95				0.05		
	4/21/2022	9:34	29-25	77	4.60	449.55	499.50	49.95				0.05		
	4/21/2022	9:48	25-21	115	3.90	499.50	549.45	49.95				0.05		
	4/21/2022	10:01	21-17	110	3.90	549.45	599.40	49.95				0.05		
	4/21/2022	10:15	17-13	95	4.00	599.40	649.35	49.95				0.05		
	4/21/2022	10:29	13-10	135	2.80	649.35	686.82	37.47				0.04		
17	4/21/2022	11:37	65-61	72	2.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	11:55	61-57	54	5.80	49.95	99.90	49.95				0.05		
	4/21/2022	12:10	57-53	43	5.80	99.90	149.85	49.95				0.05		
	4/21/2022	12:24	53-49	25	5.70	149.85	199.80	49.95				0.05		
	4/21/2022	12:37	49-45	13	4.40	199.80	249.75	49.95				0.05		
	4/21/2022	12:50	45-41	27	6.30	249.75	299.70	49.95				0.05		
	4/21/2022	13:02	41-37	13	3.50	299.70	349.65	49.95				0.05		
	4/21/2022	13:14	37-33	17	5.20	349.65	399.60	49.95				0.05		
	4/21/2022	13:36	33-29	23	4.70	399.60	449.55	49.95				0.05		
	4/21/2022	13:48	29-25	23	5.30	449.55	499.50	49.95				0.05		
	4/21/2022	14:00	25-21	18	5.20	499.50	549.45	49.95				0.05		
	4/21/2022	14:13	21-17	19	5.20	549.45	599.40	49.95				0.05		
	4/21/2022	14:26	17-13	39	5.10	599.40	649.35	49.95				0.05		
	4/21/2022	14:39	13-10	18	5.30	649.35	686.82	37.47				0.04		
18	4/21/2022	11:37	65-61	118	4.80	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	11:55	61-57	73	5.20	49.95	99.90	49.95				0.05		
	4/21/2022	12:11	57-53	37	5.80	99.90	149.85	49.95				0.05		
	4/21/2022	12:24	53-49	27	6.40	149.85	199.80	49.95				0.05		
	4/21/2022	12:37	49-45	20	5.60	199.80	249.75	49.95				0.05		
	4/21/2022	12:50	45-41	24	6.10	249.75	299.70	49.95				0.05		
	4/21/2022	13:02	41-37	13	3.60	299.70	349.65	49.95				0.05		
	4/21/2022	13:14	37-33	17	5.40	349.65	399.60	49.95				0.05		
	4/21/2022	13:36	33-29	24	5.50	399.60	449.55	49.95				0.05		
	4/21/2022	13:48	29-25	20	5.30	449.55	499.50	49.95				0.05		
	4/21/2022	14:00	25-21	18	5.20	499.50	549.45	49.95				0.05		
	4/21/2022	14:13	21-17	19	5.40	549.45	599.40	49.95				0.05		
	4/21/2022	14:26	17-13	12	4.20	599.40	649.35	49.95				0.05		
	4/21/2022	14:39	13-10	23	6.20	649.35	686.82	37.47				0.04		
19	4/21/2022	11:37	65-61	115	3.60	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	11:55	61-57	110	4.90	49.95	99.90	49.95				0.05		
	4/21/2022	12:11	57-53	75	5.90	99.90	149.85	49.95				0.05		
	4/21/2022	12:24	53-49	60	5.10	149.85	199.80	49.95				0.05		
	4/21/2022	12:37	49-45	12	4.50	199.80	249.75	49.95				0.05		
	4/21/2022	12:50	45-41	9	4.20	249.75	299.70	49.95				0.05		
	4/21/2022	13:02	41-37	33	5.60	299.70	349.65	49.95				0.05		
	4/21/2022	13:14	37-33	17	5.10	349.65	399.60	49.95				0.05		
	4/21/2022	13:36	33-29	24	5.70	399.60	449.55	49.95				0.05		
	4/21/2022	13:48	29-25	33	5.70	449.55	499.50	49.95				0.05		
	4/21/2022	14:00	25-21	18	5.30	499.50	549.45	49.95				0.05		
	4/21/2022	14:13	21-17	19	5.20	549.45	599.40	49.95				0.05		
	4/21/2022	14:26	17-13	27	6.40	599.40	649.35	49.95				0.05		
	4/21/2022	14:39	13-10	17	5.30	649.35	686.82	37.47				0.04		
20	4/21/2022	11:37	65-61	126	5.10	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	11:55	61-57	109	5.30	49.95	99.90	49.95				0.05		
	4/21/2022	12:11	57-53	80	4.50	99.90	149.85	49.95				0.05		
	4/21/2022	12:24	53-49	56	3.90	149.85	199.80	49.95				0.05		
	4/21/2022	12:37	49-45	65	6.60	199.80	249.75	49.95				0.05		
	4/21/2022	12:50	45-41	43	4.60	249.75	299.70	49.95				0.05		
	4/21/2022	13:02	41-37	42	8.00	299.70	349.65	49.95				0.05		
	4/21/2022	13:14	37-33	17	5.20	349.65	399.60	49.95				0.05		
	4/21/2022	13:36	33-29	25	5.50	399.60	449.55	49.95				0.05		
	4/21/2022	13:48	29-25	13	4.80	449.55	499.50	49.95				0.05		
	4/21/2022	14:00	25-21	38	5.50	499.50	549.45	49.95				0.05		
	4/21/2022	14:13	21-17	19	5.40	549.45	599.40	49.95				0.05		
	4/21/2022	14:26	17-13	18	5.40	599.40	649.35	49.95				0.05		
	4/21/2022	14:39	13-10	11	4.50	649.35	686.82	37.47				0.04		
21	4/21/2022	15:45	65-61	65	4.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	15:58	61-57	82	6.00	49.95	99.90	49.95				0.05		
	4/21/2022	16:13	57-53	54	5.50	99.90	149.85	49.95				0.05		
	4/22/2022	8:44	53-49	26	5.70	149.85	199.80	49.95				0.05		
	4/22/2022	8:57	49-45	26	5.50	199.80	249.75	49.95				0.05		
	4/22/2022	9:10	45-41	27	5.40	249.75	299.70	49.95				0.05		
	4/22/2022	9:24	41-37	46	4.60	299.70	349.65	49.95				0.05		
	4/22/2022	9:37	37-33	21	5.20	349.65	399.60	49.95				0.05		
	4/22/2022	10:11	33-29	25	4.90	399.60	449.55	49.95				0.05		
	4/22/2022	10:24	29-25	15	4.70	449.55	499.50	49.95				0.05		
	4/22/2022	10:40	25-21	16	4.50	499.50	549.45	49.95				0.05		
	4/22/2022	10:54	21-17	22	5.90	549.45	599.40	49.95				0.05		
	4/22/2022	11:07	17-13	23	6.10	599.40	649.35	49.95				0.05		
	4/22/2022	11:19	13-10	22	6.00	649.35	686.82	37.47				0.04		
22	4/21/2022	15:45	65-61	81	3.40	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	15:58	61-57	137	6.50	49.95	99.90	49.95				0.05		
	4/21/2022	16:14	57-53	64	5.60	99.90	149.85	49.95				0.05		
	4/22/2022	8:44	53-49	65	5.40	149.85	199.80	49.95				0.05		
	4/22/2022	8:57	49-45	39	4.80	199.80	249.75	49.95				0.05		
	4/22/2022	9:10	45-41	76	5.00	249.75	299.70	49.95				0.05		
	4/22/2022	9:24	41-37	91	5.00	299.70	349.65	49.95				0.05		
	4/22/2022	9:37	37-33	65	5.30	349.65	399.60	49.95				0.05		
	4/22/2022	10:11	33-29	82	5.20	399.60	449.55	49.95				0.05		
	4/22/2022	10:24	29-25	97	5.00	449.55	499.50	49.95				0.05		
	4/22/2022	10:39	25-21	125	4.50	499.50	549.45	49.95				0.05		
	4/22/2022	10:54	21-17	100	3.80	549.45	599.40	49.95				0.05		
	4/22/2022	11:07	17-13	125	3.90	599.40	649.35	49.95				0.05		
	4/22/2022	11:19	13-10	125	3.70	649.35	686.82	37.47				0.04		
23	4/21/2022	15:45	65-61	99	3.50	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	15:58	61-57	93	4.60	49.95	99.90	49.95				0.05		
	4/21/2022	16:14	57-53	82	4.80	99.90	149.85	49.95				0.05		
	4/22/2022	8:44	53-49	57	4.10	149.85	199.80	49.95				0.05		
	4/22/2022	8:57	49-45	38	5.80	199.80	249.75	49.95				0.05		
	4/22/2022	9:10	45-41	41	5.80	249.75	299.70	49.95				0.05		
	4/22/2022	9:24	41-37	34	5.10	299.70	349.65	49.95				0.05		
	4/22/2022	9:37	37-33	50	6.60	349.65	399.60	49.95				0.05		
	4/22/2022	10:11	33-29	47	6.30	399.60	449.55	49.95				0.05		
	4/22/2022	10:24	29-25	29	5.00	449.55	499.50	49.95				0.05		
	4/22/2022	10:40	25-21	72	6.70	499.50	549.45	49.95				0.05		
	4/22/2022	10:54	21-17	40	5.90	549.45	599.40	49.95				0.05		
	4/22/2022	11:07	17-13	41	6.40	599.40	649.35	49.95				0.05		
	4/22/2022	11:19	13-10	39	6.20	649.35	686.82	37.47				0.04		
24	4/21/2022	15:45	65-61	99	3.20	0.00	49.95	49.95	687	275	206	0.05		4'-Drop Down Screen
	4/21/2022	15:58	61-57	101	4.00	49.95	99.90	49.95				0.05		
	4/21/2022	16:14	57-53	30	5.20	99.90	149.85	49.95				0.05		
	4/22/2022	8:44	53-49	72	4.90	149.85	199.80	49.95				0.05		
	4/22/2022	8:57	49-45	24	5.30	199.80	249.75	49.95				0.05		
	4/22/2022	9:10	45-41	11	3.10	249.75	299.70	49.95				0.05		
	4/22/2022	9:24	41-37	17	4.70	299.70	349.65	49.95				0.05		
	4/22/2022	9:37	37-33	28	3.80	349.65	399.60	49.95				0.05		
	4/22/2022	10:11	33-29	18	3.90	399.60	449.55	49.95				0.05		
	4/22/2022	10:25	29-25	19	5.10	449.55	499.50	49.95				0.05		
	4/22/2022	10:40	25-21	12	4.10	499.50	549.45	49.95				0.05		
	4/22/2022	10:54	21-17	9	3.90	549.45	599.40	49.95				0.05		
	4/22/2022	11:07	17-13	17	4.00	599.40	649.35	49.95				0.05		
	4/22/2022	11:19	13-10	12	4.00	649.35	686.82	37.47				0.04		
25	4/22/2022	12:21	65-61	63	4.20	0.00	49.95	49.95	687	275	206	0.05		Expendable Tip
	4/22/2022	12:40	61-57	107	5.10	49.95	99.90	49.95				0.05		
	4/22/2022	12:58	57-53	104	3.60	99.90	149.85	49.95				0.05		
	4/22/2022	13:17	53-49	104	3.40	149.85	175.00	25.15				0.05	Low flow at high pressures. Redriving with expendable tip and redistributing volume to next interval	
	4/22/2022	13:49	49-46	82	3.70	175.00	214.37	39.37				0.04		
	4/22/2022	14:01	46-43	65	4.80	214.37	253.74	39.37				0.04		
	4/22/2022	14:16	43-40	26	5.80	253.74	293.11	39.37				0.04		
	4/22/2022	14:28	40-37	80	3.40	293.11	332.48	39.37				0.04		
	4/22/2022	14:47	37-34	48	5.90	332.48	371.85	39.37				0.04		
	4/22/2022	14:59	34-31	33	4.50	371.85	411.22	39.37				0.04		
	4/22/2022	15:12	31-29	36	4.70	411.22	450.59	39.37				0.04		
	4/22/2022	12:25	29-26	84	10.90	450.59	489.96	39.37				0.04		
	4/22/2022	12:33	26-23	32	6.80	489.96	529.33	39.37				0.04		
	4/22/2022	15:42	23-20	38	6.70	529.33	568.70	39.37				0.04		
	4/22/2022	15:49	20-17	110	12.50	568.70	608.07	39.37				0.04		
	4/22/2022	15:54	17-14	120	12.10	608.07	647.44	39.37				0.04		
	4/22/2022	16:01	14-10	45	7.10	647.44	686.82	39.38				0.04		

26	4/22/2022	12:21	65-61	41	3.60	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/22/2022	12:40	61-57	83	5.20	49.95	99.90	49.95				0.05		
	4/22/2022	12:58	57-53	57	4.80	99.90	149.85	49.95				0.05		
	4/22/2022	13:17	53-49	19	4.30	149.85	199.80	49.95				0.05		
	4/22/2022	13:33	49-45	39	5.90	199.80	249.75	49.95				0.05		
	4/22/2022	13:49	45-41	24	4.50	249.75	299.70	49.95				0.05		
	4/22/2022	14:01	41-37	30	5.20	299.70	349.65	49.95				0.05		
	4/22/2022	14:16	37-33	26	5.00	349.65	399.60	49.95				0.05		
	4/22/2022	14:28	33-29	27	5.20	399.60	449.55	49.95				0.05		
	4/22/2022	14:47	29-25	28	5.30	449.55	499.50	49.95				0.05		
	4/22/2022	14:59	25-21	32	5.60	499.50	549.45	49.95				0.05		
	4/22/2022	15:18	21-17	25	5.00	549.45	599.40	49.95				0.05		
	4/22/2022	15:39	17-13	29	5.50	599.40	649.35	49.95				0.05		
	4/22/2022	15:42	13-10	37	5.50	649.35	686.82	37.47				0.04		
27	4/22/2022	12:21	65-61	115	2.00	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/22/2022	12:40	61-57	86	3.40	49.95	99.90	49.95				0.05		
	4/22/2022	12:58	57-53	101	7.70	99.90	149.85	49.95				0.05		
	4/22/2022	13:17	53-49	34	6.10	149.85	199.80	49.95				0.05		
	4/22/2022	13:33	49-45	39	6.90	199.80	249.75	49.95				0.05		
	4/22/2022	13:49	45-41	24	4.30	249.75	299.70	49.95				0.05		
	4/22/2022	14:01	41-37	46	6.90	299.70	349.65	49.95				0.05		
	4/22/2022	14:16	37-33	25	5.40	349.65	399.60	49.95				0.05		
	4/22/2022	14:28	33-29	35	6.40	399.60	449.55	49.95				0.05		
	4/22/2022	14:47	29-25	27	5.20	449.55	499.50	49.95				0.05		
	4/22/2022	14:59	25-21	33	5.90	499.50	549.45	49.95				0.05		
	4/22/2022	15:18	21-17	26	5.20	549.45	599.40	49.95				0.05		
	4/22/2022	15:39	17-13	20	3.60	599.40	649.35	49.95				0.05		
	4/22/2022	15:42	13-10	32	4.00	649.35	686.82	37.47				0.04		
28	4/22/2022	12:21	65-61	115	3.30	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/22/2022	12:40	61-57	87	5.20	49.95	99.90	49.95				0.05		
	4/22/2022	12:58	57-53	45	3.30	99.90	149.85	49.95				0.05		
	4/22/2022	13:17	53-49	30	5.70	149.85	199.80	49.95				0.05		
	4/22/2022	13:33	49-45	39	7.10	199.80	249.75	49.95				0.05		
	4/22/2022	13:49	45-41	54	8.00	249.75	299.70	49.95				0.05		
	4/22/2022	14:01	41-37	26	4.40	299.70	349.65	49.95				0.05		
	4/22/2022	14:16	37-33	25	5.50	349.65	399.60	49.95				0.05		
	4/22/2022	14:28	33-29	24	5.40	399.60	449.55	49.95				0.05		
	4/22/2022	14:47	29-25	13	4.10	449.55	499.50	49.95				0.05		
	4/22/2022	14:59	25-21	33	7.00	499.50	549.45	49.95				0.05		
	4/22/2022	15:18	21-17	26	6.20	549.45	599.40	49.95				0.05		
	4/22/2022	15:39	17-13	29	6.00	599.40	649.35	49.95				0.05		
	4/22/2022	15:42	13-10	38	5.90	649.35	686.82	37.47				0.04		
29	4/25/2022	10:27	65-61	76	4.40	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/25/2022	10:43	61-57	109	4.50	49.95	99.90	49.95				0.05		
	4/25/2022	10:59	57-53	85	5.20	99.90	149.85	49.95				0.05		
	4/25/2022	11:23	53-49	110	6.90	149.85	199.80	49.95				0.05		
	4/25/2022	11:39	49-45	84	6.40	199.80	249.75	49.95				0.05		
	4/25/2022	11:51	45-41	53	8.00	249.75	299.70	49.95				0.05		
	4/25/2022	12:03	41-37	48	8.10	299.70	349.65	49.95				0.05		
	4/25/2022	12:14	37-33	49	8.00	349.65	399.60	49.95				0.05		
	4/25/2022	12:25	33-29	32	6.70	399.60	449.55	49.95				0.05		
	4/25/2022	12:37	29-25	50	8.50	449.55	499.50	49.95				0.05		
	4/25/2022	12:50	25-21	52	8.80	499.50	549.45	49.95				0.05		
	4/25/2022	13:03	21-17	32	6.80	549.45	599.40	49.95				0.05		
	4/25/2022	13:17	17-13	48	8.40	599.40	649.35	49.95				0.05		
	4/25/2022	13:32	13-10	34	6.90	649.35	686.82	37.47				0.04		
30	4/25/2022	10:29	65-61	120	4.20	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/25/2022	10:43	61-57	120	4.60	49.95	99.90	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/25/2022	10:59	57-53	131	6.30	99.90	149.85	49.95				0.05		
	4/25/2022	11:23	53-49	93	6.00	149.85	199.80	49.95				0.05		
	4/25/2022	11:39	49-45	120	7.10	199.80	249.75	49.95				0.05		
	4/25/2022	11:51	45-41	69	7.50	249.75	299.70	49.95				0.05		
	4/25/2022	12:03	41-37	51	6.80	299.70	349.65	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/25/2022	12:14	37-33	50	6.70	349.65	399.60	49.95				0.05		
	4/25/2022	12:25	33-29	68	6.50	399.60	449.55	49.95				0.05		
	4/25/2022	12:37	29-25	57	5.40	449.55	499.50	49.95				0.05		
	4/25/2022	12:50	25-21	105	5.70	499.50	549.45	49.95				0.05		
	4/25/2022	13:03	21-17	125	6.10	549.45	599.40	49.95				0.05		
	4/25/2022	13:17	17-13	107	4.30	599.40	649.35	49.95				0.05	Fair amount of surfacing out of the bore. Lowered flow and continued.	
	4/25/2022	13:32	13-10	77	2.90	649.35	686.82	37.47				0.04		
31	4/25/2022	10:29	65-61	117	5.8	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/25/2022	10:43	61-57	106	6.50	49.95	99.90	49.95				0.05		
	4/25/2022	10:59	57-53	115	6.90	99.90	149.85	49.95				0.05		
	4/25/2022	11:23	53-49	92	7.00	149.85	199.80	49.95				0.05		
	4/25/2022	11:39	49-45	87	7.50	199.80	249.75	49.95				0.05		
	4/25/2022	11:51	45-41	71	6.40	249.75	299.70	49.95				0.05	Fair amount of backpressure after completion of the interval.	
	4/25/2022	12:03	41-37	52	7.00	299.70	349.65	49.95				0.05		
	4/25/2022	12:14	37-33	51	7.30	349.65	399.60	49.95				0.05		
	4/25/2022	12:25	33-29	64	8.40	399.60	449.55	49.95				0.05		
	4/25/2022	12:37	29-25	60	7.50	449.55	499.50	49.95				0.05		
	4/25/2022	12:50	25-21	40	7.10	499.50	549.45	49.95				0.05		
	4/25/2022	13:03	21-17	55	8.20	549.45	599.40	49.95				0.05		
	4/25/2022	13:17	17-13	66	8.70	599.40	649.35	49.95				0.05		
	4/25/2022	13:32	13-10	45	7.00	649.35	686.82	37.47				0.04		
32	4/25/2022	15:05	65-61	72	5.10	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/25/2022	15:25	61-57	44	5.70	49.95	99.90	49.95				0.05		
	4/25/2022	15:39	57-53	77	7.20	99.90	149.85	49.95				0.05		
	4/25/2022	15:52	53-49	54	4.90	149.85	199.80	49.95				0.05		
	4/25/2022	16:04	49-45	54	7.30	199.80	249.75	49.95				0.05		
	4/25/2022	16:17	45-41	44	7.20	249.75	299.70	49.95				0.05		
	4/25/2022	16:27	41-37	52	7.60	299.70	349.65	49.95				0.05		
	4/25/2022	16:41	37-33	54	7.40	349.65	399.60	49.95				0.05		
	4/25/2022	16:55	33-29	48	6.80	399.60	449.55	49.95				0.05		
	4/26/2022	8:47	29-25	25	6.30	449.55	499.50	49.95				0.05		
	4/26/2022	9:01	25-21	58	7.00	499.50	549.45	49.95				0.05		
	4/26/2022	9:11	21-17	71	6.60	549.45	599.40	49.95				0.05		
	4/26/2022	9:24	17-13	70	7.20	599.40	649.35	49.95				0.05	Small amount of surfacing out of bore hole. Lowered flow and continued.	
	4/26/2022	9:39	13-10	48	5.70	649.35	686.82	37.47				0.04	Small amount of surfacing out of bore hole. Lowered flow and continued.	
33	4/25/2022	15:05	65-61	82	4.50	0.00	49.95	49.95	1936	774	580	0.05		4"-Drop Down Screen
	4/25/2022	15:25	61-57	77	6.60	49.95	99.90	49.95				0.05		
	4/25/2022	15:39	57-53	54	7.70	99.90	149.85	49.95				0.05		
	4/25/2022	15:52	53-49	66	6.80	149.85	199.80	49.95				0.05		
	4/25/2022	16:04	49-45	40	6.40	199.80	249.75	49.95				0.05		
	4/25/2022	16:17	45-41	36	6.90	249.75	299.70	49.95				0.05		
	4/25/2022	16:27	41-37	49	8.20	299.70	349.65	49.95				0.05		
	4/25/2022	16:41	37-33	37	6.40	349.65	399.60	49.95				0.05		
	4/25/2022	16:55	33-29	49	7.70	399.60	440.00	40.40				0.05		
	4/26/2022	8:39	33-29	10	5.00	440.00	449.55	9.55				0.00		
	4/26/2022	8:47	29-25	20	5.20	449.55	499.50	49.95				0.05		
	4/26/2022	9:01	25-21	36	7.00	499.50	549.45	49.95				0.05		
	4/26/2022	9:11	21-17	41	7.60	549.45	599.40	49.95				0.05		
	4/26/2022	9:24	17-13	27	6.20	0.00	649.35	649.35				0.05		
	4/26/2022	9:39	13-10	48	8.00	0.00	686.82	686.82				0.04		
34	4/25/2022	15:05	65-61	132	3.50	0.00	49.95	49.95	687	275	206	0.05		4"-Drop Down Screen
	4/25/2022	15:25	61-57	104	4.20	49.95	99.90	49.95				0.05		
	4/25/2022	15:39	57-53	107	6.30	99.90	149.85	49.95				0.05		
	4/25/2022	15:52	53-49	109	7.20	149.85	199.80	49.95				0.05		
	4/25/2022	16:04	49-45	101	6.90	199.80	249.75	49.95				0.05		
	4/25/2022	16:17	45-41	89	6.70	249.75	299.70	49.95				0.05		
	4/25/2022	16:27	41-37	64	5.20	299.70	349.65	49.95				0.05		
	4/25/2022	16:41	37-33	85	7.20	349.65	399.60	49.95				0.05		
	4/25/2022	16:55	33-29	51	6.40	399.60	430.00	30.40				0.05		
	4/26/2022	8:39	33-29	10	4.70	430.00	449.55	19.55				0.00		
	4/26/2022	8:47	29-25	56	7.40	449.55	499.50	49.95				0.05		
	4/26/2022	9:01	25-21	58	7.70	499.50	549.45	49.95				0.05		
	4/26/2022	9:11	21-17	50	7.00	549.45	599.40	49.95				0.05		
	4/26/2022	9:24	17-13	79	7.80	599.40	649.35	49.95				0.05		
	4/26/2022	9:39	13-10	55	5.60	649.35	686.82	37.47				0.04		
35	4/26/2022	10:53	65-61	72	4.00	0.00	49.95	49.95	687	275	206	0.05	Small amount of surfacing out of bore hole. Lowered flow and continued.	4"-Drop Down Screen
	4/26/2022	11:11	61-57	64	6.30	49.95	99.90	49.95				0.05		
	4/26/2022	11:29	57-53	77	6.00	99.90	149.85	49.95				0.05		
	4/26/2022	11:44	53-49	89	8.20	149.85	199.80	49.95				0.05		
	4/26/2022	11:54	49-45	68	7.30	199.80	249.75	49.95				0.05		
	4/26/2022	12:05	45-41	76	8.60	249.75	299.70	49.95				0.05		
	4/26/2022	12:15	41-37	70	8.10	299.70	349.65	49.95				0.05		
	4/26/2022	12:26	37-33	54	5.78	349.65	399.60	49.95				0.05		
	4/26/2022	12:39	33-29	72	7.20	399.60	449.55	49.95				0.05		
	4/26/2022	12:51	29-25	60	7.50	449.55	499.50	49.95				0.05		
	4/26/2022	13:04	25-21	57	7.30	499.50	549.45	49.95				0.05		
	4/26/2022	13:18	21-17	69	7.40	549.45	599.40	49.95				0.05		
	4/26/2022	13:33	17-13	65	6.90	599.40	649.35	49.95				0.05		
	4/26/2022	13:44	13-10	68	6.10	649.35	686.82	37.47				0.04		
36	4/26/2022	10:53	65-61	117	3.10	0.00	27.00	27.00	687	275	206	0.05	High pressure with low flow and surfacing. Lifting up and redistributing to the next interval.	4"-Drop Down Screen
	4/26/2022	11:11	61-57	105	3.90	27.00	99.90	72.90				0.05	Small amount of surfacing out of bore hole. Lowered flow and continued.	
	4/26/2022	11:29	57-53	100	4.40	99.90	149.85	49.95				0.05		
	4/26/2022	11:44	53-49	95	7.10	149.85	199.80	49.95				0.05		
	4/26/2022	11:54	49-45	107	7.30	199.80	249.75	49.95				0.05		
	4/26/2022	12:05	45-41	104	7.10	249.75	299.70	49.95				0.05		
	4/26/2022	12:15	41-37	130	2.50	299.70	327.00	27.30				0.05	High pressures and low flow. Lifting to next interval and redistributing	
	4/26/2022	12:26	37-33	98	4.50	327.00	399.60	72.60				0.05		
	4/26/2022	12:39	33-29	138	4.80	399.60	449.55	49.95				0.05	High pressures and low flow. Heavy surfacing out of bore and within 2' of bore. Redriving with expendable tip.	
	4/26/2022	12:56	29-25	71	5.90	449.55	499.50	49.95				0.05		
	4/26/2022	13:04	25-21	58	7.40	499.50	549.45	49.95				0.05		
	4/26/2022	13:18	21-17	70	8.50	549.45	599.40	49.95				0.05		
	4/26/2022	13:33	17-13	64	8.00	599.40	649.35	49.95				0.05		
	4/26/2022	13:44	13-10	65	7.60	649.35	686.82	37.47				0.04		

Total Gallons:	Total Lbs. 3DME	Total Lbs. of ZVt	Total Litres of BDt
25974	9900	7412	26.82



LEGEND

- Deep Only Injection Point
- Monitoring wells
- Uninstalled wells

Prepared By: ***BD***

Figure 1 – Injection Map
Deep Only Central Barrier
Eastern Portion

Date Prepared: ***Apr 22***

REGENESIS®
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LEGEND

- Points completed
- Monitoring wells

Prepared By: *BD*

Figure 2 – Injection Map
Deep Only Central Barrier
Western Portion

Date Prepared: *Apr 22*

REGENESIS® REMEDIATION SERVICES
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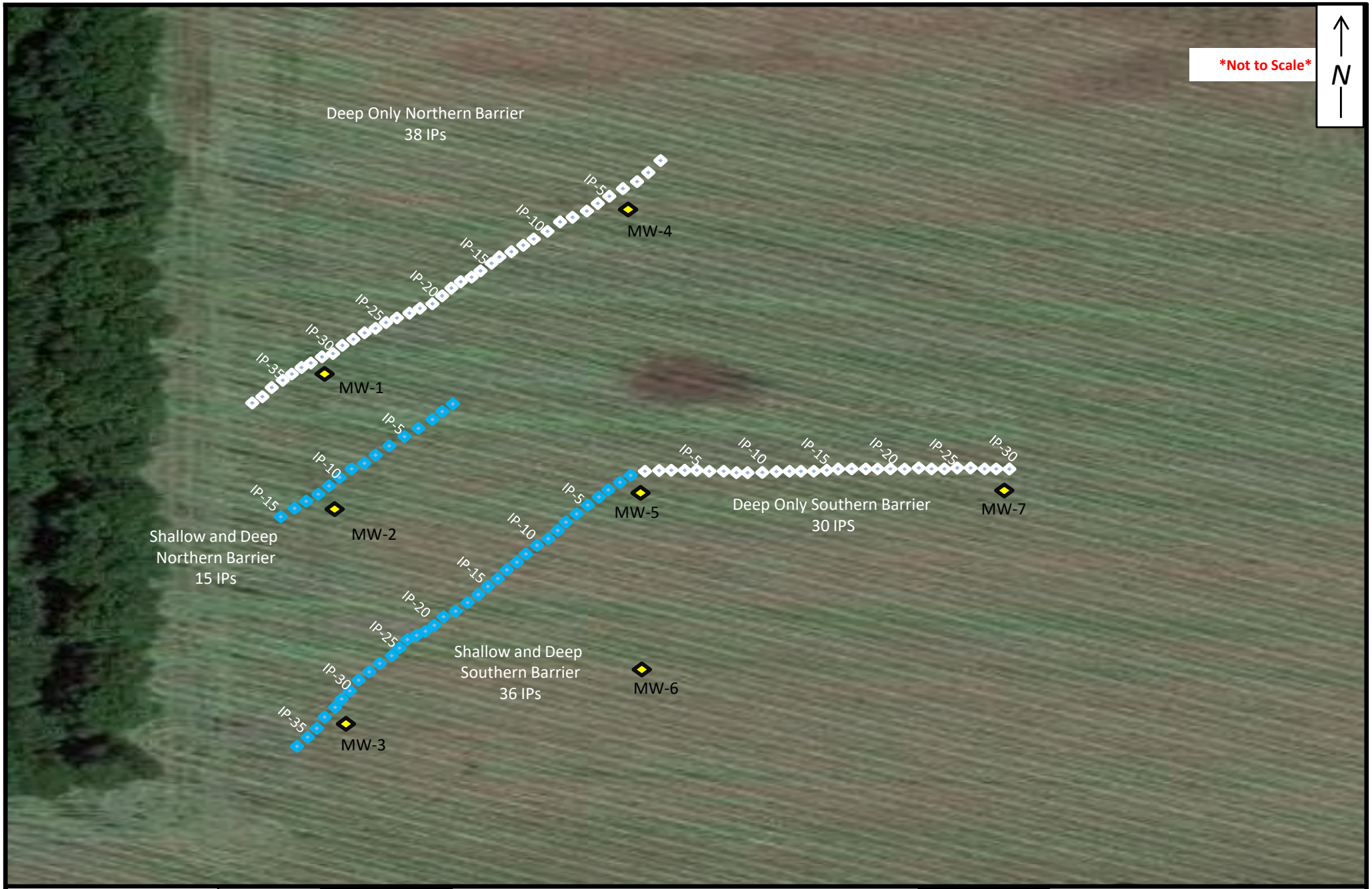

LEGEND

- Deep Only Barrier Points
- Shallow and Deep Barrier Points
- Uninstalled Wells

Prepared By: *BD*

Figure 3 – Injection Map
Western Barriers

Date Prepared: *Apr 2022*

REGENESIS®
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LEGEND

- Deep Only Injection Point
- Monitoring wells

Prepared By: *BD*

Figure 4 – Injection Map
Deep Only Northern Barrier

Date Prepared: *Apr 22*

REGENESIS® REMEDIATION SERVICES
Technology-Based Solutions for the Environment

Global Headquarters
1011 Calle Sombra
San Clemente, CA 92673
Ph: (949) 366-8000
Fax: (949) 366-8090

Photo Log

Photo 1: View looking west from the access road showing the site conditions prior to RRS arriving. (2/14/22)

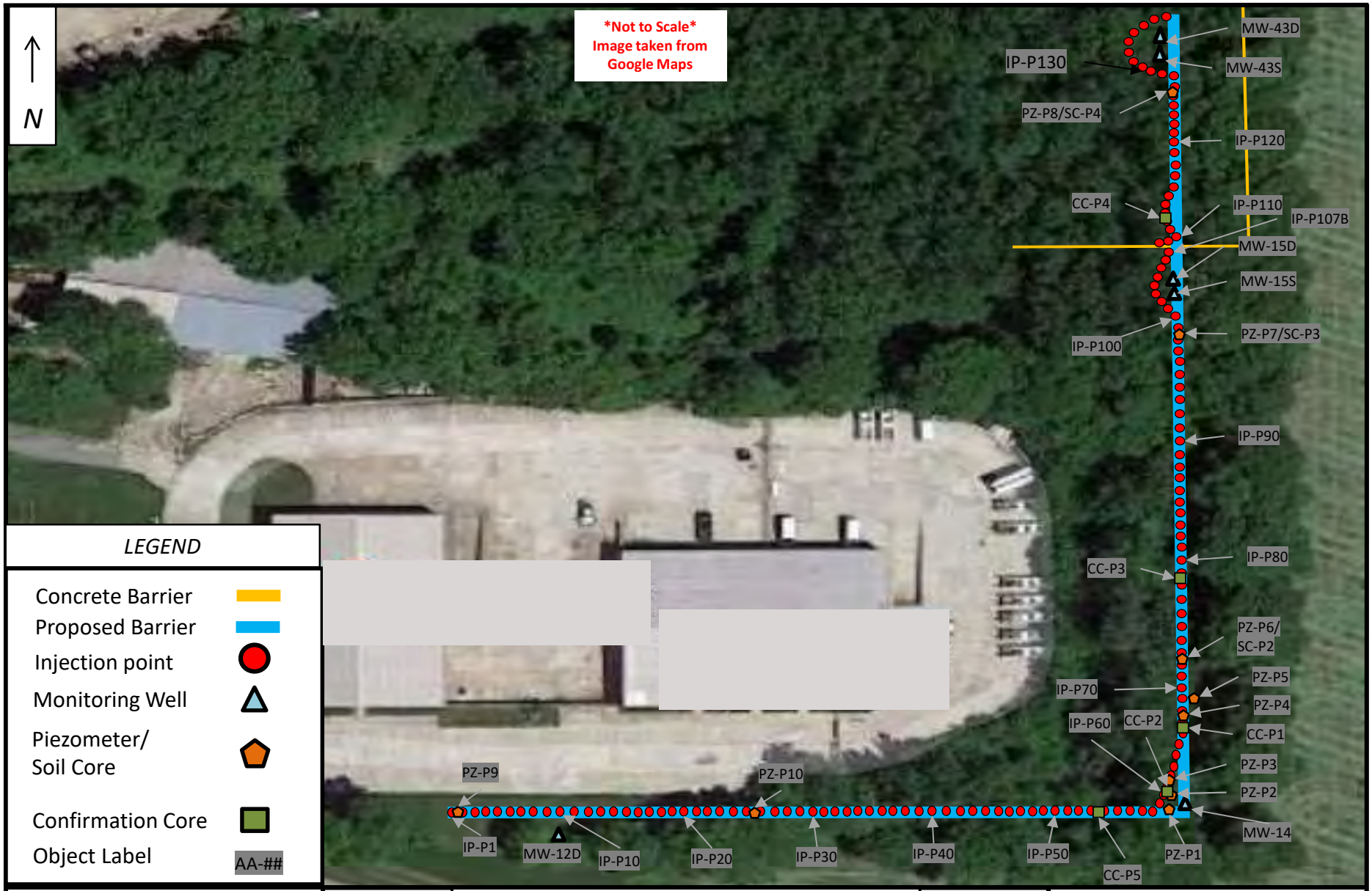
Photo 2: View looking East at injection points in Deep Only Southern PRB being completed. In view are Midway and Enviro-Dynamics personnel. (3/10/22)

Photo 3: View looking North showing RRS trailer setup and equipment. (3/31/22)

Photo 4: View looking West showing work being done at Deep and Shallow Northern PRB. (4/15/2022)

APPENDIX E

PERMEABLE REACTIVE BARRIER LOCATION FIGURES FROM RRS REPORTS



PLUME STOP
Liquid Activated Carbon

Prepared By:
JE

Figure 1 – Plumestop Barrier Injection Locations Map
Patriot – Houghland Canning
1130 Eastview Dr, Franklin, IN 46131

Date Prepared:
Oct 2021

REGENESIS
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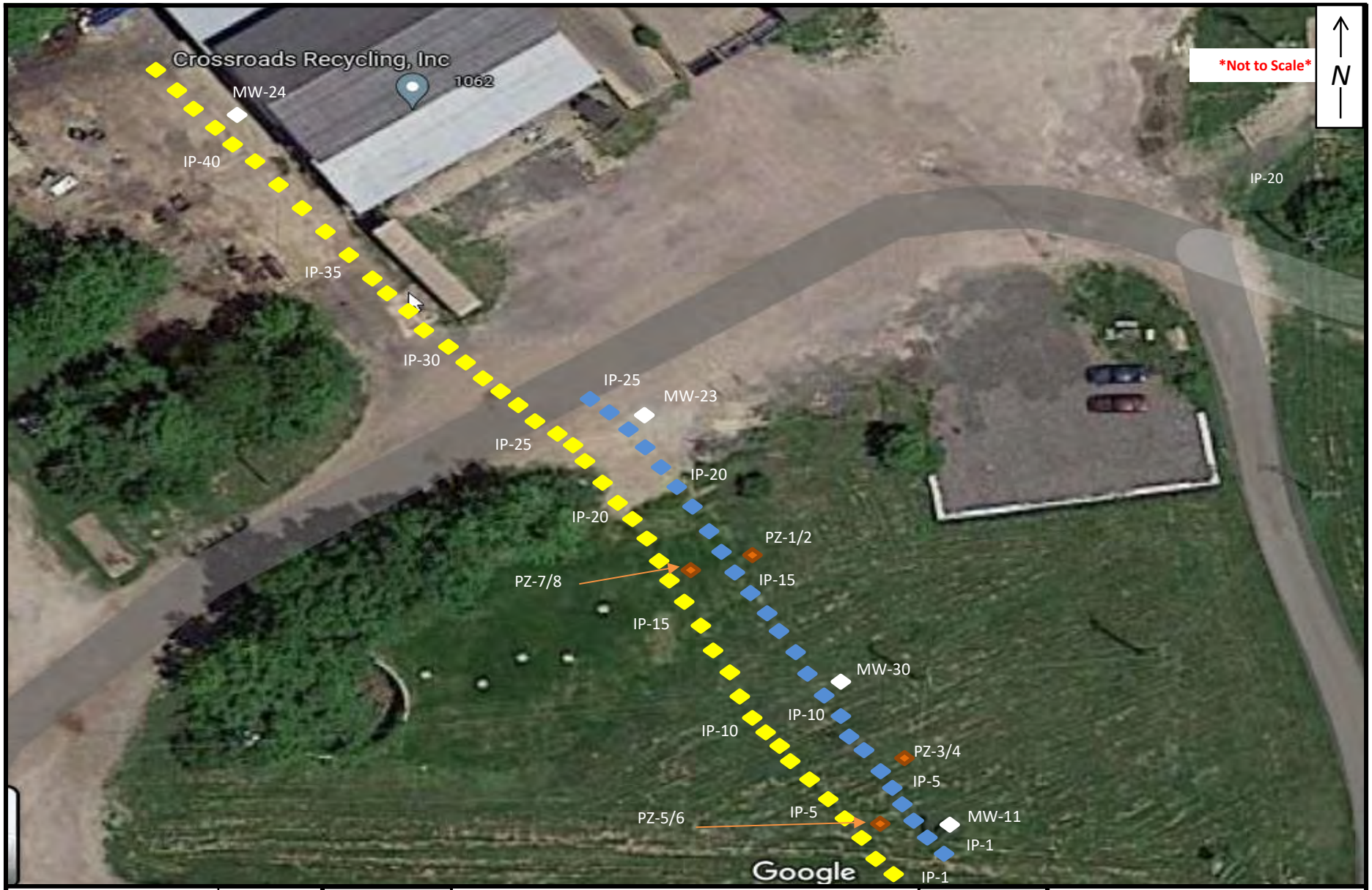

LEGEND

- PRB-1 Injection Point
- PRB-2 Injection Point
- Monitoring Well
- Temporary Well

Prepared By: *BD*

Figure 2 – Injection Map
Former Houghland Canning Facility
PRB 1 and 2

Date Prepared: *Sept 2021*

REGENESIS REMEDIATION SERVICES
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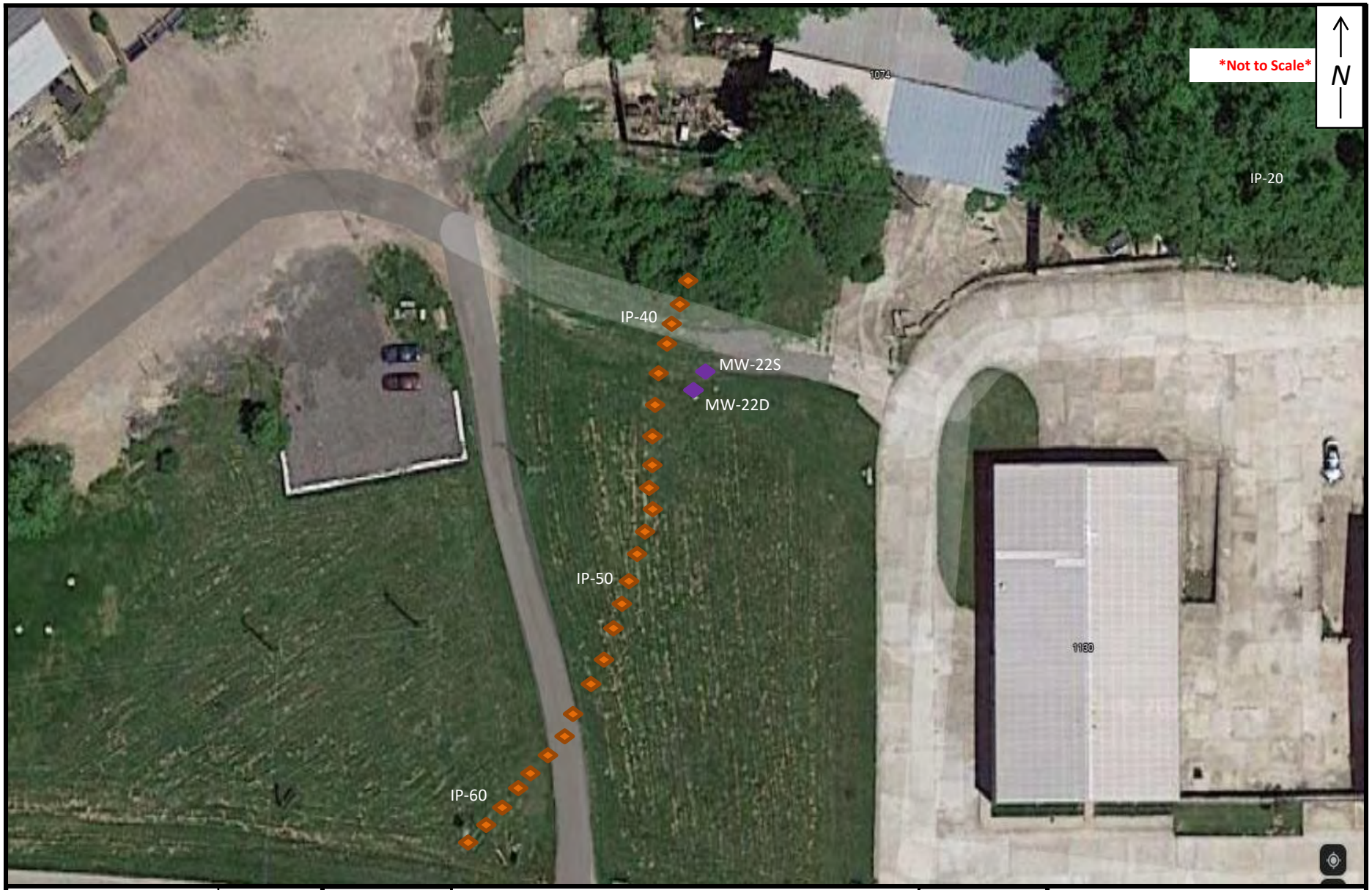
LEGEND	Prepared By: *BD*	**Figure 3 – Injection Map** **Former Houghland Canning Facility** **PRB 3**	Date Prepared: *Oct 2021*	REGENESIS REMEDIATION SERVICES Technology-Based Solutions for the Environment
Injection Point Monitoring Well				

LEGEND	Prepared By:	Figure 4 – Injection Map	Date Prepared:
Injection Point Monitoring Well	*BD*	Former Houghland Canning Facility PRB 4 Northern End	*Oct 2021*

REGENESIS REMEDIATION SERVICES
Technology-Based Solutions for the Environment



LEGEND

- Injection Point
- Monitoring Well

Prepared By: *BD*

Figure 5 – Injection Map
Former Houghland Canning Facility
PRB 4 Southern End

Date Prepared: *Oct 2021*

REGENESIS REMEDIATION SERVICES
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LEGEND

- Injection Point
- Monitoring Well

Prepared By: *BD*

Figure 6 – Injection Map
Former Houghland Canning Facility
PRB 4 Northern End

Date Prepared: *Oct 2021*

REGENESIS REMEDIATION SERVICES
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LEGEND

- Injection Point
- Monitoring Well

Prepared By: *BD*

Figure 7 – Injection Map
Former Houghland Canning Facility
PRB 4 Southern End

Date Prepared: *Oct 2021*

REGENESIS REMEDIATION SERVICES
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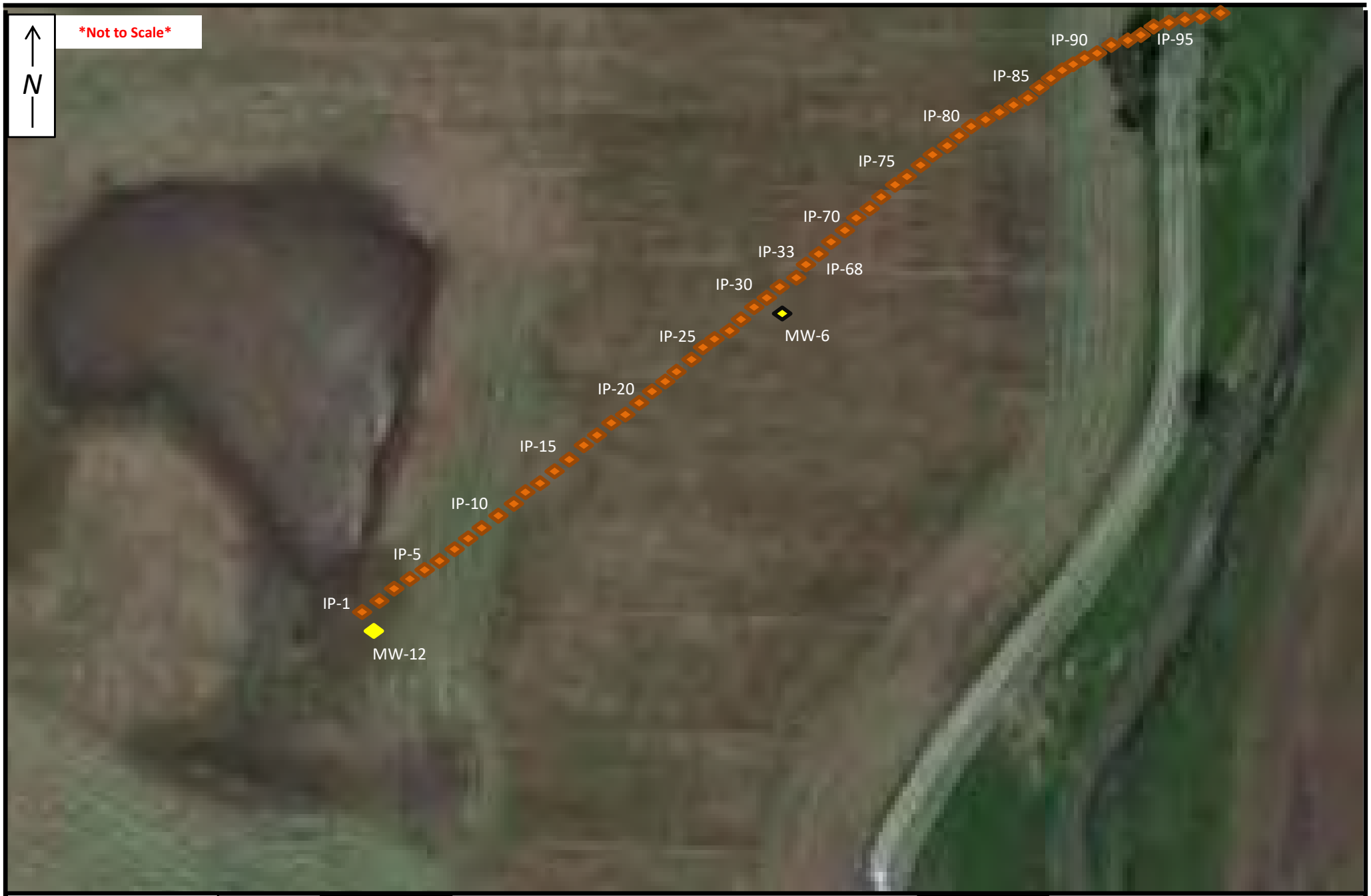


LEGEND

- Deep Only Injection Point
- Monitoring wells
- Uninstalled wells

Prepared By: ***BD***

Figure 1 – Injection Map
Deep Only Central Barrier
Eastern Portion

Date Prepared: ***Apr 22***

REGENESIS®
REMEDIATION SERVICES
Technology-Based Solutions for the Environment

LEGEND

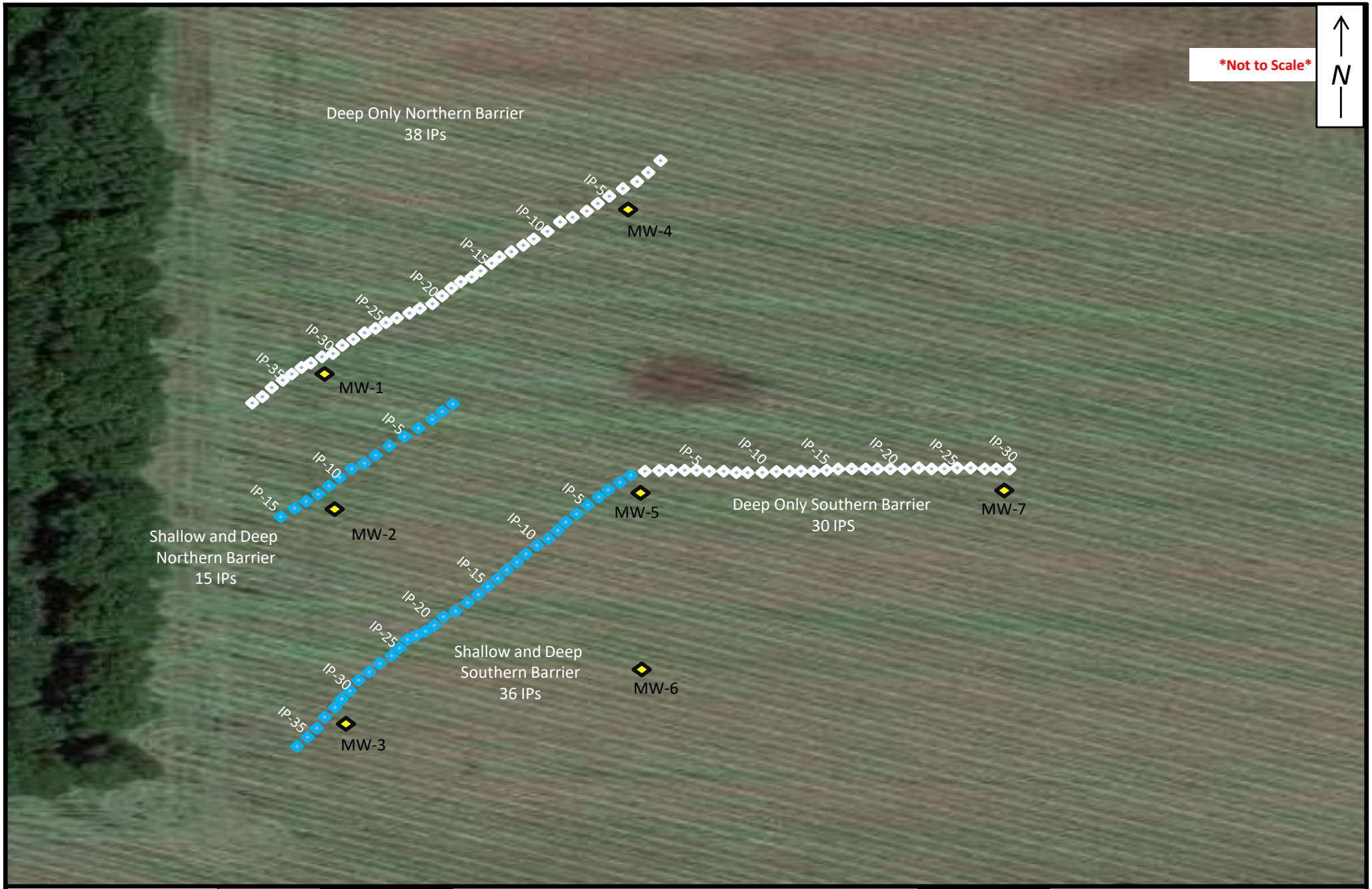
- Points completed
- Monitoring wells

Prepared By: *BD*

Figure 2 – Injection Map
Deep Only Central Barrier
Western Portion

Date Prepared: *Apr 22*

REGENESIS® REMEDIATION SERVICES
Technology-Based Solutions for the Environment



LEGEND

- Deep Only Barrier Points
- Shallow and Deep Barrier Points
- Uninstalled Wells

Prepared By: *BD*

Figure 3 – Injection Map
Western Barriers

Date Prepared: *Apr 2022*

REGENESIS®
REMEDIATION SERVICES
Technology-Based Solutions for the Environment

LEGEND

- Deep Only Injection Point
- Monitoring wells

Prepared By: *BD*

Figure 4 – Injection Map
Deep Only Northern Barrier

Date Prepared: *Apr 22*

REGENESIS® REMEDIATION SERVICES
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APPENDIX F

1Q2022 LOW FLOW SAMPLING LOGS

Low-Flow Test Report:

Test Date / Time: 3/15/2022 11:20:58 AM
Project: HRID 1Q2022 MW-11D
Operator Name: Sabrina Bailey

Location Name: HRID MW-11D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 13 ft** **Total Depth: 23 ft** **Initial Depth to Water: 6.04 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 15 ft** **Estimated Total Volume Pumped: 2600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 11:20 AM	00:00	7.09 pH	55.56 °F	600.19 µS/cm	0.15 mg/L	46.02 NTU	-112.6 mV	6.04 ft	200.00 ml/min
3/15/2022 11:21 AM	01:00	7.01 pH	55.10 °F	603.77 µS/cm	0.10 mg/L	44.13 NTU	-117.0 mV	6.04 ft	200.00 ml/min
3/15/2022 11:22 AM	02:00	7.06 pH	54.67 °F	606.03 µS/cm	0.09 mg/L	39.02 NTU	-124.5 mV	6.04 ft	200.00 ml/min
3/15/2022 11:23 AM	03:00	7.07 pH	54.64 °F	606.79 µS/cm	0.06 mg/L	38.04 NTU	-128.3 mV	6.04 ft	200.00 ml/min
3/15/2022 11:24 AM	04:00	7.08 pH	54.72 °F	611.75 µS/cm	0.05 mg/L	36.03 NTU	-131.0 mV	6.04 ft	200.00 ml/min
3/15/2022 11:25 AM	05:00	7.09 pH	54.86 °F	619.20 µS/cm	0.05 mg/L	29.53 NTU	-134.3 mV	6.04 ft	200.00 ml/min
3/15/2022 11:26 AM	06:00	7.11 pH	55.13 °F	623.64 µS/cm	0.04 mg/L	25.35 NTU	-138.3 mV	6.04 ft	200.00 ml/min
3/15/2022 11:27 AM	07:00	7.12 pH	55.49 °F	623.89 µS/cm	0.04 mg/L	21.78 NTU	-140.9 mV	6.04 ft	200.00 ml/min
3/15/2022 11:28 AM	08:00	7.14 pH	55.39 °F	624.36 µS/cm	0.06 mg/L	22.39 NTU	-142.5 mV	6.04 ft	200.00 ml/min
3/15/2022 11:29 AM	09:00	7.16 pH	55.11 °F	627.82 µS/cm	0.06 mg/L	19.97 NTU	-144.6 mV	6.04 ft	200.00 ml/min
3/15/2022 11:30 AM	10:00	7.17 pH	55.20 °F	631.25 µS/cm	0.05 mg/L	13.31 NTU	-146.8 mV	6.04 ft	200.00 ml/min
3/15/2022 11:31 AM	11:00	7.18 pH	55.41 °F	632.56 µS/cm	0.04 mg/L	10.86 NTU	-148.3 mV	6.04 ft	200.00 ml/min
3/15/2022 11:32 AM	12:00	7.19 pH	55.38 °F	634.22 µS/cm	0.04 mg/L	10.75 NTU	-149.9 mV	6.04 ft	200.00 ml/min
3/15/2022 11:33 AM	13:00	7.19 pH	55.73 °F	635.18 µS/cm	0.04 mg/L	10.27 NTU	-151.0 mV	6.04 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-11D	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/14/2022 10:51:43 AM
Project: HRID 1Q2022 MW-12
Operator Name: Sabrina Bailey

Location Name: HRID MW-12 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 5 ft** **Total Depth: 15.1 ft** **Initial Depth to Water: 7.76 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 11 ft** **Estimated Total Volume Pumped: 4000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:
MW-12

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/14/2022 10:51 AM	00:00	7.04 pH	51.63 °F	719.09 µS/cm	3.45 mg/L	1,957.7 NTU	203.9 mV	7.76 ft	200.00 ml/min
3/14/2022 10:52 AM	01:00	7.04 pH	51.97 °F	717.98 µS/cm	3.36 mg/L	1,756.4 NTU	203.5 mV	7.76 ft	200.00 ml/min
3/14/2022 10:53 AM	02:00	7.03 pH	52.09 °F	717.57 µS/cm	3.31 mg/L	1,414.7 NTU	203.9 mV	7.76 ft	200.00 ml/min
3/14/2022 10:54 AM	03:00	7.03 pH	52.16 °F	717.28 µS/cm	3.28 mg/L	1,216.2 NTU	204.4 mV	7.76 ft	200.00 ml/min
3/14/2022 10:55 AM	04:00	7.03 pH	52.27 °F	718.22 µS/cm	3.29 mg/L	976.66 NTU	204.8 mV	7.76 ft	200.00 ml/min
3/14/2022 10:56 AM	05:00	7.03 pH	52.14 °F	720.03 µS/cm	3.43 mg/L	831.81 NTU	204.8 mV	7.76 ft	200.00 ml/min
3/14/2022 10:57 AM	06:00	7.04 pH	52.00 °F	720.80 µS/cm	3.47 mg/L	675.20 NTU	204.7 mV	7.76 ft	200.00 ml/min
3/14/2022 10:58 AM	07:00	7.03 pH	52.06 °F	721.71 µS/cm	3.49 mg/L	635.12 NTU	205.2 mV	7.76 ft	200.00 ml/min
3/14/2022 10:59 AM	08:00	7.03 pH	52.12 °F	720.55 µS/cm	3.49 mg/L	563.54 NTU	205.2 mV	7.76 ft	200.00 ml/min
3/14/2022 11:00 AM	09:00	7.03 pH	52.04 °F	720.17 µS/cm	3.47 mg/L	479.01 NTU	205.0 mV	7.76 ft	200.00 ml/min
3/14/2022 11:01 AM	10:00	7.02 pH	52.04 °F	720.70 µS/cm	3.51 mg/L	425.21 NTU	205.5 mV	7.76 ft	200.00 ml/min
3/14/2022 11:02 AM	11:00	7.03 pH	52.02 °F	720.53 µS/cm	3.54 mg/L	395.79 NTU	205.4 mV	7.76 ft	200.00 ml/min
3/14/2022 11:03 AM	12:00	7.03 pH	52.08 °F	720.91 µS/cm	3.55 mg/L	328.45 NTU	205.1 mV	7.76 ft	200.00 ml/min
3/14/2022 11:04 AM	13:00	7.03 pH	52.10 °F	721.76 µS/cm	3.59 mg/L	267.59 NTU	205.1 mV	7.76 ft	200.00 ml/min
3/14/2022 11:05 AM	14:00	7.02 pH	52.11 °F	723.10 µS/cm	3.65 mg/L	226.57 NTU	205.2 mV	7.76 ft	200.00 ml/min

3/14/2022 11:06 AM	15:00	7.02 pH	52.05 °F	722.78 µS/cm	3.68 mg/L	193.59 NTU	205.0 mV	7.76 ft	200.00 ml/min
3/14/2022 11:07 AM	16:00	7.02 pH	51.98 °F	722.52 µS/cm	3.65 mg/L	177.03 NTU	204.9 mV	7.76 ft	200.00 ml/min
3/14/2022 11:08 AM	17:00	7.02 pH	51.94 °F	723.14 µS/cm	3.69 mg/L	139.44 NTU	204.4 mV	7.76 ft	200.00 ml/min
3/14/2022 11:09 AM	18:00	7.01 pH	51.98 °F	722.01 µS/cm	3.67 mg/L	108.07 NTU	204.5 mV	7.76 ft	200.00 ml/min
3/14/2022 11:10 AM	19:00	7.02 pH	52.01 °F	720.64 µS/cm	3.61 mg/L	112.72 NTU	203.7 mV	7.76 ft	200.00 ml/min
3/14/2022 11:11 AM	20:00	7.02 pH	52.03 °F	719.59 µS/cm	3.53 mg/L	90.61 NTU	203.4 mV	7.76 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-12	VOCs MW-12*

Low-Flow Test Report:

Test Date / Time: 3/14/2022 11:38:46 AM
Project: HRID 1Q2022 MW-12D
Operator Name: Sabrina Bailey

Location Name: HRID MW-12D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 18 ft** **Total Depth: 28 ft** **Initial Depth to Water: 8.19 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 18 ft** **Estimated Total Volume Pumped: 3200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/14/2022 11:38 AM	00:00	7.90 pH	54.85 °F	1,088.7 µS/cm	1.04 mg/L	250.85 NTU	-44.6 mV	8.19 ft	200.00 ml/min
3/14/2022 11:39 AM	01:00	7.10 pH	56.75 °F	3,693.4 µS/cm	0.02 mg/L	65.27 NTU	-153.0 mV	8.19 ft	200.00 ml/min
3/14/2022 11:40 AM	02:00	7.32 pH	57.03 °F	1,867.1 µS/cm	0.01 mg/L	204.59 NTU	-167.6 mV	8.19 ft	200.00 ml/min
3/14/2022 11:41 AM	03:00	7.58 pH	57.12 °F	1,194.6 µS/cm	0.01 mg/L	262.95 NTU	-185.1 mV	8.19 ft	200.00 ml/min
3/14/2022 11:42 AM	04:00	7.75 pH	57.05 °F	913.99 µS/cm	0.01 mg/L	228.79 NTU	-210.9 mV	8.19 ft	200.00 ml/min
3/14/2022 11:43 AM	05:00	7.89 pH	57.08 °F	800.90 µS/cm	0.01 mg/L	187.08 NTU	-238.1 mV	8.19 ft	200.00 ml/min
3/14/2022 11:44 AM	06:00	8.03 pH	57.16 °F	722.64 µS/cm	0.01 mg/L	149.20 NTU	-280.1 mV	8.19 ft	200.00 ml/min
3/14/2022 11:45 AM	07:00	8.16 pH	57.31 °F	675.85 µS/cm	0.00 mg/L	113.89 NTU	-317.4 mV	8.19 ft	200.00 ml/min
3/14/2022 11:46 AM	08:00	8.24 pH	57.43 °F	648.18 µS/cm	0.00 mg/L	87.31 NTU	-337.6 mV	8.19 ft	200.00 ml/min
3/14/2022 11:47 AM	09:00	8.25 pH	57.34 °F	640.20 µS/cm	0.00 mg/L	76.76 NTU	-346.1 mV	8.19 ft	200.00 ml/min
3/14/2022 11:48 AM	10:00	8.26 pH	57.26 °F	648.04 µS/cm	0.00 mg/L	76.09 NTU	-351.4 mV	8.19 ft	200.00 ml/min
3/14/2022 11:49 AM	11:00	8.29 pH	57.58 °F	647.27 µS/cm	0.00 mg/L	67.16 NTU	-360.4 mV	8.19 ft	200.00 ml/min
3/14/2022 11:50 AM	12:00	8.33 pH	57.57 °F	650.69 µS/cm	0.00 mg/L	60.92 NTU	-364.6 mV	8.19 ft	200.00 ml/min
3/14/2022 11:51 AM	13:00	8.30 pH	57.52 °F	666.44 µS/cm	0.00 mg/L	56.29 NTU	-364.5 mV	8.19 ft	200.00 ml/min
3/14/2022 11:52 AM	14:00	8.31 pH	57.55 °F	673.56 µS/cm	0.00 mg/L	50.04 NTU	-369.5 mV	8.19 ft	200.00 ml/min

3/14/2022 11:53 AM	15:00	8.29 pH	57.52 °F	686.08 µS/cm	0.00 mg/L	44.75 NTU	-371.1 mV	8.19 ft	200.00 ml/min
3/14/2022 11:54 AM	16:00	8.29 pH	57.57 °F	695.07 µS/cm	0.00 mg/L	44.08 NTU	-374.2 mV	8.19 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-12D	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/16/2022 9:59:41 AM
Project: HRID 1Q2022 MW-14
Operator Name: Danielle Richardson

Location Name: HRID MW-14 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 10 ft** **Total Depth: 20 ft** **Initial Depth to Water: 7.97 ft**	**Pump Type: SS Hurricane Pro** **Tubing Type: Poly** **Pump Intake From TOC: 14 ft** **Estimated Total Volume Pumped: 3660 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/16/2022 9:59 AM	00:00	7.37 pH	44.67 °F	214.55 µS/cm	0.00 mg/L	8.56 NTU	-12.4 mV	7.97 ft	200.00 ml/min
3/16/2022 10:00 AM	01:00	7.33 pH	45.15 °F	219.67 µS/cm	0.00 mg/L	10.41 NTU	-14.2 mV	7.97 ft	200.00 ml/min
3/16/2022 10:01 AM	02:00	7.32 pH	45.11 °F	219.27 µS/cm	0.00 mg/L	7.50 NTU	-17.1 mV	7.97 ft	200.00 ml/min
3/16/2022 10:02 AM	03:00	7.32 pH	45.38 °F	218.22 µS/cm	0.00 mg/L	8.52 NTU	-19.3 mV	7.97 ft	200.00 ml/min
3/16/2022 10:03 AM	04:00	7.31 pH	45.87 °F	217.51 µS/cm	0.00 mg/L	4.46 NTU	-19.4 mV	7.97 ft	200.00 ml/min
3/16/2022 10:04 AM	05:00	7.30 pH	46.64 °F	217.68 µS/cm	0.00 mg/L	5.84 NTU	-20.7 mV	7.97 ft	200.00 ml/min
3/16/2022 10:05 AM	05:30	7.29 pH	47.37 °F	217.69 µS/cm	0.00 mg/L	4.85 NTU	-21.9 mV	7.97 ft	200.00 ml/min
3/16/2022 10:05 AM	06:18	7.28 pH	47.41 °F	217.77 µS/cm	0.01 mg/L	5.98 NTU	-22.0 mV	7.97 ft	200.00 ml/min
3/16/2022 10:06 AM	07:18	7.29 pH	45.97 °F	217.29 µS/cm	0.03 mg/L	9.53 NTU	-25.2 mV	7.97 ft	200.00 ml/min
3/16/2022 10:07 AM	08:18	7.28 pH	46.23 °F	221.45 µS/cm	0.00 mg/L	7.52 NTU	-27.7 mV	7.97 ft	200.00 ml/min
3/16/2022 10:08 AM	09:18	7.29 pH	46.01 °F	221.18 µS/cm	0.00 mg/L	5.09 NTU	-29.5 mV	7.97 ft	200.00 ml/min
3/16/2022 10:09 AM	10:18	7.28 pH	46.09 °F	222.05 µS/cm	0.00 mg/L	5.45 NTU	-30.1 mV	7.97 ft	200.00 ml/min
3/16/2022 10:10 AM	11:18	7.28 pH	46.74 °F	221.69 µS/cm	0.01 mg/L	6.35 NTU	-31.0 mV	7.97 ft	200.00 ml/min
3/16/2022 10:11 AM	12:18	7.28 pH	45.99 °F	221.28 µS/cm	0.03 mg/L	10.92 NTU	-32.9 mV	7.97 ft	200.00 ml/min
3/16/2022 10:12 AM	13:18	7.28 pH	46.07 °F	223.03 µS/cm	0.05 mg/L	12.38 NTU	-34.1 mV	7.97 ft	200.00 ml/min

3/16/2022 10:13 AM	14:18	7.28 pH	46.20 °F	222.47 µS/cm	0.04 mg/L	8.78 NTU	-35.1 mV	7.97 ft	200.00 ml/min
3/16/2022 10:14 AM	15:18	7.28 pH	46.09 °F	223.15 µS/cm	0.04 mg/L	7.82 NTU	-36.8 mV	7.97 ft	200.00 ml/min
3/16/2022 10:15 AM	16:18	7.28 pH	46.19 °F	223.62 µS/cm	0.03 mg/L	6.60 NTU	-37.4 mV	7.97 ft	200.00 ml/min
3/16/2022 10:16 AM	17:18	7.29 pH	46.08 °F	221.93 µS/cm	0.03 mg/L	6.46 NTU	-38.7 mV	7.97 ft	200.00 ml/min
3/16/2022 10:17 AM	18:18	7.29 pH	46.01 °F	222.64 µS/cm	0.03 mg/L	4.90 NTU	-39.6 mV	7.97 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-14	VOCs

Low-Flow Test Report:

Test Date / Time: 3/16/2022 9:11:08 AM
Project: HRID 1Q2022 MW-14D
Operator Name: Danielle Richardson

Location Name: HRID MW-14D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 23 ft** **Total Depth: 33 ft** **Initial Depth to Water: 10.79 ft**	**Pump Type: SS Hurricane Pro** **Tubing Type: Poly** **Pump Intake From TOC: 22 ft** **Estimated Total Volume Pumped: 3000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3	+/- 3 %	+/- 10	+/- 10	+/- 10		
3/16/2022 9:11 AM	00:00	6.69 pH	52.60 °F	456.68 µS/cm	0.97 mg/L	709.58 NTU	48.8 mV	10.79 ft	200.00 ml/min
3/16/2022 9:12 AM	01:00	6.66 pH	53.11 °F	460.21 µS/cm	0.36 mg/L	698.58 NTU	46.1 mV	10.79 ft	200.00 ml/min
3/16/2022 9:13 AM	02:00	6.60 pH	54.69 °F	0.07 µS/cm	8.93 mg/L	28.10 NTU	69.3 mV	10.79 ft	200.00 ml/min
3/16/2022 9:14 AM	03:00	6.72 pH	50.74 °F	455.65 µS/cm	2.86 mg/L	886.46 NTU	53.6 mV	10.79 ft	200.00 ml/min
3/16/2022 9:15 AM	04:00	6.70 pH	53.55 °F	461.30 µS/cm	0.32 mg/L	1,371.9 NTU	45.4 mV	10.79 ft	200.00 ml/min
3/16/2022 9:16 AM	05:00	6.70 pH	54.03 °F	460.03 µS/cm	0.11 mg/L	1,774.4 NTU	44.9 mV	10.79 ft	200.00 ml/min
3/16/2022 9:17 AM	06:00	6.71 pH	53.56 °F	460.67 µS/cm	0.06 mg/L	2,131.8 NTU	34.8 mV	10.79 ft	200.00 ml/min
3/16/2022 9:18 AM	07:00	6.70 pH	54.33 °F	460.03 µS/cm	0.02 mg/L	1,703.5 NTU	29.5 mV	10.79 ft	200.00 ml/min
3/16/2022 9:19 AM	08:00	6.70 pH	54.23 °F	459.83 µS/cm	0.00 mg/L	1,244.3 NTU	24.4 mV	10.79 ft	200.00 ml/min
3/16/2022 9:20 AM	09:00	6.70 pH	54.55 °F	459.94 µS/cm	0.00 mg/L	677.57 NTU	21.9 mV	10.79 ft	200.00 ml/min
3/16/2022 9:21 AM	10:00	6.70 pH	54.81 °F	459.46 µS/cm	0.00 mg/L	294.77 NTU	18.1 mV	10.79 ft	200.00 ml/min
3/16/2022 9:22 AM	11:00	6.69 pH	54.90 °F	459.11 µS/cm	0.00 mg/L	177.60 NTU	15.1 mV	10.79 ft	200.00 ml/min
3/16/2022 9:23 AM	12:00	6.69 pH	54.92 °F	458.70 µS/cm	0.00 mg/L	93.31 NTU	11.7 mV	10.79 ft	200.00 ml/min
3/16/2022 9:24 AM	13:00	6.69 pH	54.85 °F	458.79 µS/cm	0.00 mg/L	51.19 NTU	10.1 mV	10.79 ft	200.00 ml/min
3/16/2022 9:25 AM	14:00	6.69 pH	54.95 °F	459.11 µS/cm	0.00 mg/L	42.76 NTU	8.6 mV	10.79 ft	200.00 ml/min

3/16/2022 9:26 AM	15:00	6.70 pH	54.88 °F	458.82 µS/cm	0.00 mg/L	49.85 NTU	6.3 mV	10.79 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-14D	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/16/2022 12:06:01 PM
Project: HRID 1Q2022 MW-15
Operator Name: Danielle Richardson

Location Name: HRID MW-15 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 11 ft** **Total Depth: 21 ft** **Initial Depth to Water: 11.2 ft**	**Pump Type: SS Hurricane Pro** **Tubing Type: Poly** **Pump Intake From TOC: 16 ft** **Estimated Total Volume Pumped: 5355 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/16/2022 12:06 PM	00:00	7.06 pH	52.40 °F	384.81 µS/cm	5.43 mg/L	168.92 NTU	77.0 mV	11.20 ft	300.00 ml/min
3/16/2022 12:06 PM	00:51	7.07 pH	52.42 °F	384.00 µS/cm	5.20 mg/L	147.87 NTU	75.9 mV	11.20 ft	300.00 ml/min
3/16/2022 12:07 PM	01:51	7.02 pH	53.27 °F	385.88 µS/cm	5.10 mg/L	116.94 NTU	76.1 mV	11.20 ft	300.00 ml/min
3/16/2022 12:08 PM	02:51	7.01 pH	53.51 °F	386.22 µS/cm	5.01 mg/L	93.99 NTU	76.7 mV	11.20 ft	300.00 ml/min
3/16/2022 12:09 PM	03:51	6.98 pH	54.86 °F	386.74 µS/cm	5.00 mg/L	88.93 NTU	77.0 mV	11.20 ft	300.00 ml/min
3/16/2022 12:10 PM	04:51	6.96 pH	55.71 °F	387.42 µS/cm	5.00 mg/L	101.44 NTU	77.0 mV	11.20 ft	300.00 ml/min
3/16/2022 12:11 PM	05:51	6.98 pH	56.67 °F	339.91 µS/cm	5.36 mg/L	86.44 NTU	75.7 mV	11.20 ft	300.00 ml/min
3/16/2022 12:12 PM	06:51	6.98 pH	53.47 °F	383.42 µS/cm	4.64 mg/L	71.06 NTU	75.5 mV	11.20 ft	300.00 ml/min
3/16/2022 12:13 PM	07:51	6.98 pH	54.00 °F	380.98 µS/cm	4.31 mg/L	50.52 NTU	77.3 mV	11.20 ft	300.00 ml/min
3/16/2022 12:14 PM	08:51	6.97 pH	55.06 °F	383.21 µS/cm	4.26 mg/L	51.51 NTU	76.0 mV	11.20 ft	300.00 ml/min
3/16/2022 12:15 PM	09:51	6.98 pH	53.31 °F	383.00 µS/cm	4.21 mg/L	44.20 NTU	76.1 mV	11.20 ft	300.00 ml/min
3/16/2022 12:16 PM	10:51	6.98 pH	53.06 °F	384.39 µS/cm	3.89 mg/L	34.24 NTU	76.5 mV	11.20 ft	300.00 ml/min
3/16/2022 12:17 PM	11:51	6.98 pH	53.16 °F	384.56 µS/cm	3.75 mg/L	29.11 NTU	77.0 mV	11.20 ft	300.00 ml/min
3/16/2022 12:18 PM	12:51	6.98 pH	53.15 °F	384.29 µS/cm	3.60 mg/L	22.37 NTU	77.3 mV	11.20 ft	300.00 ml/min
3/16/2022 12:19 PM	13:51	6.97 pH	54.07 °F	384.19 µS/cm	3.50 mg/L	22.99 NTU	78.4 mV	11.20 ft	300.00 ml/min

3/16/2022 12:20 PM	14:51	6.95 pH	55.14 °F	383.95 µS/cm	3.50 mg/L	25.10 NTU	78.3 mV	11.20 ft	300.00 ml/min
3/16/2022 12:21 PM	15:51	6.96 pH	53.61 °F	384.16 µS/cm	3.31 mg/L	19.52 NTU	77.4 mV	11.20 ft	300.00 ml/min
3/16/2022 12:22 PM	16:51	6.96 pH	54.20 °F	383.67 µS/cm	3.17 mg/L	20.02 NTU	78.1 mV	11.20 ft	300.00 ml/min
3/16/2022 12:23 PM	17:51	6.95 pH	54.97 °F	381.21 µS/cm	3.11 mg/L	19.38 NTU	77.1 mV	11.20 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-15	VOCs

Low-Flow Test Report:

Test Date / Time: 3/16/2022 10:48:26 AM
Project: HRID 1Q2022 MW-15D
Operator Name: Danielle Richardson

Location Name: HRID MW-15D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 m** **Top of Screen: 38 ft** **Total Depth: 48 ft** **Initial Depth to Water: 11.96 ft**	**Pump Type: SS Hurricane Pro** **Tubing Type: Poly** **Pump Intake From TOC: 30 ft** **Estimated Total Volume Pumped: 3900 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/16/2022 10:48 AM	00:00	7.12 pH	54.81 °F	274.66 µS/cm	5.01 mg/L	5.39 NTU	58.6 mV	11.96 ft	300.00 ml/min
3/16/2022 10:49 AM	01:00	7.08 pH	55.45 °F	406.07 µS/cm	8.42 mg/L	14.00 NTU	61.8 mV	11.96 ft	300.00 ml/min
3/16/2022 10:50 AM	02:00	7.00 pH	54.59 °F	412.47 µS/cm	4.01 mg/L	12.58 NTU	48.8 mV	11.96 ft	300.00 ml/min
3/16/2022 10:51 AM	03:00	6.98 pH	54.58 °F	420.37 µS/cm	0.51 mg/L	27.94 NTU	24.6 mV	11.96 ft	300.00 ml/min
3/16/2022 10:52 AM	04:00	6.96 pH	54.54 °F	419.91 µS/cm	0.14 mg/L	45.26 NTU	6.1 mV	11.96 ft	300.00 ml/min
3/16/2022 10:53 AM	05:00	6.93 pH	54.57 °F	420.44 µS/cm	0.12 mg/L	59.11 NTU	-9.4 mV	11.96 ft	300.00 ml/min
3/16/2022 10:54 AM	06:00	6.91 pH	54.71 °F	421.41 µS/cm	0.08 mg/L	71.37 NTU	-22.3 mV	11.96 ft	300.00 ml/min
3/16/2022 10:55 AM	07:00	6.90 pH	54.69 °F	421.00 µS/cm	0.05 mg/L	93.22 NTU	-33.0 mV	11.96 ft	300.00 ml/min
3/16/2022 10:56 AM	08:00	6.89 pH	54.65 °F	421.79 µS/cm	0.04 mg/L	92.90 NTU	-41.5 mV	11.96 ft	300.00 ml/min
3/16/2022 10:57 AM	09:00	6.88 pH	54.69 °F	424.36 µS/cm	0.02 mg/L	98.94 NTU	-48.0 mV	11.96 ft	300.00 ml/min
3/16/2022 10:58 AM	10:00	6.87 pH	54.71 °F	438.97 µS/cm	0.01 mg/L	99.98 NTU	-52.0 mV	11.96 ft	300.00 ml/min
3/16/2022 10:59 AM	11:00	6.86 pH	54.69 °F	459.65 µS/cm	0.00 mg/L	109.35 NTU	-53.1 mV	11.96 ft	300.00 ml/min
3/16/2022 11:00 AM	12:00	6.86 pH	54.63 °F	467.44 µS/cm	0.00 mg/L	112.26 NTU	-54.3 mV	11.96 ft	300.00 ml/min
3/16/2022 11:01 AM	13:00	6.85 pH	54.75 °F	470.66 µS/cm	0.00 mg/L	112.77 NTU	-55.6 mV	11.96 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-15D	VOCs

Low-Flow Test Report:

Test Date / Time: 3/15/2022 11:53:03 AM
Project: HRID 1Q2022 MW-22
Operator Name: Sabrina Bailey

Location Name: HRID MW-22 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 8 ft** **Total Depth: 18.9 ft** **Initial Depth to Water: 11.31 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 15 ft** **Estimated Total Volume Pumped: 3400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:
MS/MSD

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 11:53 AM	00:00	6.76 pH	55.77 °F	998.38 µS/cm	2.95 mg/L	407.92 NTU	33.3 mV	11.31 ft	200.00 ml/min
3/15/2022 11:54 AM	01:00	6.68 pH	54.78 °F	1,007.9 µS/cm	2.90 mg/L	349.86 NTU	41.2 mV	11.31 ft	200.00 ml/min
3/15/2022 11:55 AM	02:00	6.69 pH	54.52 °F	1,009.5 µS/cm	2.84 mg/L	268.17 NTU	41.4 mV	11.31 ft	200.00 ml/min
3/15/2022 11:56 AM	03:00	6.71 pH	54.64 °F	1,010.5 µS/cm	2.76 mg/L	183.16 NTU	41.3 mV	11.31 ft	200.00 ml/min
3/15/2022 11:57 AM	04:00	6.71 pH	54.59 °F	1,011.8 µS/cm	2.69 mg/L	143.58 NTU	41.5 mV	11.31 ft	200.00 ml/min
3/15/2022 11:58 AM	05:00	6.71 pH	54.62 °F	1,013.9 µS/cm	2.60 mg/L	93.24 NTU	40.8 mV	11.31 ft	200.00 ml/min
3/15/2022 11:59 AM	06:00	6.79 pH	54.93 °F	1,009.0 µS/cm	3.35 mg/L	233.41 NTU	28.3 mV	11.31 ft	200.00 ml/min
3/15/2022 12:00 PM	07:00	6.75 pH	55.88 °F	1,008.7 µS/cm	2.64 mg/L	194.08 NTU	29.4 mV	11.31 ft	200.00 ml/min
3/15/2022 12:01 PM	08:00	6.75 pH	54.92 °F	1,007.6 µS/cm	2.31 mg/L	146.21 NTU	30.7 mV	11.31 ft	200.00 ml/min
3/15/2022 12:02 PM	09:00	6.75 pH	54.99 °F	1,006.6 µS/cm	2.12 mg/L	124.31 NTU	30.0 mV	11.31 ft	200.00 ml/min
3/15/2022 12:03 PM	10:00	6.76 pH	54.92 °F	1,004.9 µS/cm	2.04 mg/L	95.46 NTU	30.0 mV	11.31 ft	200.00 ml/min
3/15/2022 12:04 PM	11:00	6.76 pH	54.93 °F	999.11 µS/cm	1.95 mg/L	74.71 NTU	29.5 mV	11.31 ft	200.00 ml/min
3/15/2022 12:05 PM	12:00	6.77 pH	54.84 °F	993.84 µS/cm	1.86 mg/L	58.06 NTU	28.9 mV	11.31 ft	200.00 ml/min
3/15/2022 12:06 PM	13:00	6.77 pH	55.03 °F	987.57 µS/cm	1.81 mg/L	51.41 NTU	27.6 mV	11.31 ft	200.00 ml/min
3/15/2022 12:07 PM	14:00	6.78 pH	54.97 °F	982.80 µS/cm	1.76 mg/L	44.62 NTU	26.1 mV	11.31 ft	200.00 ml/min

3/15/2022 12:08 PM	15:00	6.78 pH	55.27 °F	982.89 µS/cm	1.75 mg/L	42.47 NTU	23.7 mV	11.31 ft	200.00 ml/min
3/15/2022 12:09 PM	16:00	6.78 pH	55.32 °F	979.19 µS/cm	1.76 mg/L	39.36 NTU	22.5 mV	11.31 ft	200.00 ml/min
3/15/2022 12:10 PM	17:00	6.78 pH	55.06 °F	981.47 µS/cm	1.75 mg/L	39.05 NTU	22.3 mV	11.31 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-22	VOCs, MS (A), MSD (A)

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/15/2022 12:48:46 PM
Project: HRID 1Q2022 MW-22D
Operator Name: Sabrina Bailey

Location Name: HRID MW-22D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 18 ft** **Total Depth: 28 ft** **Initial Depth to Water: 11.65 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 20 ft** **Estimated Total Volume Pumped: 14695 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 12:48 PM	00:00	6.97 pH	57.64 °F	606.03 µS/cm	0.13 mg/L	260.08 NTU	20.0 mV	11.65 ft	300.00 ml/min
3/15/2022 12:49 PM	01:00	6.90 pH	57.88 °F	606.97 µS/cm	0.14 mg/L	271.42 NTU	21.2 mV	11.65 ft	300.00 ml/min
3/15/2022 12:50 PM	02:00	6.88 pH	57.40 °F	608.28 µS/cm	0.14 mg/L	315.64 NTU	19.0 mV	11.65 ft	300.00 ml/min
3/15/2022 12:51 PM	03:00	6.86 pH	57.77 °F	609.25 µS/cm	0.14 mg/L	258.88 NTU	17.6 mV	11.65 ft	300.00 ml/min
3/15/2022 12:52 PM	04:00	6.85 pH	58.17 °F	609.07 µS/cm	0.15 mg/L	166.97 NTU	17.0 mV	11.65 ft	300.00 ml/min
3/15/2022 12:53 PM	05:00	6.84 pH	59.90 °F	616.97 µS/cm	0.17 mg/L	169.89 NTU	16.8 mV	11.65 ft	300.00 ml/min
3/15/2022 12:54 PM	06:00	6.86 pH	57.13 °F	605.91 µS/cm	0.16 mg/L	235.39 NTU	10.3 mV	11.65 ft	300.00 ml/min
3/15/2022 12:55 PM	07:00	6.87 pH	57.26 °F	611.07 µS/cm	0.07 mg/L	155.28 NTU	1.7 mV	11.65 ft	300.00 ml/min
3/15/2022 12:56 PM	08:00	6.86 pH	57.15 °F	610.78 µS/cm	0.02 mg/L	95.43 NTU	-1.9 mV	11.65 ft	300.00 ml/min
3/15/2022 12:57 PM	09:00	6.86 pH	57.12 °F	610.65 µS/cm	0.01 mg/L	62.93 NTU	-4.3 mV	11.65 ft	300.00 ml/min
3/15/2022 12:58 PM	10:00	6.86 pH	57.13 °F	610.40 µS/cm	0.01 mg/L	58.37 NTU	-5.6 mV	11.65 ft	300.00 ml/min
3/15/2022 12:59 PM	11:00	6.86 pH	57.06 °F	610.62 µS/cm	0.01 mg/L	43.96 NTU	-7.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:00 PM	12:00	6.86 pH	57.09 °F	610.22 µS/cm	0.00 mg/L	38.64 NTU	-8.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:01 PM	13:00	6.87 pH	57.04 °F	610.55 µS/cm	0.00 mg/L	27.53 NTU	-9.7 mV	11.65 ft	300.00 ml/min
3/15/2022 1:02 PM	14:00	7.03 pH	58.14 °F	0.07 µS/cm	10.34 mg/L	0.48 NTU	-11.3 mV	11.65 ft	300.00 ml/min

3/15/2022 1:03 PM	15:00	7.29 pH	59.95 °F	0.07 µS/cm	10.14 mg/L	0.70 NTU	-6.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:04 PM	16:00	6.98 pH	57.18 °F	609.12 µS/cm	0.41 mg/L	68.05 NTU	-23.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:05 PM	17:00	7.06 pH	58.17 °F	0.40 µS/cm	9.67 mg/L	0.41 NTU	-17.3 mV	11.65 ft	300.00 ml/min
3/15/2022 1:06 PM	18:00	7.22 pH	59.26 °F	0.07 µS/cm	10.47 mg/L	0.41 NTU	-16.3 mV	11.65 ft	300.00 ml/min
3/15/2022 1:07 PM	19:00	7.30 pH	58.66 °F	597.74 µS/cm	7.48 mg/L	0.27 NTU	-13.0 mV	11.65 ft	300.00 ml/min
3/15/2022 1:08 PM	20:00	7.15 pH	58.72 °F	0.25 µS/cm	6.52 mg/L	0.28 NTU	-18.6 mV	11.65 ft	300.00 ml/min
3/15/2022 1:09 PM	21:00	7.07 pH	58.01 °F	103.83 µS/cm	0.46 mg/L	0.26 NTU	-14.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:10 PM	22:00	7.23 pH	59.17 °F	12.45 µS/cm	1.14 mg/L	0.29 NTU	-14.2 mV	11.65 ft	300.00 ml/min
3/15/2022 1:11 PM	23:00	7.40 pH	60.44 °F	13.33 µS/cm	1.59 mg/L	0.20 NTU	-11.6 mV	11.65 ft	300.00 ml/min
3/15/2022 1:12 PM	24:00	7.50 pH	61.59 °F	14.75 µS/cm	1.68 mg/L	0.09 NTU	-6.3 mV	11.65 ft	300.00 ml/min
3/15/2022 1:13 PM	25:00	7.41 pH	60.77 °F	62.17 µS/cm	1.58 mg/L	0.25 NTU	-10.5 mV	11.65 ft	300.00 ml/min
3/15/2022 1:14 PM	26:00	7.57 pH	61.71 °F	49.06 µS/cm	1.78 mg/L	0.16 NTU	-7.0 mV	11.65 ft	300.00 ml/min
3/15/2022 1:15 PM	27:00	7.71 pH	62.93 °F	50.76 µS/cm	1.82 mg/L	0.58 NTU	-3.3 mV	11.65 ft	300.00 ml/min
3/15/2022 1:16 PM	28:00	7.80 pH	64.18 °F	51.33 µS/cm	2.21 mg/L	0.19 NTU	0.3 mV	11.65 ft	300.00 ml/min
3/15/2022 1:22 PM	33:59	7.24 pH	58.50 °F	602.07 µS/cm	0.31 mg/L	271.32 NTU	-12.9 mV	11.65 ft	300.00 ml/min
3/15/2022 1:23 PM	34:59	7.01 pH	57.10 °F	609.53 µS/cm	0.02 mg/L	1,318.8 NTU	-4.8 mV	11.65 ft	300.00 ml/min
3/15/2022 1:24 PM	35:59	6.99 pH	57.16 °F	609.63 µS/cm	0.01 mg/L	841.56 NTU	-7.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:25 PM	36:59	6.96 pH	57.38 °F	608.94 µS/cm	0.02 mg/L	660.51 NTU	-6.7 mV	11.65 ft	300.00 ml/min
3/15/2022 1:26 PM	37:59	6.94 pH	57.42 °F	609.16 µS/cm	0.03 mg/L	448.47 NTU	-6.2 mV	11.65 ft	300.00 ml/min
3/15/2022 1:27 PM	38:59	6.93 pH	57.48 °F	609.10 µS/cm	0.03 mg/L	433.25 NTU	-7.1 mV	11.65 ft	300.00 ml/min
3/15/2022 1:28 PM	39:59	6.94 pH	57.45 °F	609.33 µS/cm	0.03 mg/L	307.40 NTU	-8.0 mV	11.65 ft	300.00 ml/min
3/15/2022 1:29 PM	40:59	6.94 pH	57.46 °F	609.05 µS/cm	0.02 mg/L	265.33 NTU	-9.1 mV	11.65 ft	300.00 ml/min
3/15/2022 1:30 PM	41:59	6.95 pH	57.48 °F	608.93 µS/cm	0.02 mg/L	244.51 NTU	-10.8 mV	11.65 ft	300.00 ml/min
3/15/2022 1:31 PM	42:59	6.96 pH	57.47 °F	608.81 µS/cm	0.01 mg/L	165.71 NTU	-11.9 mV	11.65 ft	300.00 ml/min
3/15/2022 1:32 PM	43:59	6.97 pH	57.45 °F	609.17 µS/cm	0.01 mg/L	161.02 NTU	-12.6 mV	11.65 ft	300.00 ml/min
3/15/2022 1:33 PM	44:59	6.98 pH	57.45 °F	608.99 µS/cm	0.01 mg/L	119.93 NTU	-13.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:34 PM	45:59	6.99 pH	57.40 °F	608.94 µS/cm	0.01 mg/L	116.25 NTU	-14.4 mV	11.65 ft	300.00 ml/min
3/15/2022 1:35 PM	46:59	7.00 pH	57.33 °F	609.22 µS/cm	0.00 mg/L	104.22 NTU	-15.5 mV	11.65 ft	300.00 ml/min
3/15/2022 1:36 PM	47:59	7.01 pH	57.40 °F	608.97 µS/cm	0.00 mg/L	110.52 NTU	-16.6 mV	11.65 ft	300.00 ml/min

3/15/2022 1:37 PM	48:59	7.01 pH	57.35 °F	608.50 µS/cm	0.00 mg/L	92.01 NTU	-17.4 mV	11.65 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-22D	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/15/2022 10:08:14 AM
Project: HRID 1Q2022 MW-23
Operator Name: Sabrina Bailey

Location Name: HRID MW-23 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 10 ft** **Total Depth: 20 ft** **Initial Depth to Water: 13.62 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 17 ft** **Estimated Total Volume Pumped: 4000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 10:08 AM	00:00	7.06 pH	55.81 °F	2,438.5 µS/cm	0.11 mg/L	225.06 NTU	-150.6 mV	13.62 ft	200.00 ml/min
3/15/2022 10:09 AM	01:00	6.95 pH	56.32 °F	2,062.7 µS/cm	0.05 mg/L	168.08 NTU	-144.8 mV	13.62 ft	200.00 ml/min
3/15/2022 10:10 AM	02:00	6.92 pH	56.60 °F	1,906.8 µS/cm	0.04 mg/L	114.52 NTU	-144.3 mV	13.62 ft	200.00 ml/min
3/15/2022 10:11 AM	03:00	6.90 pH	56.76 °F	1,817.3 µS/cm	0.04 mg/L	78.13 NTU	-142.9 mV	13.62 ft	200.00 ml/min
3/15/2022 10:12 AM	04:00	6.88 pH	56.95 °F	1,783.9 µS/cm	0.03 mg/L	61.62 NTU	-143.0 mV	13.62 ft	200.00 ml/min
3/15/2022 10:13 AM	05:00	6.88 pH	57.06 °F	1,762.5 µS/cm	0.03 mg/L	43.89 NTU	-142.6 mV	13.62 ft	200.00 ml/min
3/15/2022 10:14 AM	06:00	6.86 pH	57.02 °F	1,756.3 µS/cm	0.02 mg/L	47.66 NTU	-142.4 mV	13.62 ft	200.00 ml/min
3/15/2022 10:15 AM	07:00	6.85 pH	57.00 °F	1,748.8 µS/cm	0.02 mg/L	23.07 NTU	-141.3 mV	13.62 ft	200.00 ml/min
3/15/2022 10:16 AM	08:00	6.85 pH	56.93 °F	1,738.5 µS/cm	0.03 mg/L	19.25 NTU	-140.5 mV	13.62 ft	200.00 ml/min
3/15/2022 10:17 AM	09:00	6.84 pH	57.02 °F	1,721.8 µS/cm	0.03 mg/L	19.58 NTU	-140.4 mV	13.62 ft	200.00 ml/min
3/15/2022 10:18 AM	10:00	6.84 pH	56.99 °F	1,694.4 µS/cm	0.03 mg/L	14.93 NTU	-139.4 mV	13.62 ft	200.00 ml/min
3/15/2022 10:19 AM	11:00	6.82 pH	56.98 °F	1,666.8 µS/cm	0.02 mg/L	14.29 NTU	-137.5 mV	13.62 ft	200.00 ml/min
3/15/2022 10:20 AM	12:00	6.82 pH	57.08 °F	1,647.1 µS/cm	0.02 mg/L	25.66 NTU	-137.0 mV	13.62 ft	200.00 ml/min
3/15/2022 10:21 AM	13:00	6.81 pH	57.05 °F	1,630.2 µS/cm	0.02 mg/L	15.51 NTU	-136.6 mV	13.62 ft	200.00 ml/min
3/15/2022 10:22 AM	14:00	6.82 pH	57.02 °F	1,618.0 µS/cm	0.01 mg/L	8.73 NTU	-136.7 mV	13.62 ft	200.00 ml/min

3/15/2022 10:23 AM	15:00	6.80 pH	56.99 °F	1,596.1 µS/cm	0.02 mg/L	7.09 NTU	-135.6 mV	13.62 ft	200.00 ml/min
3/15/2022 10:24 AM	16:00	6.80 pH	56.98 °F	1,579.7 µS/cm	0.02 mg/L	6.19 NTU	-135.1 mV	13.62 ft	200.00 ml/min
3/15/2022 10:25 AM	17:00	6.80 pH	57.02 °F	1,541.9 µS/cm	0.01 mg/L	6.24 NTU	-135.6 mV	13.62 ft	200.00 ml/min
3/15/2022 10:26 AM	18:00	6.81 pH	56.97 °F	1,505.2 µS/cm	0.01 mg/L	6.08 NTU	-136.1 mV	13.62 ft	200.00 ml/min
3/15/2022 10:27 AM	19:00	6.81 pH	56.95 °F	1,488.8 µS/cm	0.01 mg/L	9.09 NTU	-136.0 mV	13.62 ft	200.00 ml/min
3/15/2022 10:28 AM	20:00	6.81 pH	57.06 °F	1,472.0 µS/cm	0.01 mg/L	6.32 NTU	-136.7 mV	13.62 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-23	VOCs

Low-Flow Test Report:

Test Date / Time: 3/17/2022 12:00:54 PM
Project: HRID 1Q2022 MW-24
Operator Name: Sabrina Bailey

Location Name: HRID MW-24 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 11 ft** **Total Depth: 21.8 ft** **Initial Depth to Water: 14.78 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 18 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/17/2022 12:00 PM	00:00	6.79 pH	60.65 °F	412.04 µS/cm	3.52 mg/L	68.77 NTU	79.3 mV	14.78 ft	200.00 ml/min
3/17/2022 12:01 PM	01:00	6.81 pH	58.40 °F	401.51 µS/cm	2.89 mg/L	44.93 NTU	79.3 mV	14.78 ft	200.00 ml/min
3/17/2022 12:02 PM	02:00	6.83 pH	58.20 °F	407.65 µS/cm	2.87 mg/L	34.83 NTU	79.2 mV	14.78 ft	200.00 ml/min
3/17/2022 12:03 PM	03:00	6.85 pH	58.00 °F	406.08 µS/cm	2.87 mg/L	28.48 NTU	79.1 mV	14.78 ft	200.00 ml/min
3/17/2022 12:04 PM	04:00	6.86 pH	58.36 °F	407.54 µS/cm	2.88 mg/L	24.14 NTU	78.9 mV	14.78 ft	200.00 ml/min
3/17/2022 12:05 PM	05:00	6.86 pH	58.98 °F	407.25 µS/cm	2.86 mg/L	22.61 NTU	78.6 mV	14.78 ft	200.00 ml/min
3/17/2022 12:06 PM	06:00	6.86 pH	59.78 °F	408.84 µS/cm	2.90 mg/L	14.48 NTU	78.7 mV	14.78 ft	200.00 ml/min
3/17/2022 12:07 PM	07:00	6.86 pH	60.92 °F	409.67 µS/cm	2.95 mg/L	15.63 NTU	78.2 mV	14.78 ft	200.00 ml/min
3/17/2022 12:08 PM	08:00	6.87 pH	60.37 °F	407.30 µS/cm	2.86 mg/L	17.11 NTU	77.8 mV	14.78 ft	200.00 ml/min
3/17/2022 12:09 PM	09:00	6.91 pH	58.67 °F	407.49 µS/cm	2.83 mg/L	15.31 NTU	78.2 mV	14.78 ft	200.00 ml/min
3/17/2022 12:10 PM	10:00	6.91 pH	59.09 °F	409.34 µS/cm	2.82 mg/L	13.26 NTU	77.9 mV	14.78 ft	200.00 ml/min
3/17/2022 12:11 PM	11:00	6.91 pH	60.01 °F	411.03 µS/cm	2.83 mg/L	8.80 NTU	77.3 mV	14.78 ft	200.00 ml/min
3/17/2022 12:12 PM	12:00	6.91 pH	61.46 °F	417.07 µS/cm	2.97 mg/L	8.96 NTU	76.8 mV	14.78 ft	200.00 ml/min
3/17/2022 12:13 PM	13:00	6.89 pH	62.67 °F	414.64 µS/cm	3.04 mg/L	7.38 NTU	76.2 mV	14.78 ft	200.00 ml/min
3/17/2022 12:14 PM	14:00	6.88 pH	64.16 °F	415.33 µS/cm	3.09 mg/L	5.22 NTU	75.1 mV	14.78 ft	200.00 ml/min

3/17/2022 12:15 PM	15:00	6.88 pH	64.96 °F	413.11 µS/cm	3.09 mg/L	6.61 NTU	74.3 mV	14.78 ft	200.00 ml/min
3/17/2022 12:16 PM	16:00	6.96 pH	59.85 °F	401.78 µS/cm	2.83 mg/L	13.95 NTU	75.5 mV	14.78 ft	200.00 ml/min
3/17/2022 12:17 PM	17:00	6.95 pH	60.36 °F	408.21 µS/cm	2.76 mg/L	23.06 NTU	75.1 mV	14.78 ft	200.00 ml/min
3/17/2022 12:18 PM	18:00	6.96 pH	60.69 °F	408.08 µS/cm	2.68 mg/L	36.38 NTU	74.9 mV	14.78 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-24	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/16/2022 11:28:58 AM
Project: HRID 1Q2022 MW-26
Operator Name: Sabrina Bailey

Location Name: HRID MW-26 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 11.9 ft** **Total Depth: 22.9 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 10 ft** **Estimated Total Volume Pumped: 6200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 11:28 AM	00:00	7.28 pH	60.44 °F	625.80 µS/cm	0.57 mg/L	41.91 NTU	-113.6 mV	200.00 ml/min
3/16/2022 11:29 AM	01:00	7.27 pH	57.53 °F	619.53 µS/cm	0.42 mg/L	13.86 NTU	-116.5 mV	200.00 ml/min
3/16/2022 11:30 AM	02:00	7.29 pH	59.05 °F	621.96 µS/cm	0.19 mg/L	9.02 NTU	-121.1 mV	200.00 ml/min
3/16/2022 11:31 AM	03:00	7.31 pH	59.61 °F	618.71 µS/cm	0.13 mg/L	7.24 NTU	-123.5 mV	200.00 ml/min
3/16/2022 11:32 AM	04:00	7.33 pH	59.92 °F	615.31 µS/cm	0.11 mg/L	6.44 NTU	-125.8 mV	200.00 ml/min
3/16/2022 11:33 AM	05:00	7.35 pH	60.57 °F	614.54 µS/cm	0.09 mg/L	5.99 NTU	-127.7 mV	200.00 ml/min
3/16/2022 11:34 AM	06:00	7.36 pH	61.44 °F	616.35 µS/cm	0.08 mg/L	6.27 NTU	-128.8 mV	200.00 ml/min
3/16/2022 11:35 AM	07:00	7.35 pH	62.69 °F	620.92 µS/cm	0.08 mg/L	6.14 NTU	-129.5 mV	200.00 ml/min
3/16/2022 11:36 AM	08:00	7.33 pH	60.10 °F	618.20 µS/cm	0.07 mg/L	24.47 NTU	-133.4 mV	200.00 ml/min
3/16/2022 11:37 AM	09:00	7.32 pH	56.71 °F	616.67 µS/cm	0.00 mg/L	34.29 NTU	-132.4 mV	200.00 ml/min
3/16/2022 11:38 AM	10:00	7.30 pH	56.93 °F	612.11 µS/cm	0.00 mg/L	3.97 NTU	-128.8 mV	200.00 ml/min
3/16/2022 11:39 AM	11:00	7.30 pH	56.77 °F	616.59 µS/cm	0.00 mg/L	1.91 NTU	-126.8 mV	200.00 ml/min
3/16/2022 11:40 AM	12:00	7.29 pH	56.70 °F	617.33 µS/cm	0.00 mg/L	2.05 NTU	-125.4 mV	200.00 ml/min
3/16/2022 11:41 AM	13:00	7.29 pH	56.77 °F	615.40 µS/cm	0.00 mg/L	1.74 NTU	-124.1 mV	200.00 ml/min
3/16/2022 11:42 AM	14:00	7.28 pH	56.91 °F	613.46 µS/cm	0.00 mg/L	2.10 NTU	-123.2 mV	200.00 ml/min

3/16/2022 11:43 AM	15:00	7.28 pH	57.03 °F	612.02 µS/cm	0.00 mg/L	1.58 NTU	-122.8 mV	200.00 ml/min
3/16/2022 11:44 AM	16:00	7.29 pH	57.17 °F	612.41 µS/cm	0.00 mg/L	1.66 NTU	-122.7 mV	200.00 ml/min
3/16/2022 11:45 AM	17:00	7.30 pH	57.61 °F	610.93 µS/cm	0.00 mg/L	1.23 NTU	-122.7 mV	200.00 ml/min
3/16/2022 11:46 AM	18:00	7.30 pH	58.17 °F	610.50 µS/cm	0.00 mg/L	0.87 NTU	-122.7 mV	200.00 ml/min
3/16/2022 11:47 AM	19:00	7.30 pH	59.63 °F	615.67 µS/cm	0.00 mg/L	0.94 NTU	-122.9 mV	200.00 ml/min
3/16/2022 11:48 AM	20:00	7.30 pH	62.01 °F	618.84 µS/cm	0.01 mg/L	0.89 NTU	-122.9 mV	200.00 ml/min
3/16/2022 11:49 AM	21:00	7.30 pH	64.05 °F	619.37 µS/cm	0.05 mg/L	0.92 NTU	-123.5 mV	200.00 ml/min
3/16/2022 11:50 AM	22:00	7.29 pH	61.67 °F	599.47 µS/cm	0.05 mg/L	1.15 NTU	-123.9 mV	200.00 ml/min
3/16/2022 11:51 AM	23:00	7.31 pH	58.59 °F	611.90 µS/cm	0.05 mg/L	1.59 NTU	-124.1 mV	200.00 ml/min
3/16/2022 11:52 AM	24:00	7.28 pH	59.57 °F	616.66 µS/cm	0.04 mg/L	1.37 NTU	-124.1 mV	200.00 ml/min
3/16/2022 11:53 AM	25:00	7.29 pH	60.35 °F	616.47 µS/cm	0.03 mg/L	1.08 NTU	-125.4 mV	200.00 ml/min
3/16/2022 11:54 AM	26:00	7.30 pH	60.75 °F	613.35 µS/cm	0.03 mg/L	0.95 NTU	-126.5 mV	200.00 ml/min
3/16/2022 11:55 AM	27:00	7.29 pH	59.43 °F	613.27 µS/cm	0.04 mg/L	1.60 NTU	-126.8 mV	200.00 ml/min
3/16/2022 11:56 AM	28:00	7.29 pH	60.10 °F	616.89 µS/cm	0.03 mg/L	1.47 NTU	-127.8 mV	200.00 ml/min
3/16/2022 11:57 AM	29:00	7.30 pH	60.36 °F	615.12 µS/cm	0.02 mg/L	1.38 NTU	-128.9 mV	200.00 ml/min
3/16/2022 11:58 AM	30:00	7.30 pH	61.38 °F	615.39 µS/cm	0.01 mg/L	1.12 NTU	-129.8 mV	200.00 ml/min
3/16/2022 11:59 AM	31:00	7.31 pH	62.43 °F	617.40 µS/cm	0.01 mg/L	0.98 NTU	-130.0 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-26	VOCs

Low-Flow Test Report:

Test Date / Time: 3/15/2022 10:44:46 AM
Project: HRID 1Q2022 MW-30
Operator Name: Sabrina Bailey

Location Name: HRID MW-30 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 4 ft** **Total Depth: 14.5 ft** **Initial Depth to Water: 8.11 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 11 ft** **Estimated Total Volume Pumped: 2796.667 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:
Dup

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 10:44 AM	00:00	7.10 pH	54.10 °F	1,240.0 µS/cm	0.07 mg/L	626.48 NTU	-127.3 mV	8.11 ft	200.00 ml/min
3/15/2022 10:45 AM	00:59	7.11 pH	53.80 °F	1,184.6 µS/cm	0.06 mg/L	347.21 NTU	-129.6 mV	8.11 ft	200.00 ml/min
3/15/2022 10:46 AM	01:59	7.08 pH	53.36 °F	1,173.3 µS/cm	0.04 mg/L	163.09 NTU	-131.3 mV	8.11 ft	200.00 ml/min
3/15/2022 10:47 AM	02:59	7.10 pH	52.97 °F	1,106.7 µS/cm	0.04 mg/L	120.55 NTU	-131.8 mV	8.11 ft	200.00 ml/min
3/15/2022 10:48 AM	03:59	7.09 pH	52.60 °F	1,062.7 µS/cm	0.04 mg/L	77.15 NTU	-129.0 mV	8.11 ft	200.00 ml/min
3/15/2022 10:49 AM	04:59	7.09 pH	52.43 °F	1,042.1 µS/cm	0.04 mg/L	53.61 NTU	-127.5 mV	8.11 ft	200.00 ml/min
3/15/2022 10:50 AM	05:59	7.09 pH	52.24 °F	1,021.7 µS/cm	0.04 mg/L	32.62 NTU	-125.8 mV	8.11 ft	200.00 ml/min
3/15/2022 10:51 AM	06:59	7.08 pH	52.17 °F	1,008.3 µS/cm	0.03 mg/L	22.95 NTU	-125.0 mV	8.11 ft	200.00 ml/min
3/15/2022 10:52 AM	07:59	7.09 pH	52.12 °F	1,000.2 µS/cm	0.03 mg/L	17.31 NTU	-125.3 mV	8.11 ft	200.00 ml/min
3/15/2022 10:53 AM	08:59	7.10 pH	52.07 °F	995.84 µS/cm	0.03 mg/L	15.23 NTU	-126.1 mV	8.11 ft	200.00 ml/min
3/15/2022 10:54 AM	09:59	7.09 pH	52.12 °F	991.30 µS/cm	0.04 mg/L	14.73 NTU	-126.6 mV	8.11 ft	200.00 ml/min
3/15/2022 10:55 AM	10:59	7.09 pH	51.95 °F	977.40 µS/cm	0.03 mg/L	11.25 NTU	-125.8 mV	8.11 ft	200.00 ml/min
3/15/2022 10:56 AM	11:59	7.09 pH	51.87 °F	971.66 µS/cm	0.03 mg/L	7.69 NTU	-126.0 mV	8.11 ft	200.00 ml/min
3/15/2022 10:57 AM	12:59	7.09 pH	51.83 °F	966.90 µS/cm	0.03 mg/L	7.53 NTU	-126.2 mV	8.11 ft	200.00 ml/min
3/15/2022 10:58 AM	13:59	7.09 pH	51.82 °F	966.43 µS/cm	0.04 mg/L	7.57 NTU	-126.8 mV	8.11 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-30	VOCs Dup

Low-Flow Test Report:

Test Date / Time: 3/16/2022 10:42:32 AM
Project: HRID 1Q2022 MW-37 (2)
Operator Name: Sabrina Bailey

Location Name: HRID MW-32 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 23 ft** **Total Depth: 33 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 10 ft** **Estimated Total Volume Pumped: 5400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 10:42 AM	00:00	7.31 pH	57.01 °F	595.21 µS/cm	5.53 mg/L	1.63 NTU	2.0 mV	200.00 ml/min
3/16/2022 10:43 AM	01:00	7.25 pH	56.99 °F	597.29 µS/cm	5.53 mg/L	1.43 NTU	8.0 mV	200.00 ml/min
3/16/2022 10:44 AM	02:00	7.24 pH	57.16 °F	597.63 µS/cm	5.51 mg/L	1.33 NTU	11.9 mV	200.00 ml/min
3/16/2022 10:45 AM	03:00	7.22 pH	57.30 °F	602.40 µS/cm	4.76 mg/L	1.35 NTU	14.9 mV	200.00 ml/min
3/16/2022 10:46 AM	04:00	7.20 pH	57.35 °F	606.81 µS/cm	3.75 mg/L	6.70 NTU	18.0 mV	200.00 ml/min
3/16/2022 10:47 AM	05:00	7.18 pH	57.36 °F	610.60 µS/cm	3.25 mg/L	37.54 NTU	20.3 mV	200.00 ml/min
3/16/2022 10:48 AM	06:00	7.17 pH	57.39 °F	614.55 µS/cm	2.57 mg/L	145.60 NTU	22.4 mV	200.00 ml/min
3/16/2022 10:49 AM	07:00	7.13 pH	57.44 °F	621.50 µS/cm	0.69 mg/L	343.24 NTU	24.0 mV	200.00 ml/min
3/16/2022 10:50 AM	08:00	7.12 pH	57.44 °F	620.74 µS/cm	0.26 mg/L	234.41 NTU	24.5 mV	200.00 ml/min
3/16/2022 10:51 AM	09:00	7.12 pH	57.43 °F	619.57 µS/cm	0.27 mg/L	199.19 NTU	24.6 mV	200.00 ml/min
3/16/2022 10:52 AM	10:00	7.13 pH	57.39 °F	617.50 µS/cm	0.15 mg/L	114.87 NTU	23.0 mV	200.00 ml/min
3/16/2022 10:53 AM	11:00	7.13 pH	57.39 °F	617.37 µS/cm	0.09 mg/L	76.32 NTU	21.2 mV	200.00 ml/min
3/16/2022 10:54 AM	12:00	7.14 pH	57.47 °F	617.04 µS/cm	0.08 mg/L	71.08 NTU	20.0 mV	200.00 ml/min
3/16/2022 10:55 AM	13:00	7.13 pH	57.45 °F	616.89 µS/cm	0.09 mg/L	59.89 NTU	20.0 mV	200.00 ml/min
3/16/2022 10:56 AM	14:00	7.14 pH	57.55 °F	615.91 µS/cm	0.17 mg/L	48.07 NTU	18.8 mV	200.00 ml/min

3/16/2022 10:57 AM	15:00	7.14 pH	57.57 °F	617.37 µS/cm	0.15 mg/L	74.86 NTU	18.7 mV	200.00 ml/min
3/16/2022 10:58 AM	16:00	7.14 pH	57.54 °F	618.17 µS/cm	0.17 mg/L	82.76 NTU	19.2 mV	200.00 ml/min
3/16/2022 10:59 AM	17:00	7.14 pH	57.54 °F	617.91 µS/cm	0.16 mg/L	71.75 NTU	19.6 mV	200.00 ml/min
3/16/2022 11:00 AM	18:00	7.14 pH	57.56 °F	617.09 µS/cm	0.12 mg/L	52.30 NTU	18.9 mV	200.00 ml/min
3/16/2022 11:01 AM	19:00	7.13 pH	57.59 °F	616.69 µS/cm	0.10 mg/L	38.06 NTU	18.2 mV	200.00 ml/min
3/16/2022 11:02 AM	20:00	7.13 pH	57.89 °F	616.89 µS/cm	0.09 mg/L	35.62 NTU	17.9 mV	200.00 ml/min
3/16/2022 11:03 AM	21:00	7.14 pH	57.62 °F	616.21 µS/cm	0.08 mg/L	26.36 NTU	17.1 mV	200.00 ml/min
3/16/2022 11:04 AM	22:00	7.14 pH	57.67 °F	615.74 µS/cm	0.06 mg/L	27.12 NTU	17.0 mV	200.00 ml/min
3/16/2022 11:05 AM	23:00	7.14 pH	57.63 °F	616.61 µS/cm	0.08 mg/L	27.84 NTU	17.5 mV	200.00 ml/min
3/16/2022 11:06 AM	24:00	7.14 pH	57.61 °F	616.39 µS/cm	0.10 mg/L	36.28 NTU	18.4 mV	200.00 ml/min
3/16/2022 11:07 AM	25:00	7.14 pH	57.63 °F	616.56 µS/cm	0.09 mg/L	26.96 NTU	18.6 mV	200.00 ml/min
3/16/2022 11:08 AM	26:00	7.13 pH	57.63 °F	616.55 µS/cm	0.09 mg/L	29.14 NTU	19.4 mV	200.00 ml/min
3/16/2022 11:09 AM	27:00	7.14 pH	57.63 °F	615.85 µS/cm	0.10 mg/L	26.91 NTU	19.3 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-32	VOCs & Dup (B)

Low-Flow Test Report:

Test Date / Time: 3/16/2022 1:20:28 PM
Project: HRID 1Q2022 MW-33
Operator Name: Sabrina Bailey

Location Name: HRID MW-33 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 8 ft** **Total Depth: 18 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 9 ft** **Estimated Total Volume Pumped: 5866.667 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 1:20 PM	00:00	7.11 pH	58.49 °F	607.52 µS/cm	0.07 mg/L	2,778.8 NTU	-25.4 mV	200.00 ml/min
3/16/2022 1:21 PM	01:00	7.06 pH	57.82 °F	610.66 µS/cm	0.09 mg/L	2,252.1 NTU	-17.4 mV	200.00 ml/min
3/16/2022 1:22 PM	02:00	7.05 pH	57.81 °F	611.46 µS/cm	0.09 mg/L	1,947.5 NTU	-13.1 mV	200.00 ml/min
3/16/2022 1:23 PM	03:00	7.04 pH	57.55 °F	611.86 µS/cm	0.09 mg/L	1,483.2 NTU	-8.3 mV	200.00 ml/min
3/16/2022 1:24 PM	04:00	7.03 pH	57.53 °F	613.28 µS/cm	0.05 mg/L	901.94 NTU	-4.0 mV	200.00 ml/min
3/16/2022 1:25 PM	05:00	7.03 pH	57.45 °F	612.52 µS/cm	0.03 mg/L	524.05 NTU	-1.0 mV	200.00 ml/min
3/16/2022 1:26 PM	06:00	7.03 pH	57.48 °F	611.20 µS/cm	0.02 mg/L	303.22 NTU	1.4 mV	200.00 ml/min
3/16/2022 1:27 PM	07:20	7.04 pH	57.47 °F	611.02 µS/cm	0.02 mg/L	186.82 NTU	3.4 mV	200.00 ml/min
3/16/2022 1:28 PM	08:20	7.03 pH	57.55 °F	610.75 µS/cm	0.03 mg/L	159.30 NTU	4.2 mV	200.00 ml/min
3/16/2022 1:29 PM	09:20	7.04 pH	57.56 °F	611.20 µS/cm	0.02 mg/L	129.65 NTU	4.9 mV	200.00 ml/min
3/16/2022 1:30 PM	10:20	7.06 pH	57.64 °F	611.04 µS/cm	0.03 mg/L	104.02 NTU	5.0 mV	200.00 ml/min
3/16/2022 1:31 PM	11:20	7.07 pH	57.60 °F	611.28 µS/cm	0.03 mg/L	89.10 NTU	5.0 mV	200.00 ml/min
3/16/2022 1:32 PM	12:20	7.08 pH	57.67 °F	610.91 µS/cm	0.02 mg/L	72.90 NTU	5.3 mV	200.00 ml/min
3/16/2022 1:33 PM	13:20	7.10 pH	57.62 °F	611.45 µS/cm	0.02 mg/L	66.07 NTU	5.3 mV	200.00 ml/min
3/16/2022 1:34 PM	14:20	7.11 pH	57.63 °F	610.55 µS/cm	0.02 mg/L	49.98 NTU	5.5 mV	200.00 ml/min

3/16/2022 1:35 PM	15:20	7.12 pH	57.69 °F	610.38 µS/cm	0.02 mg/L	40.35 NTU	5.7 mV	200.00 ml/min
3/16/2022 1:36 PM	16:20	7.13 pH	57.65 °F	610.30 µS/cm	0.02 mg/L	37.73 NTU	5.5 mV	200.00 ml/min
3/16/2022 1:37 PM	17:20	7.14 pH	57.70 °F	610.91 µS/cm	0.02 mg/L	34.20 NTU	5.8 mV	200.00 ml/min
3/16/2022 1:38 PM	18:20	7.15 pH	57.67 °F	610.65 µS/cm	0.01 mg/L	28.35 NTU	6.5 mV	200.00 ml/min
3/16/2022 1:39 PM	19:20	7.16 pH	57.66 °F	610.15 µS/cm	0.01 mg/L	21.78 NTU	7.2 mV	200.00 ml/min
3/16/2022 1:40 PM	20:20	7.16 pH	57.68 °F	610.23 µS/cm	0.01 mg/L	19.09 NTU	7.0 mV	200.00 ml/min
3/16/2022 1:41 PM	21:20	7.17 pH	57.68 °F	610.66 µS/cm	0.01 mg/L	14.52 NTU	7.4 mV	200.00 ml/min
3/16/2022 1:42 PM	22:20	7.17 pH	57.63 °F	610.00 µS/cm	0.00 mg/L	9.50 NTU	7.8 mV	200.00 ml/min
3/16/2022 1:43 PM	23:20	7.17 pH	57.62 °F	610.27 µS/cm	0.00 mg/L	9.76 NTU	8.4 mV	200.00 ml/min
3/16/2022 1:44 PM	24:20	7.17 pH	57.60 °F	609.38 µS/cm	0.00 mg/L	7.00 NTU	8.9 mV	200.00 ml/min
3/16/2022 1:45 PM	25:20	7.17 pH	57.63 °F	609.51 µS/cm	0.00 mg/L	8.15 NTU	9.2 mV	200.00 ml/min
3/16/2022 1:46 PM	26:20	7.18 pH	57.71 °F	609.46 µS/cm	0.00 mg/L	7.44 NTU	9.4 mV	200.00 ml/min
3/16/2022 1:47 PM	27:20	7.18 pH	57.67 °F	609.40 µS/cm	0.00 mg/L	6.23 NTU	9.7 mV	200.00 ml/min
3/16/2022 1:48 PM	28:20	7.18 pH	57.67 °F	609.86 µS/cm	0.00 mg/L	6.03 NTU	9.8 mV	200.00 ml/min
3/16/2022 1:49 PM	29:20	7.18 pH	57.72 °F	610.03 µS/cm	0.00 mg/L	6.07 NTU	10.1 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-33	VOCs

Low-Flow Test Report:

Test Date / Time: 3/16/2022 12:26:53 PM
Project: HRID 1Q2022 MW-33D
Operator Name: Sabrina Bailey

Location Name: HRID MW-33D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 23 ft** **Total Depth: 33 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 9 ft** **Estimated Total Volume Pumped: 8076.667 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 12:26 PM	00:00	7.14 pH	57.44 °F	576.05 µS/cm	3.45 mg/L	3.20 NTU	-27.6 mV	200.00 ml/min
3/16/2022 12:27 PM	01:00	7.14 pH	57.83 °F	576.48 µS/cm	3.43 mg/L	2.61 NTU	-23.6 mV	200.00 ml/min
3/16/2022 12:28 PM	02:00	7.11 pH	57.93 °F	575.25 µS/cm	3.41 mg/L	3.29 NTU	-17.9 mV	200.00 ml/min
3/16/2022 12:29 PM	03:00	7.10 pH	57.76 °F	574.82 µS/cm	3.41 mg/L	3.69 NTU	-12.2 mV	200.00 ml/min
3/16/2022 12:30 PM	04:00	7.09 pH	60.02 °F	583.53 µS/cm	3.32 mg/L	2.60 NTU	-10.8 mV	200.00 ml/min
3/16/2022 12:31 PM	05:00	7.09 pH	62.21 °F	582.63 µS/cm	3.27 mg/L	2.02 NTU	-9.9 mV	200.00 ml/min
3/16/2022 12:32 PM	06:00	7.11 pH	64.50 °F	583.12 µS/cm	3.21 mg/L	2.31 NTU	-10.7 mV	200.00 ml/min
3/16/2022 12:33 PM	07:00	7.14 pH	65.86 °F	585.42 µS/cm	3.21 mg/L	2.14 NTU	-12.0 mV	200.00 ml/min
3/16/2022 12:34 PM	08:00	7.18 pH	67.46 °F	584.85 µS/cm	3.20 mg/L	2.13 NTU	-13.5 mV	200.00 ml/min
3/16/2022 12:35 PM	09:00	7.26 pH	58.23 °F	575.18 µS/cm	3.35 mg/L	4.72 NTU	-11.4 mV	200.00 ml/min
3/16/2022 12:36 PM	10:00	7.25 pH	58.50 °F	578.58 µS/cm	3.23 mg/L	5.28 NTU	-8.0 mV	200.00 ml/min
3/16/2022 12:37 PM	11:00	7.23 pH	60.15 °F	585.94 µS/cm	3.14 mg/L	3.92 NTU	-5.6 mV	200.00 ml/min
3/16/2022 12:42 PM	16:05	7.23 pH	57.76 °F	585.69 µS/cm	2.51 mg/L	1.87 NTU	0.0 mV	200.00 ml/min
3/16/2022 12:43 PM	17:05	7.23 pH	56.98 °F	587.20 µS/cm	2.38 mg/L	1.62 NTU	3.1 mV	200.00 ml/min
3/16/2022 12:44 PM	18:05	7.19 pH	56.99 °F	594.79 µS/cm	1.60 mg/L	8.53 NTU	4.5 mV	200.00 ml/min

3/16/2022 12:45 PM	19:05	7.17 pH	56.95 °F	594.31 µS/cm	1.52 mg/L	27.45 NTU	3.7 mV	200.00 ml/min
3/16/2022 12:46 PM	20:05	7.12 pH	57.08 °F	603.74 µS/cm	0.56 mg/L	87.39 NTU	-12.0 mV	200.00 ml/min
3/16/2022 12:47 PM	21:05	7.10 pH	57.18 °F	605.05 µS/cm	0.26 mg/L	96.14 NTU	-20.1 mV	200.00 ml/min
3/16/2022 12:48 PM	22:05	7.10 pH	57.23 °F	605.58 µS/cm	0.16 mg/L	64.89 NTU	-23.9 mV	200.00 ml/min
3/16/2022 12:49 PM	23:05	7.09 pH	57.76 °F	606.61 µS/cm	0.09 mg/L	48.12 NTU	-26.1 mV	200.00 ml/min
3/16/2022 12:50 PM	24:05	7.10 pH	57.77 °F	603.99 µS/cm	0.14 mg/L	39.64 NTU	-27.3 mV	200.00 ml/min
3/16/2022 12:51 PM	25:05	7.11 pH	59.18 °F	605.83 µS/cm	0.15 mg/L	26.19 NTU	-28.1 mV	200.00 ml/min
3/16/2022 12:53 PM	26:35	7.15 pH	57.62 °F	600.80 µS/cm	0.13 mg/L	27.30 NTU	-30.6 mV	200.00 ml/min
3/16/2022 12:54 PM	27:23	7.15 pH	58.03 °F	603.76 µS/cm	0.17 mg/L	27.56 NTU	-31.5 mV	200.00 ml/min
3/16/2022 12:55 PM	28:23	7.15 pH	58.27 °F	603.83 µS/cm	0.20 mg/L	35.03 NTU	-31.8 mV	200.00 ml/min
3/16/2022 12:56 PM	29:23	7.16 pH	58.20 °F	603.97 µS/cm	0.20 mg/L	50.38 NTU	-32.0 mV	200.00 ml/min
3/16/2022 12:57 PM	30:23	7.16 pH	58.04 °F	603.66 µS/cm	0.19 mg/L	44.57 NTU	-31.9 mV	200.00 ml/min
3/16/2022 12:58 PM	31:23	7.17 pH	57.98 °F	604.52 µS/cm	0.16 mg/L	53.44 NTU	-32.0 mV	200.00 ml/min
3/16/2022 12:59 PM	32:23	7.17 pH	58.15 °F	603.61 µS/cm	0.14 mg/L	46.44 NTU	-32.0 mV	200.00 ml/min
3/16/2022 1:00 PM	33:23	7.17 pH	58.19 °F	602.91 µS/cm	0.13 mg/L	33.92 NTU	-31.8 mV	200.00 ml/min
3/16/2022 1:01 PM	34:23	7.17 pH	58.05 °F	603.19 µS/cm	0.12 mg/L	30.37 NTU	-31.5 mV	200.00 ml/min
3/16/2022 1:02 PM	35:23	7.17 pH	58.24 °F	604.16 µS/cm	0.09 mg/L	24.14 NTU	-31.3 mV	200.00 ml/min
3/16/2022 1:03 PM	36:23	7.16 pH	58.39 °F	604.55 µS/cm	0.08 mg/L	22.67 NTU	-30.9 mV	200.00 ml/min
3/16/2022 1:04 PM	37:23	7.17 pH	58.45 °F	604.11 µS/cm	0.10 mg/L	27.62 NTU	-31.2 mV	200.00 ml/min
3/16/2022 1:05 PM	38:23	7.17 pH	58.36 °F	603.32 µS/cm	0.12 mg/L	29.74 NTU	-31.1 mV	200.00 ml/min
3/16/2022 1:06 PM	39:23	7.17 pH	58.40 °F	604.41 µS/cm	0.14 mg/L	31.00 NTU	-31.3 mV	200.00 ml/min
3/16/2022 1:07 PM	40:23	7.17 pH	58.60 °F	603.06 µS/cm	0.15 mg/L	29.12 NTU	-31.6 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-33D	VOCs

Low-Flow Test Report:

Test Date / Time: 3/17/2022 11:21:14 AM
Project: HRID 1Q2022 MW-36
Operator Name: Sabrina Bailey

Location Name: HRID MW-36 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 18 ft** **Total Depth: 28 ft** **Initial Depth to Water: 15.44 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 22 ft** **Estimated Total Volume Pumped: 5200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/17/2022 11:21 AM	00:00	7.09 pH	55.80 °F	344.85 µS/cm	8.13 mg/L	812.45 NTU	47.9 mV	15.44 ft	200.00 ml/min
3/17/2022 11:22 AM	01:00	7.07 pH	55.82 °F	349.09 µS/cm	8.12 mg/L	958.35 NTU	49.7 mV	15.44 ft	200.00 ml/min
3/17/2022 11:23 AM	02:00	7.06 pH	55.99 °F	352.01 µS/cm	8.09 mg/L	1,011.7 NTU	51.0 mV	15.44 ft	200.00 ml/min
3/17/2022 11:24 AM	03:00	7.04 pH	56.33 °F	356.50 µS/cm	8.02 mg/L	1,158.8 NTU	52.5 mV	15.44 ft	200.00 ml/min
3/17/2022 11:25 AM	04:00	7.03 pH	56.36 °F	354.83 µS/cm	7.95 mg/L	1,232.9 NTU	53.9 mV	15.44 ft	200.00 ml/min
3/17/2022 11:26 AM	05:00	7.02 pH	56.33 °F	354.56 µS/cm	7.91 mg/L	1,230.7 NTU	55.3 mV	15.44 ft	200.00 ml/min
3/17/2022 11:27 AM	06:00	7.02 pH	56.19 °F	353.12 µS/cm	7.88 mg/L	1,289.2 NTU	56.3 mV	15.44 ft	200.00 ml/min
3/17/2022 11:28 AM	07:00	7.01 pH	56.15 °F	352.60 µS/cm	7.83 mg/L	1,027.9 NTU	57.3 mV	15.44 ft	200.00 ml/min
3/17/2022 11:29 AM	08:00	7.00 pH	56.28 °F	350.89 µS/cm	7.78 mg/L	810.57 NTU	58.2 mV	15.44 ft	200.00 ml/min
3/17/2022 11:30 AM	09:00	7.00 pH	56.23 °F	351.24 µS/cm	7.81 mg/L	708.79 NTU	59.0 mV	15.44 ft	200.00 ml/min
3/17/2022 11:31 AM	10:00	6.99 pH	56.24 °F	351.02 µS/cm	7.83 mg/L	539.41 NTU	59.9 mV	15.44 ft	200.00 ml/min
3/17/2022 11:32 AM	11:00	6.99 pH	56.20 °F	351.74 µS/cm	7.91 mg/L	506.98 NTU	60.5 mV	15.44 ft	200.00 ml/min
3/17/2022 11:33 AM	12:00	6.99 pH	56.32 °F	351.90 µS/cm	8.00 mg/L	372.40 NTU	61.2 mV	15.44 ft	200.00 ml/min
3/17/2022 11:34 AM	13:00	6.99 pH	56.26 °F	351.22 µS/cm	8.06 mg/L	341.32 NTU	61.7 mV	15.44 ft	200.00 ml/min
3/17/2022 11:35 AM	14:00	6.98 pH	55.77 °F	353.82 µS/cm	8.18 mg/L	241.28 NTU	62.5 mV	15.44 ft	200.00 ml/min

3/17/2022 11:36 AM	15:00	6.98 pH	56.23 °F	350.72 µS/cm	8.07 mg/L	225.46 NTU	62.8 mV	15.44 ft	200.00 ml/min
3/17/2022 11:37 AM	16:00	6.98 pH	56.28 °F	349.70 µS/cm	8.00 mg/L	187.23 NTU	63.2 mV	15.44 ft	200.00 ml/min
3/17/2022 11:38 AM	17:00	6.97 pH	56.17 °F	349.62 µS/cm	7.97 mg/L	164.92 NTU	63.3 mV	15.44 ft	200.00 ml/min
3/17/2022 11:39 AM	18:00	6.97 pH	56.32 °F	349.11 µS/cm	7.89 mg/L	126.80 NTU	63.5 mV	15.44 ft	200.00 ml/min
3/17/2022 11:40 AM	19:00	6.96 pH	56.27 °F	348.99 µS/cm	7.79 mg/L	101.63 NTU	63.4 mV	15.44 ft	200.00 ml/min
3/17/2022 11:41 AM	20:00	6.95 pH	56.28 °F	348.69 µS/cm	7.66 mg/L	84.74 NTU	63.6 mV	15.44 ft	200.00 ml/min
3/17/2022 11:42 AM	21:00	6.95 pH	56.21 °F	348.07 µS/cm	7.55 mg/L	73.43 NTU	63.6 mV	15.44 ft	200.00 ml/min
3/17/2022 11:43 AM	22:00	6.93 pH	28.82 °F	553.61 µS/cm	13.68 mg/L	59.41 NTU	63.5 mV	15.44 ft	200.00 ml/min
3/17/2022 11:44 AM	23:00	6.94 pH	56.24 °F	347.00 µS/cm	7.23 mg/L	52.82 NTU	63.6 mV	15.44 ft	200.00 ml/min
3/17/2022 11:45 AM	24:00	6.93 pH	56.17 °F	347.49 µS/cm	7.32 mg/L	49.04 NTU	63.8 mV	15.44 ft	200.00 ml/min
3/17/2022 11:46 AM	25:00	6.93 pH	56.12 °F	347.54 µS/cm	7.34 mg/L	38.13 NTU	63.8 mV	15.44 ft	200.00 ml/min
3/17/2022 11:47 AM	26:00	6.93 pH	56.15 °F	347.24 µS/cm	7.31 mg/L	44.30 NTU	64.8 mV	15.44 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-36	VOCS

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/16/2022 10:02:25 AM
Project: HRID 1Q2022 MW-37
Operator Name: Sabrina Bailey

Location Name: HRID MW-37 **Well Diameter: 2 cm** **Casing Type: PVC sch 40** **Screen Length: 6 m** **Top of Screen: 15 m** **Total Depth: 25 m**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 6.5 ft** **Estimated Total Volume Pumped: 4173.333 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 10:02 AM	00:00	7.18 pH	56.84 °F	590.48 µS/cm	0.15 mg/L	1,352.7 NTU	-9.0 mV	200.00 ml/min
3/16/2022 10:03 AM	01:00	7.15 pH	55.84 °F	589.81 µS/cm	0.13 mg/L	1,807.4 NTU	0.8 mV	200.00 ml/min
3/16/2022 10:04 AM	02:00	7.14 pH	56.33 °F	592.08 µS/cm	0.11 mg/L	1,495.2 NTU	8.1 mV	200.00 ml/min
3/16/2022 10:05 AM	03:00	7.13 pH	56.24 °F	592.02 µS/cm	0.09 mg/L	929.33 NTU	12.4 mV	200.00 ml/min
3/16/2022 10:06 AM	04:00	7.13 pH	56.38 °F	590.81 µS/cm	0.11 mg/L	841.52 NTU	14.4 mV	200.00 ml/min
3/16/2022 10:07 AM	05:00	7.13 pH	55.62 °F	590.71 µS/cm	0.16 mg/L	878.14 NTU	15.8 mV	200.00 ml/min
3/16/2022 10:08 AM	06:00	7.13 pH	56.27 °F	593.00 µS/cm	0.10 mg/L	756.59 NTU	16.7 mV	200.00 ml/min
3/16/2022 10:09 AM	07:00	7.13 pH	56.47 °F	592.76 µS/cm	0.08 mg/L	529.12 NTU	16.6 mV	200.00 ml/min
3/16/2022 10:10 AM	08:00	7.13 pH	56.35 °F	592.33 µS/cm	0.07 mg/L	456.66 NTU	16.1 mV	200.00 ml/min
3/16/2022 10:11 AM	09:00	7.13 pH	56.24 °F	592.41 µS/cm	0.05 mg/L	362.59 NTU	15.0 mV	200.00 ml/min
3/16/2022 10:12 AM	10:00	7.14 pH	56.08 °F	592.01 µS/cm	0.05 mg/L	345.90 NTU	14.2 mV	200.00 ml/min
3/16/2022 10:13 AM	11:00	7.14 pH	55.97 °F	591.60 µS/cm	0.05 mg/L	304.57 NTU	13.9 mV	200.00 ml/min
3/16/2022 10:14 AM	12:00	7.14 pH	55.86 °F	592.71 µS/cm	0.06 mg/L	320.25 NTU	13.3 mV	200.00 ml/min
3/16/2022 10:15 AM	13:00	7.13 pH	56.32 °F	593.89 µS/cm	0.04 mg/L	251.09 NTU	12.2 mV	200.00 ml/min
3/16/2022 10:16 AM	14:00	7.13 pH	56.25 °F	594.55 µS/cm	0.02 mg/L	218.95 NTU	11.6 mV	200.00 ml/min

3/16/2022 10:17 AM	15:00	7.14 pH	56.18 °F	594.31 µS/cm	0.02 mg/L	202.24 NTU	11.1 mV	200.00 ml/min
3/16/2022 10:18 AM	16:00	7.14 pH	56.13 °F	594.96 µS/cm	0.03 mg/L	198.63 NTU	10.6 mV	200.00 ml/min
3/16/2022 10:19 AM	16:52	7.14 pH	56.25 °F	596.02 µS/cm	0.02 mg/L	162.62 NTU	10.4 mV	200.00 ml/min
3/16/2022 10:20 AM	17:52	7.14 pH	56.21 °F	596.70 µS/cm	0.02 mg/L	130.26 NTU	10.4 mV	200.00 ml/min
3/16/2022 10:21 AM	18:52	7.14 pH	56.16 °F	597.04 µS/cm	0.02 mg/L	119.35 NTU	10.2 mV	200.00 ml/min
3/16/2022 10:22 AM	19:52	7.14 pH	56.18 °F	597.89 µS/cm	0.02 mg/L	128.09 NTU	10.0 mV	200.00 ml/min
3/16/2022 10:23 AM	20:52	7.14 pH	56.24 °F	598.71 µS/cm	0.03 mg/L	124.27 NTU	9.7 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-37	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/16/2022 2:06:34 PM
Project: HRID 1Q2022 MW-33 (2)
Operator Name: Sabrina Bailey

Location Name: HRID MW-40 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 8 ft** **Total Depth: 18 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 7 ft** **Estimated Total Volume Pumped: 6200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 2:06 PM	00:00	6.90 pH	49.15 °F	1,032.4 µS/cm	0.05 mg/L	224.02 NTU	47.7 mV	200.00 ml/min
3/16/2022 2:07 PM	01:00	6.78 pH	49.18 °F	1,039.0 µS/cm	0.05 mg/L	296.65 NTU	58.5 mV	200.00 ml/min
3/16/2022 2:08 PM	02:00	6.74 pH	49.32 °F	1,040.9 µS/cm	0.04 mg/L	325.36 NTU	64.6 mV	200.00 ml/min
3/16/2022 2:09 PM	03:00	6.72 pH	49.37 °F	1,042.5 µS/cm	0.04 mg/L	252.81 NTU	68.1 mV	200.00 ml/min
3/16/2022 2:10 PM	04:00	6.71 pH	49.67 °F	1,043.9 µS/cm	0.03 mg/L	209.72 NTU	70.4 mV	200.00 ml/min
3/16/2022 2:11 PM	05:00	6.71 pH	49.85 °F	1,046.1 µS/cm	0.03 mg/L	158.15 NTU	72.3 mV	200.00 ml/min
3/16/2022 2:12 PM	06:00	6.70 pH	49.73 °F	1,050.8 µS/cm	0.02 mg/L	145.07 NTU	73.9 mV	200.00 ml/min
3/16/2022 2:13 PM	07:00	6.71 pH	49.79 °F	1,053.4 µS/cm	0.01 mg/L	131.18 NTU	75.1 mV	200.00 ml/min
3/16/2022 2:14 PM	08:00	6.71 pH	50.03 °F	1,049.7 µS/cm	0.02 mg/L	113.29 NTU	76.0 mV	200.00 ml/min
3/16/2022 2:15 PM	09:00	6.71 pH	50.44 °F	1,047.0 µS/cm	0.02 mg/L	113.47 NTU	76.7 mV	200.00 ml/min
3/16/2022 2:16 PM	10:00	6.71 pH	50.52 °F	1,043.5 µS/cm	0.02 mg/L	81.11 NTU	77.3 mV	200.00 ml/min
3/16/2022 2:17 PM	11:00	6.71 pH	50.32 °F	1,037.3 µS/cm	0.01 mg/L	79.03 NTU	78.0 mV	200.00 ml/min
3/16/2022 2:18 PM	12:00	6.72 pH	50.50 °F	1,037.6 µS/cm	0.01 mg/L	79.92 NTU	78.4 mV	200.00 ml/min
3/16/2022 2:19 PM	13:00	6.72 pH	50.47 °F	1,034.5 µS/cm	0.00 mg/L	82.26 NTU	79.0 mV	200.00 ml/min
3/16/2022 2:20 PM	14:00	6.72 pH	50.66 °F	1,034.7 µS/cm	0.01 mg/L	67.56 NTU	79.3 mV	200.00 ml/min

3/16/2022 2:21 PM	15:00	6.72 pH	51.32 °F	1,035.3 µS/cm	0.01 mg/L	59.28 NTU	79.4 mV	200.00 ml/min
3/16/2022 2:22 PM	16:00	6.72 pH	51.77 °F	1,035.0 µS/cm	0.01 mg/L	61.06 NTU	79.5 mV	200.00 ml/min
3/16/2022 2:23 PM	17:00	6.73 pH	51.79 °F	1,033.7 µS/cm	0.01 mg/L	53.99 NTU	79.7 mV	200.00 ml/min
3/16/2022 2:24 PM	18:00	6.73 pH	51.37 °F	1,029.7 µS/cm	0.01 mg/L	53.62 NTU	80.1 mV	200.00 ml/min
3/16/2022 2:25 PM	19:00	6.74 pH	51.33 °F	1,034.0 µS/cm	0.01 mg/L	45.35 NTU	80.1 mV	200.00 ml/min
3/16/2022 2:26 PM	20:00	6.74 pH	52.31 °F	1,037.3 µS/cm	0.01 mg/L	43.36 NTU	79.9 mV	200.00 ml/min
3/16/2022 2:27 PM	21:00	6.74 pH	55.03 °F	1,050.2 µS/cm	0.02 mg/L	159.15 NTU	79.3 mV	200.00 ml/min
3/16/2022 2:28 PM	22:00	6.76 pH	49.41 °F	1,026.9 µS/cm	0.00 mg/L	73.59 NTU	81.0 mV	200.00 ml/min
3/16/2022 2:29 PM	23:00	6.77 pH	48.05 °F	1,039.2 µS/cm	0.00 mg/L	50.24 NTU	81.2 mV	200.00 ml/min
3/16/2022 2:30 PM	24:00	6.76 pH	48.31 °F	1,040.9 µS/cm	0.00 mg/L	35.92 NTU	82.0 mV	200.00 ml/min
3/16/2022 2:31 PM	25:00	6.76 pH	48.90 °F	1,033.0 µS/cm	0.00 mg/L	21.08 NTU	82.9 mV	200.00 ml/min
3/16/2022 2:32 PM	26:00	6.76 pH	49.44 °F	1,027.5 µS/cm	0.00 mg/L	12.73 NTU	83.6 mV	200.00 ml/min
3/16/2022 2:33 PM	27:00	6.75 pH	50.18 °F	1,026.2 µS/cm	0.00 mg/L	10.20 NTU	83.9 mV	200.00 ml/min
3/16/2022 2:34 PM	28:00	6.75 pH	51.16 °F	1,027.6 µS/cm	0.00 mg/L	8.77 NTU	83.8 mV	200.00 ml/min
3/16/2022 2:35 PM	29:00	6.76 pH	51.33 °F	1,026.6 µS/cm	0.00 mg/L	10.17 NTU	84.1 mV	200.00 ml/min
3/16/2022 2:36 PM	30:00	6.76 pH	51.56 °F	1,028.8 µS/cm	0.00 mg/L	11.98 NTU	84.0 mV	200.00 ml/min
3/16/2022 2:37 PM	31:00	6.76 pH	52.36 °F	1,028.9 µS/cm	0.00 mg/L	8.31 NTU	83.8 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-40	VOCs

Low-Flow Test Report:

Test Date / Time: 3/14/2022 12:53:25 PM
Project: HRID 1Q2022 MW-41
Operator Name: Sabrina Bailey

Location Name: HRID MW-41 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 12 ft** **Total Depth: 22 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 8 ft** **Estimated Total Volume Pumped: 4200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/14/2022 12:53 PM	00:00	7.15 pH	56.52 °F	636.61 µS/cm	0.30 mg/L	1,628.5 NTU	-77.5 mV	200.00 ml/min
3/14/2022 12:54 PM	01:00	7.12 pH	56.50 °F	638.14 µS/cm	0.27 mg/L	1,554.4 NTU	-80.4 mV	200.00 ml/min
3/14/2022 12:55 PM	02:00	7.09 pH	55.77 °F	636.83 µS/cm	0.20 mg/L	1,858.6 NTU	-82.4 mV	200.00 ml/min
3/14/2022 12:56 PM	03:00	7.09 pH	56.43 °F	637.72 µS/cm	0.15 mg/L	1,664.8 NTU	-83.1 mV	200.00 ml/min
3/14/2022 12:57 PM	04:00	7.09 pH	56.39 °F	636.21 µS/cm	0.14 mg/L	1,606.2 NTU	-84.6 mV	200.00 ml/min
3/14/2022 12:58 PM	05:00	7.09 pH	56.62 °F	640.19 µS/cm	0.13 mg/L	1,275.7 NTU	-86.5 mV	200.00 ml/min
3/14/2022 12:59 PM	06:00	7.09 pH	56.03 °F	638.57 µS/cm	0.13 mg/L	1,472.9 NTU	-89.3 mV	200.00 ml/min
3/14/2022 1:00 PM	07:00	7.10 pH	56.06 °F	638.78 µS/cm	0.08 mg/L	1,164.2 NTU	-91.6 mV	200.00 ml/min
3/14/2022 1:01 PM	08:00	7.10 pH	56.10 °F	638.46 µS/cm	0.07 mg/L	991.51 NTU	-93.5 mV	200.00 ml/min
3/14/2022 1:02 PM	09:00	7.11 pH	56.03 °F	639.01 µS/cm	0.08 mg/L	731.90 NTU	-95.5 mV	200.00 ml/min
3/14/2022 1:03 PM	10:00	7.11 pH	56.01 °F	638.71 µS/cm	0.08 mg/L	626.47 NTU	-97.3 mV	200.00 ml/min
3/14/2022 1:04 PM	11:00	7.12 pH	55.94 °F	638.65 µS/cm	0.10 mg/L	430.01 NTU	-99.2 mV	200.00 ml/min
3/14/2022 1:05 PM	12:00	7.13 pH	55.96 °F	639.84 µS/cm	0.11 mg/L	327.90 NTU	-101.1 mV	200.00 ml/min
3/14/2022 1:06 PM	13:00	7.13 pH	55.96 °F	641.40 µS/cm	0.11 mg/L	293.32 NTU	-102.7 mV	200.00 ml/min
3/14/2022 1:07 PM	14:00	7.14 pH	56.00 °F	642.72 µS/cm	0.11 mg/L	237.11 NTU	-103.9 mV	200.00 ml/min

3/14/2022 1:08 PM	15:00	7.14 pH	56.00 °F	644.10 µS/cm	0.10 mg/L	199.59 NTU	-105.0 mV	200.00 ml/min
3/14/2022 1:09 PM	16:00	7.14 pH	56.00 °F	645.16 µS/cm	0.09 mg/L	171.03 NTU	-106.1 mV	200.00 ml/min
3/14/2022 1:10 PM	17:00	7.15 pH	56.25 °F	644.61 µS/cm	0.09 mg/L	215.44 NTU	-106.5 mV	200.00 ml/min
3/14/2022 1:11 PM	18:00	7.16 pH	56.29 °F	643.32 µS/cm	0.10 mg/L	156.94 NTU	-106.8 mV	200.00 ml/min
3/14/2022 1:12 PM	19:00	7.17 pH	56.01 °F	642.41 µS/cm	0.09 mg/L	119.48 NTU	-107.7 mV	200.00 ml/min
3/14/2022 1:13 PM	20:00	7.17 pH	56.17 °F	643.75 µS/cm	0.08 mg/L	120.33 NTU	-109.0 mV	200.00 ml/min
3/14/2022 1:14 PM	21:00	7.18 pH	56.49 °F	643.90 µS/cm	0.09 mg/L	118.69 NTU	-109.6 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-41	VOCs

Low-Flow Test Report:

Test Date / Time: 3/14/2022 1:41:26 PM
Project: HRID 1Q2022 MW-29D
Operator Name: Sabrina Bailey

Location Name: HRID MW-41 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 31 ft** **Total Depth: 41 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 16 ft** **Estimated Total Volume Pumped: 5600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/14/2022 1:41 PM	00:00	7.23 pH	57.54 °F	622.47 µS/cm	0.14 mg/L	48.97 NTU	-24.1 mV	200.00 ml/min
3/14/2022 1:42 PM	01:00	7.21 pH	57.04 °F	624.61 µS/cm	0.11 mg/L	46.73 NTU	-31.1 mV	200.00 ml/min
3/14/2022 1:43 PM	02:00	7.21 pH	56.97 °F	626.42 µS/cm	0.11 mg/L	42.21 NTU	-36.6 mV	200.00 ml/min
3/14/2022 1:44 PM	03:00	7.21 pH	57.06 °F	628.25 µS/cm	0.10 mg/L	42.71 NTU	-40.4 mV	200.00 ml/min
3/14/2022 1:45 PM	04:00	7.21 pH	57.19 °F	628.88 µS/cm	0.08 mg/L	37.51 NTU	-44.3 mV	200.00 ml/min
3/14/2022 1:46 PM	05:00	7.22 pH	57.27 °F	627.04 µS/cm	0.07 mg/L	35.58 NTU	-47.2 mV	200.00 ml/min
3/14/2022 1:47 PM	06:00	7.23 pH	57.29 °F	626.58 µS/cm	0.07 mg/L	34.60 NTU	-49.9 mV	200.00 ml/min
3/14/2022 1:48 PM	07:00	7.25 pH	56.98 °F	627.49 µS/cm	0.08 mg/L	35.91 NTU	-54.8 mV	200.00 ml/min
3/14/2022 1:49 PM	08:00	7.25 pH	57.17 °F	628.21 µS/cm	0.04 mg/L	34.86 NTU	-59.8 mV	200.00 ml/min
3/14/2022 1:50 PM	09:00	7.26 pH	57.14 °F	627.94 µS/cm	0.02 mg/L	29.00 NTU	-63.4 mV	200.00 ml/min
3/14/2022 1:51 PM	10:00	7.26 pH	57.07 °F	628.25 µS/cm	0.02 mg/L	26.52 NTU	-67.4 mV	200.00 ml/min
3/14/2022 1:52 PM	11:00	7.26 pH	57.00 °F	627.81 µS/cm	0.01 mg/L	24.83 NTU	-71.1 mV	200.00 ml/min
3/14/2022 1:53 PM	12:00	7.27 pH	56.95 °F	627.85 µS/cm	0.01 mg/L	24.76 NTU	-75.1 mV	200.00 ml/min
3/14/2022 1:54 PM	13:00	7.27 pH	56.93 °F	627.53 µS/cm	0.00 mg/L	24.27 NTU	-78.8 mV	200.00 ml/min
3/14/2022 1:55 PM	14:00	7.26 pH	56.96 °F	626.27 µS/cm	0.01 mg/L	25.27 NTU	-81.4 mV	200.00 ml/min

3/14/2022 1:56 PM	15:00	7.24 pH	57.00 °F	625.53 µS/cm	0.01 mg/L	24.89 NTU	-83.0 mV	200.00 ml/min
3/14/2022 1:57 PM	16:00	7.23 pH	56.96 °F	625.02 µS/cm	0.00 mg/L	21.38 NTU	-83.6 mV	200.00 ml/min
3/14/2022 1:58 PM	17:00	7.21 pH	56.95 °F	624.33 µS/cm	0.00 mg/L	20.69 NTU	-84.4 mV	200.00 ml/min
3/14/2022 1:59 PM	18:00	7.20 pH	56.93 °F	624.30 µS/cm	0.00 mg/L	18.94 NTU	-85.0 mV	200.00 ml/min
3/14/2022 2:00 PM	19:00	7.18 pH	56.91 °F	622.28 µS/cm	0.00 mg/L	14.94 NTU	-83.6 mV	200.00 ml/min
3/14/2022 2:01 PM	20:00	7.17 pH	56.90 °F	622.67 µS/cm	0.00 mg/L	13.23 NTU	-83.5 mV	200.00 ml/min
3/14/2022 2:02 PM	21:00	7.16 pH	56.91 °F	623.00 µS/cm	0.00 mg/L	11.94 NTU	-83.4 mV	200.00 ml/min
3/14/2022 2:03 PM	22:00	7.15 pH	56.92 °F	624.51 µS/cm	0.00 mg/L	10.46 NTU	-84.0 mV	200.00 ml/min
3/14/2022 2:04 PM	23:00	7.15 pH	56.93 °F	626.37 µS/cm	0.00 mg/L	11.05 NTU	-85.4 mV	200.00 ml/min
3/14/2022 2:05 PM	24:00	7.14 pH	56.89 °F	626.92 µS/cm	0.00 mg/L	9.83 NTU	-86.4 mV	200.00 ml/min
3/14/2022 2:06 PM	25:00	7.14 pH	56.90 °F	627.67 µS/cm	0.00 mg/L	9.41 NTU	-87.1 mV	200.00 ml/min
3/14/2022 2:07 PM	26:00	7.14 pH	56.89 °F	626.68 µS/cm	0.00 mg/L	6.85 NTU	-86.9 mV	200.00 ml/min
3/14/2022 2:08 PM	27:00	7.13 pH	56.90 °F	626.58 µS/cm	0.00 mg/L	6.46 NTU	-86.6 mV	200.00 ml/min
3/14/2022 2:09 PM	28:00	7.13 pH	56.91 °F	627.89 µS/cm	0.00 mg/L	5.61 NTU	-87.4 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-29D	VOCs

Low-Flow Test Report:

Test Date / Time: 3/14/2022 2:24:49 PM
Project: HRID 1Q2022 MW-29
Operator Name: Sabrina Bailey

Location Name: HRID MW-41 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 7.6 ft** **Total Depth: 17.6 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 8 ft** **Estimated Total Volume Pumped: 6380 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/14/2022 2:24 PM	00:00	7.03 pH	54.75 °F	776.58 µS/cm	0.05 mg/L	24.31 NTU	-127.0 mV	200.00 ml/min
3/14/2022 2:25 PM	01:00	6.97 pH	55.57 °F	777.86 µS/cm	0.07 mg/L	20.35 NTU	-130.3 mV	200.00 ml/min
3/14/2022 2:26 PM	02:00	6.99 pH	55.86 °F	778.25 µS/cm	0.07 mg/L	15.16 NTU	-133.6 mV	200.00 ml/min
3/14/2022 2:27 PM	03:00	7.02 pH	55.25 °F	780.55 µS/cm	0.05 mg/L	13.63 NTU	-138.0 mV	200.00 ml/min
3/14/2022 2:28 PM	04:00	7.03 pH	55.33 °F	777.67 µS/cm	0.03 mg/L	10.38 NTU	-140.7 mV	200.00 ml/min
3/14/2022 2:29 PM	05:00	7.04 pH	55.44 °F	772.89 µS/cm	0.03 mg/L	10.82 NTU	-143.2 mV	200.00 ml/min
3/14/2022 2:30 PM	06:00	7.05 pH	55.39 °F	768.48 µS/cm	0.03 mg/L	8.39 NTU	-145.8 mV	200.00 ml/min
3/14/2022 2:31 PM	07:00	7.06 pH	55.31 °F	766.16 µS/cm	0.02 mg/L	7.67 NTU	-148.0 mV	200.00 ml/min
3/14/2022 2:32 PM	08:00	7.07 pH	55.25 °F	763.28 µS/cm	0.01 mg/L	5.84 NTU	-149.9 mV	200.00 ml/min
3/14/2022 2:33 PM	09:00	7.08 pH	55.22 °F	760.66 µS/cm	0.02 mg/L	5.39 NTU	-151.3 mV	200.00 ml/min
3/14/2022 2:34 PM	10:00	7.08 pH	55.81 °F	758.07 µS/cm	0.02 mg/L	4.45 NTU	-152.6 mV	200.00 ml/min
3/14/2022 2:35 PM	11:00	7.09 pH	55.74 °F	758.79 µS/cm	0.01 mg/L	4.40 NTU	-153.7 mV	200.00 ml/min
3/14/2022 2:36 PM	12:00	7.09 pH	55.96 °F	762.44 µS/cm	0.01 mg/L	4.25 NTU	-155.0 mV	200.00 ml/min
3/14/2022 2:37 PM	13:00	7.10 pH	56.17 °F	762.86 µS/cm	0.02 mg/L	4.10 NTU	-157.1 mV	200.00 ml/min
3/14/2022 2:38 PM	14:00	7.10 pH	56.02 °F	761.06 µS/cm	0.02 mg/L	3.94 NTU	-158.4 mV	200.00 ml/min

3/14/2022 2:39 PM	15:00	7.11 pH	55.78 °F	762.72 µS/cm	0.01 mg/L	3.58 NTU	-160.6 mV	200.00 ml/min
3/14/2022 2:40 PM	16:00	7.11 pH	56.17 °F	760.45 µS/cm	0.01 mg/L	3.79 NTU	-161.6 mV	200.00 ml/min
3/14/2022 2:41 PM	17:00	7.11 pH	56.07 °F	757.02 µS/cm	0.01 mg/L	3.12 NTU	-163.4 mV	200.00 ml/min
3/14/2022 2:42 PM	18:00	7.11 pH	56.14 °F	757.06 µS/cm	0.01 mg/L	3.09 NTU	-165.2 mV	200.00 ml/min
3/14/2022 2:43 PM	19:00	7.11 pH	56.53 °F	758.05 µS/cm	0.01 mg/L	2.81 NTU	-166.5 mV	200.00 ml/min
3/14/2022 2:44 PM	20:00	7.12 pH	56.88 °F	759.43 µS/cm	0.01 mg/L	2.96 NTU	-166.2 mV	200.00 ml/min
3/14/2022 2:45 PM	21:00	7.12 pH	56.87 °F	755.94 µS/cm	0.01 mg/L	2.86 NTU	-166.4 mV	200.00 ml/min
3/14/2022 2:46 PM	22:00	7.12 pH	56.46 °F	757.35 µS/cm	0.01 mg/L	2.49 NTU	-167.3 mV	200.00 ml/min
3/14/2022 2:47 PM	23:00	7.12 pH	56.58 °F	759.87 µS/cm	0.01 mg/L	2.21 NTU	-168.3 mV	200.00 ml/min
3/14/2022 2:48 PM	24:00	7.12 pH	56.64 °F	757.26 µS/cm	0.01 mg/L	2.21 NTU	-168.7 mV	200.00 ml/min
3/14/2022 2:49 PM	25:00	7.12 pH	56.52 °F	757.32 µS/cm	0.01 mg/L	2.38 NTU	-169.6 mV	200.00 ml/min
3/14/2022 2:50 PM	26:00	7.12 pH	56.29 °F	756.14 µS/cm	0.00 mg/L	2.36 NTU	-170.5 mV	200.00 ml/min
3/14/2022 2:51 PM	26:45	7.13 pH	55.94 °F	756.57 µS/cm	0.00 mg/L	2.10 NTU	-170.9 mV	200.00 ml/min
3/14/2022 2:52 PM	27:45	7.11 pH	55.87 °F	753.82 µS/cm	0.00 mg/L	2.44 NTU	-171.3 mV	200.00 ml/min
3/14/2022 2:53 PM	28:54	7.15 pH	55.94 °F	751.35 µS/cm	0.00 mg/L	1.74 NTU	-174.0 mV	200.00 ml/min
3/14/2022 2:54 PM	29:54	7.12 pH	56.17 °F	750.36 µS/cm	0.00 mg/L	2.00 NTU	-176.5 mV	200.00 ml/min
3/14/2022 2:55 PM	30:54	7.12 pH	56.47 °F	751.01 µS/cm	0.00 mg/L	1.90 NTU	-177.7 mV	200.00 ml/min
3/14/2022 2:56 PM	31:54	7.13 pH	56.63 °F	750.34 µS/cm	0.00 mg/L	2.07 NTU	-178.3 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-29	VOCs

Low-Flow Test Report:

Test Date / Time: 3/17/2022 10:27:28 AM
Project: HRID 1Q2022 MW-41D
Operator Name: Sabrina Bailey

Location Name: HRID MW-41D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 25 ft** **Total Depth: 35 ft** **Initial Depth to Water: 10.41 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 23 ft** **Estimated Total Volume Pumped: 5846.667 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/17/2022 10:27 AM	00:00	7.30 pH	56.93 °F	354.09 µS/cm	0.13 mg/L	35.42 NTU	-29.1 mV	10.41 ft	200.00 ml/min
3/17/2022 10:28 AM	01:00	7.25 pH	57.02 °F	367.23 µS/cm	0.11 mg/L	36.64 NTU	-35.1 mV	10.41 ft	200.00 ml/min
3/17/2022 10:29 AM	02:14	7.22 pH	57.28 °F	368.61 µS/cm	0.10 mg/L	53.35 NTU	-40.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:30 AM	03:14	7.18 pH	57.36 °F	370.23 µS/cm	0.09 mg/L	39.27 NTU	-43.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:31 AM	04:14	7.14 pH	57.42 °F	377.40 µS/cm	0.07 mg/L	40.73 NTU	-46.9 mV	10.41 ft	200.00 ml/min
3/17/2022 10:32 AM	05:14	7.13 pH	57.58 °F	380.86 µS/cm	0.08 mg/L	35.02 NTU	-48.3 mV	10.41 ft	200.00 ml/min
3/17/2022 10:33 AM	06:14	7.11 pH	57.14 °F	380.80 µS/cm	0.10 mg/L	36.95 NTU	-50.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:34 AM	07:14	7.09 pH	56.72 °F	388.38 µS/cm	0.11 mg/L	38.55 NTU	-54.2 mV	10.41 ft	200.00 ml/min
3/17/2022 10:35 AM	08:14	7.06 pH	57.58 °F	392.49 µS/cm	0.07 mg/L	37.57 NTU	-56.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:36 AM	09:14	7.05 pH	57.58 °F	394.64 µS/cm	0.04 mg/L	34.29 NTU	-59.3 mV	10.41 ft	200.00 ml/min
3/17/2022 10:37 AM	10:14	7.04 pH	57.60 °F	396.74 µS/cm	0.03 mg/L	30.98 NTU	-60.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:38 AM	11:14	7.03 pH	57.47 °F	397.73 µS/cm	0.03 mg/L	25.76 NTU	-62.4 mV	10.41 ft	200.00 ml/min
3/17/2022 10:39 AM	12:14	7.02 pH	57.56 °F	396.76 µS/cm	0.04 mg/L	23.08 NTU	-64.1 mV	10.41 ft	200.00 ml/min
3/17/2022 10:40 AM	13:14	7.01 pH	57.59 °F	397.22 µS/cm	0.03 mg/L	18.90 NTU	-65.4 mV	10.41 ft	200.00 ml/min
3/17/2022 10:41 AM	14:14	7.01 pH	57.65 °F	396.36 µS/cm	0.02 mg/L	19.70 NTU	-66.7 mV	10.41 ft	200.00 ml/min

3/17/2022 10:42 AM	15:14	7.01 pH	57.61 °F	396.28 µS/cm	0.02 mg/L	15.33 NTU	-67.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:43 AM	16:14	7.01 pH	57.60 °F	396.39 µS/cm	0.01 mg/L	14.82 NTU	-68.7 mV	10.41 ft	200.00 ml/min
3/17/2022 10:44 AM	17:14	7.00 pH	57.55 °F	395.71 µS/cm	0.01 mg/L	10.74 NTU	-69.7 mV	10.41 ft	200.00 ml/min
3/17/2022 10:45 AM	18:14	7.00 pH	57.49 °F	395.05 µS/cm	0.01 mg/L	8.73 NTU	-70.6 mV	10.41 ft	200.00 ml/min
3/17/2022 10:46 AM	19:14	7.00 pH	57.56 °F	395.39 µS/cm	0.02 mg/L	5.59 NTU	-70.8 mV	10.41 ft	200.00 ml/min
3/17/2022 10:47 AM	20:14	7.00 pH	57.37 °F	397.01 µS/cm	0.03 mg/L	5.18 NTU	-70.5 mV	10.41 ft	200.00 ml/min
3/17/2022 10:48 AM	21:14	6.99 pH	57.27 °F	397.44 µS/cm	0.05 mg/L	4.67 NTU	-70.4 mV	10.41 ft	200.00 ml/min
3/17/2022 10:49 AM	22:14	6.99 pH	57.17 °F	398.37 µS/cm	0.06 mg/L	4.31 NTU	-70.3 mV	10.41 ft	200.00 ml/min
3/17/2022 10:50 AM	23:14	6.99 pH	56.93 °F	399.40 µS/cm	0.07 mg/L	8.92 NTU	-70.2 mV	10.41 ft	200.00 ml/min
3/17/2022 10:51 AM	24:14	7.00 pH	56.51 °F	394.38 µS/cm	0.10 mg/L	6.24 NTU	-72.3 mV	10.41 ft	200.00 ml/min
3/17/2022 10:52 AM	25:14	6.98 pH	39.92 °F	517.89 µS/cm	0.14 mg/L	6.27 NTU	-74.0 mV	10.41 ft	200.00 ml/min
3/17/2022 10:53 AM	26:14	6.97 pH	43.37 °F	489.88 µS/cm	0.07 mg/L	3.46 NTU	-75.3 mV	10.41 ft	200.00 ml/min
3/17/2022 10:54 AM	27:14	6.98 pH	58.04 °F	395.36 µS/cm	0.00 mg/L	2.87 NTU	-76.4 mV	10.41 ft	200.00 ml/min
3/17/2022 10:55 AM	28:14	6.98 pH	57.90 °F	394.63 µS/cm	0.00 mg/L	4.33 NTU	-77.1 mV	10.41 ft	200.00 ml/min
3/17/2022 10:56 AM	29:14	6.98 pH	57.87 °F	393.22 µS/cm	0.00 mg/L	2.75 NTU	-77.8 mV	10.41 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-41D	VOCs

Low-Flow Test Report:

Test Date / Time: 3/15/2022 1:59:54 PM
Project: HRID 1Q2022 MW-42D
Operator Name: Sabrina Bailey

Location Name: HRID MW-42D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 42 ft** **Total Depth: 52 ft** **Initial Depth to Water: 8.44 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 31 ft** **Estimated Total Volume Pumped: 4500 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 1:59 PM	00:00	7.10 pH	56.96 °F	620.28 µS/cm	0.41 mg/L	4.26 NTU	-50.2 mV	8.44 ft	300.00 ml/min
3/15/2022 2:00 PM	01:00	7.06 pH	56.80 °F	621.21 µS/cm	0.28 mg/L	2.63 NTU	-53.3 mV	8.44 ft	300.00 ml/min
3/15/2022 2:01 PM	02:00	7.05 pH	56.87 °F	621.55 µS/cm	0.22 mg/L	1.58 NTU	-54.9 mV	8.44 ft	300.00 ml/min
3/15/2022 2:02 PM	03:00	7.04 pH	56.85 °F	623.42 µS/cm	0.19 mg/L	1.45 NTU	-55.7 mV	8.44 ft	300.00 ml/min
3/15/2022 2:03 PM	04:00	7.03 pH	56.73 °F	630.27 µS/cm	0.15 mg/L	0.92 NTU	-54.6 mV	8.44 ft	300.00 ml/min
3/15/2022 2:04 PM	05:00	7.02 pH	56.79 °F	640.77 µS/cm	0.13 mg/L	1.10 NTU	-51.7 mV	8.44 ft	300.00 ml/min
3/15/2022 2:05 PM	06:00	7.01 pH	56.88 °F	649.80 µS/cm	0.12 mg/L	1.31 NTU	-48.4 mV	8.44 ft	300.00 ml/min
3/15/2022 2:06 PM	07:00	7.01 pH	56.84 °F	655.94 µS/cm	0.11 mg/L	1.62 NTU	-45.4 mV	8.44 ft	300.00 ml/min
3/15/2022 2:07 PM	08:00	7.01 pH	56.85 °F	660.45 µS/cm	0.10 mg/L	2.63 NTU	-43.0 mV	8.44 ft	300.00 ml/min
3/15/2022 2:08 PM	09:00	7.01 pH	56.75 °F	663.34 µS/cm	0.09 mg/L	3.03 NTU	-41.1 mV	8.44 ft	300.00 ml/min
3/15/2022 2:09 PM	10:00	7.01 pH	56.77 °F	665.76 µS/cm	0.08 mg/L	4.61 NTU	-39.8 mV	8.44 ft	300.00 ml/min
3/15/2022 2:10 PM	11:00	7.02 pH	56.74 °F	667.24 µS/cm	0.08 mg/L	4.46 NTU	-38.8 mV	8.44 ft	300.00 ml/min
3/15/2022 2:11 PM	12:00	7.02 pH	56.73 °F	667.96 µS/cm	0.07 mg/L	6.00 NTU	-38.1 mV	8.44 ft	300.00 ml/min
3/15/2022 2:12 PM	13:00	7.03 pH	56.75 °F	668.56 µS/cm	0.06 mg/L	6.60 NTU	-37.7 mV	8.44 ft	300.00 ml/min
3/15/2022 2:13 PM	14:00	7.03 pH	56.69 °F	669.60 µS/cm	0.06 mg/L	6.45 NTU	-37.5 mV	8.44 ft	300.00 ml/min

3/15/2022 2:14 PM	15:00	7.04 pH	56.75 °F	669.92 µS/cm	0.06 mg/L	6.56 NTU	-37.6 mV	8.44 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-42D	VOCs

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/15/2022 2:33:18 PM
Project: HRID 1Q2022 MW-42
Operator Name: Sabrina Bailey

Location Name: HRID MW-42 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 8 ft** **Total Depth: 18 ft** **Initial Depth to Water: 8.74 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 13 ft** **Estimated Total Volume Pumped: 8100 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/15/2022 2:33 PM	00:00	7.07 pH	55.95 °F	739.88 µS/cm	6.12 mg/L	2,077.5 NTU	47.0 mV	8.74 ft	300.00 ml/min
3/15/2022 2:34 PM	01:00	7.04 pH	56.20 °F	741.38 µS/cm	6.12 mg/L	1,918.6 NTU	49.6 mV	8.74 ft	300.00 ml/min
3/15/2022 2:35 PM	02:00	7.03 pH	56.69 °F	748.10 µS/cm	6.19 mg/L	1,594.3 NTU	51.0 mV	8.74 ft	300.00 ml/min
3/15/2022 2:36 PM	03:00	7.05 pH	54.96 °F	736.62 µS/cm	6.10 mg/L	2,487.1 NTU	54.1 mV	8.74 ft	300.00 ml/min
3/15/2022 2:37 PM	04:00	7.04 pH	54.85 °F	739.61 µS/cm	6.08 mg/L	2,782.7 NTU	56.4 mV	8.74 ft	300.00 ml/min
3/15/2022 2:38 PM	05:00	7.03 pH	54.91 °F	738.76 µS/cm	6.05 mg/L	2,604.3 NTU	58.8 mV	8.74 ft	300.00 ml/min
3/15/2022 2:39 PM	06:00	7.02 pH	54.79 °F	737.28 µS/cm	5.98 mg/L	2,372.8 NTU	60.7 mV	8.74 ft	300.00 ml/min
3/15/2022 2:40 PM	07:00	7.02 pH	54.68 °F	736.42 µS/cm	5.92 mg/L	1,713.2 NTU	62.4 mV	8.74 ft	300.00 ml/min
3/15/2022 2:41 PM	08:00	7.02 pH	54.48 °F	736.63 µS/cm	5.91 mg/L	1,479.3 NTU	63.8 mV	8.74 ft	300.00 ml/min
3/15/2022 2:42 PM	09:00	7.02 pH	54.41 °F	735.48 µS/cm	5.86 mg/L	1,067.3 NTU	64.9 mV	8.74 ft	300.00 ml/min
3/15/2022 2:43 PM	10:00	7.01 pH	54.27 °F	733.89 µS/cm	5.79 mg/L	1,082.4 NTU	66.0 mV	8.74 ft	300.00 ml/min
3/15/2022 2:44 PM	11:00	7.01 pH	54.18 °F	732.17 µS/cm	5.68 mg/L	773.63 NTU	66.8 mV	8.74 ft	300.00 ml/min
3/15/2022 2:45 PM	12:00	7.01 pH	54.25 °F	729.46 µS/cm	5.56 mg/L	728.97 NTU	67.3 mV	8.74 ft	300.00 ml/min
3/15/2022 2:46 PM	13:00	7.01 pH	54.43 °F	727.85 µS/cm	5.44 mg/L	670.75 NTU	67.9 mV	8.74 ft	300.00 ml/min
3/15/2022 2:47 PM	14:00	7.01 pH	54.54 °F	726.94 µS/cm	5.36 mg/L	646.16 NTU	68.2 mV	8.74 ft	300.00 ml/min

3/15/2022 2:48 PM	15:00	7.01 pH	54.74 °F	728.03 µS/cm	5.34 mg/L	501.58 NTU	68.4 mV	8.74 ft	300.00 ml/min
3/15/2022 2:49 PM	16:00	7.02 pH	54.61 °F	728.39 µS/cm	5.32 mg/L	503.78 NTU	68.7 mV	8.74 ft	300.00 ml/min
3/15/2022 2:50 PM	17:00	7.02 pH	54.57 °F	728.13 µS/cm	5.26 mg/L	400.72 NTU	68.7 mV	8.74 ft	300.00 ml/min
3/15/2022 2:51 PM	18:00	7.03 pH	54.46 °F	731.33 µS/cm	5.25 mg/L	356.66 NTU	69.0 mV	8.74 ft	300.00 ml/min
3/15/2022 2:52 PM	19:00	7.03 pH	54.43 °F	732.59 µS/cm	5.21 mg/L	342.56 NTU	69.0 mV	8.74 ft	300.00 ml/min
3/15/2022 2:53 PM	20:00	7.03 pH	54.42 °F	732.01 µS/cm	5.14 mg/L	293.22 NTU	69.0 mV	8.74 ft	300.00 ml/min
3/15/2022 2:54 PM	21:00	7.03 pH	54.34 °F	731.12 µS/cm	5.11 mg/L	230.23 NTU	69.2 mV	8.74 ft	300.00 ml/min
3/15/2022 2:55 PM	22:00	7.04 pH	54.26 °F	732.08 µS/cm	5.21 mg/L	197.79 NTU	69.5 mV	8.74 ft	300.00 ml/min
3/15/2022 2:56 PM	23:00	7.04 pH	54.16 °F	730.72 µS/cm	5.23 mg/L	199.33 NTU	69.6 mV	8.74 ft	300.00 ml/min
3/15/2022 2:57 PM	24:00	7.04 pH	54.21 °F	731.43 µS/cm	5.27 mg/L	146.96 NTU	69.7 mV	8.74 ft	300.00 ml/min
3/15/2022 2:58 PM	25:00	7.04 pH	54.10 °F	729.89 µS/cm	5.22 mg/L	134.92 NTU	70.2 mV	8.74 ft	300.00 ml/min
3/15/2022 2:59 PM	26:00	7.04 pH	54.02 °F	729.63 µS/cm	5.18 mg/L	123.84 NTU	70.0 mV	8.74 ft	300.00 ml/min
3/15/2022 3:00 PM	27:00	7.05 pH	53.95 °F	728.54 µS/cm	5.15 mg/L	126.16 NTU	70.3 mV	8.74 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-42	VOCs

Low-Flow Test Report:

Test Date / Time: 3/16/2022 9:09:02 AM
Project: HRID 1Q2022 MW-39
Operator Name: Sabrina Bailey

Location Name: HRID MW-42 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 15 ft** **Total Depth: 25 ft**	**Pump Type: Proactive Monsoon XL SS** **Tubing Type: Poly** **Pump Intake From TOC: 6.5 ft** **Estimated Total Volume Pumped: 6000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	
3/16/2022 9:09 AM	00:00	7.43 pH	61.35 °F	0.07 µS/cm	8.46 mg/L	0.21 NTU	154.3 mV	200.00 ml/min
3/16/2022 9:10 AM	01:00	6.88 pH	55.71 °F	829.14 µS/cm	1.73 mg/L	3.87 NTU	155.3 mV	200.00 ml/min
3/16/2022 9:11 AM	02:00	6.84 pH	55.79 °F	830.42 µS/cm	1.49 mg/L	2.36 NTU	155.2 mV	200.00 ml/min
3/16/2022 9:12 AM	03:00	6.84 pH	55.87 °F	821.81 µS/cm	1.35 mg/L	1.72 NTU	154.7 mV	200.00 ml/min
3/16/2022 9:13 AM	04:00	6.84 pH	55.93 °F	816.06 µS/cm	1.34 mg/L	1.74 NTU	153.8 mV	200.00 ml/min
3/16/2022 9:14 AM	05:00	6.84 pH	56.09 °F	813.73 µS/cm	1.34 mg/L	1.18 NTU	153.0 mV	200.00 ml/min
3/16/2022 9:15 AM	06:00	6.84 pH	56.19 °F	811.71 µS/cm	1.31 mg/L	0.97 NTU	152.2 mV	200.00 ml/min
3/16/2022 9:16 AM	07:00	6.84 pH	56.21 °F	810.37 µS/cm	1.29 mg/L	0.85 NTU	151.4 mV	200.00 ml/min
3/16/2022 9:17 AM	08:00	6.85 pH	56.16 °F	804.70 µS/cm	1.24 mg/L	0.54 NTU	150.5 mV	200.00 ml/min
3/16/2022 9:18 AM	09:00	6.85 pH	56.05 °F	803.60 µS/cm	1.24 mg/L	0.67 NTU	149.8 mV	200.00 ml/min
3/16/2022 9:19 AM	10:00	6.85 pH	56.12 °F	801.50 µS/cm	1.24 mg/L	0.47 NTU	148.9 mV	200.00 ml/min
3/16/2022 9:20 AM	11:00	6.86 pH	56.01 °F	800.22 µS/cm	1.25 mg/L	0.40 NTU	148.2 mV	200.00 ml/min
3/16/2022 9:21 AM	12:00	6.86 pH	56.12 °F	799.39 µS/cm	1.26 mg/L	0.32 NTU	147.4 mV	200.00 ml/min
3/16/2022 9:22 AM	13:00	6.86 pH	56.15 °F	799.72 µS/cm	1.26 mg/L	0.31 NTU	146.9 mV	200.00 ml/min
3/16/2022 9:23 AM	14:00	6.86 pH	55.90 °F	799.01 µS/cm	1.27 mg/L	0.29 NTU	146.4 mV	200.00 ml/min

3/16/2022 9:24 AM	15:00	6.87 pH	56.69 °F	802.17 µS/cm	1.20 mg/L	0.39 NTU	145.1 mV	200.00 ml/min
3/16/2022 9:25 AM	16:00	6.87 pH	56.76 °F	800.77 µS/cm	1.21 mg/L	0.42 NTU	144.2 mV	200.00 ml/min
3/16/2022 9:26 AM	17:00	6.87 pH	56.67 °F	793.23 µS/cm	1.15 mg/L	0.30 NTU	142.8 mV	200.00 ml/min
3/16/2022 9:27 AM	18:00	6.88 pH	56.51 °F	790.00 µS/cm	1.16 mg/L	0.29 NTU	141.8 mV	200.00 ml/min
3/16/2022 9:28 AM	19:00	6.88 pH	56.36 °F	789.52 µS/cm	1.15 mg/L	0.16 NTU	141.1 mV	200.00 ml/min
3/16/2022 9:29 AM	20:00	6.88 pH	56.41 °F	794.50 µS/cm	1.18 mg/L	0.35 NTU	140.6 mV	200.00 ml/min
3/16/2022 9:30 AM	21:00	6.88 pH	56.39 °F	794.57 µS/cm	1.21 mg/L	0.22 NTU	139.8 mV	200.00 ml/min
3/16/2022 9:31 AM	22:00	6.88 pH	56.35 °F	791.96 µS/cm	1.18 mg/L	0.26 NTU	138.7 mV	200.00 ml/min
3/16/2022 9:32 AM	23:00	6.88 pH	56.35 °F	792.31 µS/cm	1.16 mg/L	0.16 NTU	138.1 mV	200.00 ml/min
3/16/2022 9:33 AM	24:00	6.89 pH	56.33 °F	789.26 µS/cm	1.13 mg/L	0.19 NTU	137.0 mV	200.00 ml/min
3/16/2022 9:34 AM	25:00	6.89 pH	56.29 °F	790.12 µS/cm	1.13 mg/L	0.24 NTU	136.2 mV	200.00 ml/min
3/16/2022 9:35 AM	26:00	6.89 pH	56.37 °F	789.58 µS/cm	1.14 mg/L	0.15 NTU	135.4 mV	200.00 ml/min
3/16/2022 9:36 AM	27:00	6.89 pH	56.46 °F	784.86 µS/cm	1.16 mg/L	0.19 NTU	134.0 mV	200.00 ml/min
3/16/2022 9:37 AM	28:00	6.90 pH	56.63 °F	785.61 µS/cm	1.16 mg/L	0.18 NTU	133.3 mV	200.00 ml/min
3/16/2022 9:38 AM	29:00	6.90 pH	56.76 °F	789.95 µS/cm	1.17 mg/L	0.04 NTU	132.6 mV	200.00 ml/min
3/16/2022 9:39 AM	30:00	6.90 pH	57.68 °F	789.47 µS/cm	1.15 mg/L	0.01 NTU	132.0 mV	200.00 ml/min

Samples

Sample ID:	Description:
MW-39	

Low-Flow Test Report:

Test Date / Time: 3/16/2022 12:52:22 PM
Project: HRID 1Q2022 MW-43
Operator Name: Danielle Richardson

Location Name: HRID MW-43 **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 6 ft** **Total Depth: 16 ft** **Initial Depth to Water: 9.58 ft**	**Pump Type: SS Hurricane Pro** **Tubing Type: Poly** **Pump Intake From TOC: 13 ft** **Estimated Total Volume Pumped: 6000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/16/2022 12:52 PM	00:00	6.83 pH	50.93 °F	182.46 µS/cm	2.80 mg/L	980.78 NTU	95.7 mV	9.58 ft	300.00 ml/min
3/16/2022 12:53 PM	01:00	6.72 pH	51.52 °F	182.69 µS/cm	2.05 mg/L	1,061.1 NTU	94.7 mV	9.58 ft	300.00 ml/min
3/16/2022 12:54 PM	02:00	6.73 pH	47.50 °F	183.32 µS/cm	1.75 mg/L	1,023.9 NTU	97.3 mV	9.58 ft	300.00 ml/min
3/16/2022 12:55 PM	03:00	6.73 pH	47.44 °F	184.89 µS/cm	1.73 mg/L	955.49 NTU	98.3 mV	9.58 ft	300.00 ml/min
3/16/2022 12:56 PM	04:00	6.73 pH	47.28 °F	187.77 µS/cm	1.61 mg/L	840.93 NTU	99.0 mV	9.58 ft	300.00 ml/min
3/16/2022 12:57 PM	05:00	6.72 pH	47.62 °F	191.16 µS/cm	1.47 mg/L	690.10 NTU	100.0 mV	9.58 ft	300.00 ml/min
3/16/2022 12:58 PM	06:00	6.71 pH	47.55 °F	195.01 µS/cm	1.30 mg/L	562.46 NTU	100.5 mV	9.58 ft	300.00 ml/min
3/16/2022 12:59 PM	07:00	6.71 pH	46.75 °F	201.30 µS/cm	1.09 mg/L	427.11 NTU	101.7 mV	9.58 ft	300.00 ml/min
3/16/2022 1:00 PM	08:00	6.71 pH	47.19 °F	209.72 µS/cm	0.83 mg/L	325.34 NTU	102.5 mV	9.58 ft	300.00 ml/min
3/16/2022 1:01 PM	09:00	6.69 pH	48.22 °F	210.38 µS/cm	0.73 mg/L	265.51 NTU	103.4 mV	9.58 ft	300.00 ml/min
3/16/2022 1:02 PM	10:00	6.65 pH	49.41 °F	209.48 µS/cm	0.75 mg/L	298.68 NTU	102.6 mV	9.58 ft	300.00 ml/min
3/16/2022 1:03 PM	11:00	6.64 pH	49.44 °F	210.17 µS/cm	0.73 mg/L	257.52 NTU	102.1 mV	9.58 ft	300.00 ml/min
3/16/2022 1:04 PM	12:00	6.65 pH	48.83 °F	216.32 µS/cm	0.61 mg/L	227.64 NTU	102.8 mV	9.58 ft	300.00 ml/min
3/16/2022 1:05 PM	13:00	6.62 pH	50.23 °F	218.04 µS/cm	0.58 mg/L	212.27 NTU	102.0 mV	9.58 ft	300.00 ml/min
3/16/2022 1:06 PM	14:00	6.63 pH	49.00 °F	218.23 µS/cm	0.51 mg/L	167.69 NTU	102.6 mV	9.58 ft	300.00 ml/min

3/16/2022 1:07 PM	15:00	6.63 pH	46.77 °F	218.79 µS/cm	0.43 mg/L	215.51 NTU	104.0 mV	9.58 ft	300.00 ml/min
3/16/2022 1:08 PM	16:00	6.64 pH	46.47 °F	216.39 µS/cm	0.40 mg/L	123.65 NTU	104.8 mV	9.58 ft	300.00 ml/min
3/16/2022 1:09 PM	17:00	6.64 pH	46.00 °F	218.37 µS/cm	0.37 mg/L	82.58 NTU	105.3 mV	9.58 ft	300.00 ml/min
3/16/2022 1:10 PM	18:00	6.64 pH	45.87 °F	218.26 µS/cm	0.35 mg/L	72.91 NTU	105.5 mV	9.58 ft	300.00 ml/min
3/16/2022 1:11 PM	19:00	6.62 pH	45.74 °F	218.36 µS/cm	0.37 mg/L	70.25 NTU	105.5 mV	9.58 ft	300.00 ml/min
3/16/2022 1:12 PM	20:00	6.61 pH	45.81 °F	218.27 µS/cm	0.38 mg/L	66.39 NTU	105.6 mV	9.58 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-43	VOCs

Low-Flow Test Report:

Test Date / Time: 3/16/2022 1:29:57 PM
Project: HRID 1Q2022 MW-43D
Operator Name: Danielle Richardson

Location Name: HRID MW-43D **Well Diameter: 2 in** **Casing Type: PVC sch 40** **Screen Length: 10 ft** **Top of Screen: 21 ft** **Total Depth: 31 ft** **Initial Depth to Water: 9.44 ft**	**Pump Type: SS Hurricane Pro** **Tubing Type: Poly** **Pump Intake From TOC: 20 ft** **Estimated Total Volume Pumped: 7800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625630**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10		
3/16/2022 1:29 PM	00:00	6.94 pH	51.48 °F	652.70 µS/cm	0.00 mg/L	13.88 NTU	49.5 mV	9.44 ft	300.00 ml/min
3/16/2022 1:30 PM	01:00	6.88 pH	51.57 °F	662.30 µS/cm	0.00 mg/L	11.49 NTU	46.8 mV	9.44 ft	300.00 ml/min
3/16/2022 1:31 PM	02:00	6.87 pH	51.61 °F	660.64 µS/cm	0.00 mg/L	7.16 NTU	44.1 mV	9.44 ft	300.00 ml/min
3/16/2022 1:32 PM	03:00	6.87 pH	51.65 °F	662.78 µS/cm	0.00 mg/L	5.91 NTU	41.8 mV	9.44 ft	300.00 ml/min
3/16/2022 1:33 PM	04:00	6.87 pH	50.17 °F	676.63 µS/cm	0.00 mg/L	4.97 NTU	39.6 mV	9.44 ft	300.00 ml/min
3/16/2022 1:34 PM	05:00	6.88 pH	51.48 °F	661.16 µS/cm	0.00 mg/L	4.69 NTU	37.4 mV	9.44 ft	300.00 ml/min
3/16/2022 1:35 PM	06:00	6.88 pH	51.53 °F	662.06 µS/cm	0.00 mg/L	3.83 NTU	35.6 mV	9.44 ft	300.00 ml/min
3/16/2022 1:36 PM	07:00	6.88 pH	50.84 °F	668.80 µS/cm	0.00 mg/L	2.57 NTU	33.7 mV	9.44 ft	300.00 ml/min
3/16/2022 1:37 PM	08:00	6.88 pH	50.07 °F	678.77 µS/cm	0.00 mg/L	2.25 NTU	32.1 mV	9.44 ft	300.00 ml/min
3/16/2022 1:38 PM	09:00	6.88 pH	50.70 °F	673.63 µS/cm	0.00 mg/L	2.69 NTU	30.6 mV	9.44 ft	300.00 ml/min
3/16/2022 1:39 PM	10:00	6.85 pH	6.14 °F	1,968.7 µS/cm	0.00 mg/L	1.71 NTU	28.9 mV	9.44 ft	300.00 ml/min
3/16/2022 1:40 PM	11:00	6.89 pH	51.64 °F	658.37 µS/cm	0.00 mg/L	2.42 NTU	27.0 mV	9.44 ft	300.00 ml/min
3/16/2022 1:41 PM	12:00	6.89 pH	51.80 °F	659.15 µS/cm	0.00 mg/L	3.14 NTU	25.4 mV	9.44 ft	300.00 ml/min
3/16/2022 1:42 PM	13:00	6.89 pH	51.81 °F	661.25 µS/cm	0.00 mg/L	1.95 NTU	23.9 mV	9.44 ft	300.00 ml/min
3/16/2022 1:43 PM	14:00	6.90 pH	51.66 °F	660.67 µS/cm	0.00 mg/L	5.43 NTU	22.2 mV	9.44 ft	300.00 ml/min

3/16/2022 1:44 PM	15:00	6.89 pH	51.72 °F	663.06 µS/cm	0.00 mg/L	1.50 NTU	20.9 mV	9.44 ft	300.00 ml/min
3/16/2022 1:45 PM	16:00	6.90 pH	51.66 °F	659.61 µS/cm	0.00 mg/L	1.40 NTU	19.4 mV	9.44 ft	300.00 ml/min
3/16/2022 1:46 PM	17:00	6.90 pH	47.55 °F	701.93 µS/cm	0.00 mg/L	0.86 NTU	18.1 mV	9.44 ft	300.00 ml/min
3/16/2022 1:47 PM	18:00	6.90 pH	45.30 °F	726.53 µS/cm	0.00 mg/L	1.40 NTU	16.9 mV	9.44 ft	300.00 ml/min
3/16/2022 1:48 PM	19:00	6.90 pH	49.18 °F	688.08 µS/cm	0.00 mg/L	1.14 NTU	15.7 mV	9.44 ft	300.00 ml/min
3/16/2022 1:49 PM	20:00	6.90 pH	45.68 °F	716.81 µS/cm	0.00 mg/L	0.73 NTU	14.4 mV	9.44 ft	300.00 ml/min
3/16/2022 1:50 PM	21:00	6.90 pH	46.02 °F	717.29 µS/cm	0.00 mg/L	1.75 NTU	13.2 mV	9.44 ft	300.00 ml/min
3/16/2022 1:51 PM	22:00	6.90 pH	50.49 °F	675.37 µS/cm	0.00 mg/L	0.41 NTU	12.2 mV	9.44 ft	300.00 ml/min
3/16/2022 1:52 PM	23:00	6.90 pH	52.01 °F	658.78 µS/cm	0.00 mg/L	1.32 NTU	11.0 mV	9.44 ft	300.00 ml/min
3/16/2022 1:53 PM	24:00	6.90 pH	52.05 °F	657.58 µS/cm	0.00 mg/L	0.49 NTU	10.1 mV	9.44 ft	300.00 ml/min
3/16/2022 1:54 PM	25:00	6.90 pH	52.01 °F	656.01 µS/cm	0.00 mg/L	1.04 NTU	9.2 mV	9.44 ft	300.00 ml/min
3/16/2022 1:55 PM	26:00	6.90 pH	51.98 °F	655.82 µS/cm	0.00 mg/L	1.83 NTU	8.3 mV	9.44 ft	300.00 ml/min

Samples

Sample ID:	Description:
MW-43D	VOCs

Created using VuSitu from In-Situ, Inc.

APPENDIX G

1Q2022 LABORATORY ANALYTICAL REPORTS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

March 29, 2022

Mr. James Cody
Patriot Engineering
6150 E 75th St
Indianapolis, IN 46250

RE: Project: HRID 1Q2022
Pace Project No.: 50311584

Dear Mr. Cody:

Enclosed are the analytical results for sample(s) received by the laboratory on March 17, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,

Tina Sayer

Tina Sayer
tina.sayer@pacelabs.com
(317)228-3100
Project Manager

Enclosures

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: HRID 1Q2022
Pace Project No.: 50311584

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: HRID 1Q2022
Pace Project No.: 50311584

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50311584001	**MW-12**	Water	03/14/22 11:15	03/17/22 15:00
50311584002	**MW-12D**	Water	03/14/22 11:55	03/17/22 15:00
50311584003	**MW-41**	Water	03/14/22 13:15	03/17/22 15:00
50311584004	**MW-29D**	Water	03/14/22 14:10	03/17/22 15:00
50311584005	**MW-29**	Water	03/14/22 14:55	03/17/22 15:00
50311584006	**MW-23**	Water	03/15/22 10:30	03/17/22 15:00
50311584007	**MW-30**	Water	03/15/22 11:00	03/17/22 15:00
50311584008	**MW-11D**	Water	03/15/22 11:40	03/17/22 15:00
50311584009	**MW-22**	Water	03/15/22 12:15	03/17/22 15:00
50311584010	**MW-22D**	Water	03/15/22 13:40	03/17/22 15:00
50311584011	**MW-42D**	Water	03/15/22 14:15	03/17/22 15:00
50311584012	**MW-42**	Water	03/15/22 15:00	03/17/22 15:00
50311584013	**DUP A**	Water	03/15/22 08:00	03/17/22 15:00
50311584014	**MW-14D**	Water	03/16/22 09:30	03/17/22 15:00
50311584015	**MW-14**	Water	03/16/22 10:20	03/17/22 15:00
50311584016	**MW-15D**	Water	03/16/22 11:00	03/17/22 15:00
50311584017	**MW-15**	Water	03/16/22 12:25	03/17/22 15:00
50311584018	**MW-43D**	Water	03/16/22 14:00	03/17/22 15:00
50311584019	**MW-43**	Water	03/16/22 13:15	03/17/22 15:00
50311584020	**MW-39**	Water	03/16/22 09:40	03/17/22 15:00
50311584021	**MW-37**	Water	03/16/22 10:25	03/17/22 15:00
50311584022	**MW-32**	Water	03/16/22 11:13	03/17/22 15:00
50311584023	**DUP (B)**	Water	03/16/22 08:00	03/17/22 15:00
50311584024	**MW-26**	Water	03/16/22 12:00	03/17/22 15:00
50311584025	**MW-33D**	Water	03/16/22 13:10	03/17/22 15:00
50311584026	**MW-33**	Water	03/16/22 13:55	03/17/22 15:00
50311584027	**MW-40**	Water	03/16/22 14:40	03/17/22 15:00
50311584028	**MW-41D**	Water	03/17/22 11:00	03/17/22 15:00
50311584029	**MW-36**	Water	03/17/22 11:50	03/17/22 15:00
50311584030	**MW-24**	Water	03/17/22 12:20	03/17/22 15:00
50311584031	**TRIP BLANK**	Water	03/17/22 08:00	03/17/22 15:00

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(317)228-3100

SAMPLE ANALYTE COUNT

Project: HRID 1Q2022
Pace Project No.: 50311584

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50311584001	**MW-12**	EPA 5030/8260	SLB	75	PASI-I
50311584002	**MW-12D**	EPA 5030/8260	SLB	75	PASI-I
50311584003	**MW-41**	EPA 5030/8260	SLB	75	PASI-I
50311584004	**MW-29D**	EPA 5030/8260	SLB	75	PASI-I
50311584005	**MW-29**	EPA 5030/8260	SLB	75	PASI-I
50311584006	**MW-23**	EPA 5030/8260	SLB	75	PASI-I
50311584007	**MW-30**	EPA 5030/8260	SLB	75	PASI-I
50311584008	**MW-11D**	EPA 5030/8260	SLB	75	PASI-I
50311584009	**MW-22**	EPA 5030/8260	SLB	75	PASI-I
50311584010	**MW-22D**	EPA 5030/8260	SLB	75	PASI-I
50311584011	**MW-42D**	EPA 5030/8260	SLB	75	PASI-I
50311584012	**MW-42**	EPA 5030/8260	SLB	75	PASI-I
50311584013	**DUP A**	EPA 5030/8260	SLB	75	PASI-I
50311584014	**MW-14D**	EPA 5030/8260	SLB	75	PASI-I
50311584015	**MW-14**	EPA 5030/8260	SLB	75	PASI-I
50311584016	**MW-15D**	EPA 5030/8260	SLB	75	PASI-I
50311584017	**MW-15**	EPA 5030/8260	SLB	75	PASI-I
50311584018	**MW-43D**	EPA 5030/8260	SLB	75	PASI-I
50311584019	**MW-43**	EPA 5030/8260	SLB	75	PASI-I
50311584020	**MW-39**	EPA 5030/8260	SLB	75	PASI-I
50311584021	**MW-37**	EPA 5030/8260	SLB	75	PASI-I
50311584022	**MW-32**	EPA 5030/8260	SLB	75	PASI-I
50311584023	**DUP (B)**	EPA 5030/8260	SLB	75	PASI-I
50311584024	**MW-26**	EPA 5030/8260	SLB	75	PASI-I
50311584025	**MW-33D**	EPA 5030/8260	SLB	75	PASI-I
50311584026	**MW-33**	EPA 5030/8260	SLB	75	PASI-I
50311584027	**MW-40**	EPA 5030/8260	SLB	75	PASI-I
50311584028	**MW-41D**	EPA 5030/8260	SLB	75	PASI-I
50311584029	**MW-36**	EPA 5030/8260	SLB	75	PASI-I
50311584030	**MW-24**	EPA 5030/8260	SLB	75	PASI-I
50311584031	**TRIP BLANK**	EPA 5030/8260	SLB	75	PASI-I

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SUMMARY OF DETECTION

Project: HRID 1Q2022
Pace Project No.: 50311584

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50311584001	**MW-12**					
EPA 5030/8260	Trichloroethene	24.5	ug/L	5.0	03/23/22 23:44	
50311584003	**MW-41**					
EPA 5030/8260	cis-1,2-Dichloroethene	178	ug/L	5.0	03/24/22 00:46	
EPA 5030/8260	Trichloroethene	139	ug/L	5.0	03/24/22 00:46	
EPA 5030/8260	Vinyl chloride	2.9	ug/L	2.0	03/24/22 00:46	
50311584004	**MW-29D**					
EPA 5030/8260	cis-1,2-Dichloroethene	58.1	ug/L	5.0	03/24/22 01:17	
EPA 5030/8260	Tetrachloroethene	12.6	ug/L	5.0	03/24/22 01:17	
EPA 5030/8260	Trichloroethene	110	ug/L	5.0	03/24/22 01:17	
50311584005	**MW-29**					
EPA 5030/8260	cis-1,2-Dichloroethene	41.0	ug/L	5.0	03/24/22 01:47	
50311584006	**MW-23**					
EPA 5030/8260	cis-1,2-Dichloroethene	731	ug/L	50.0	03/24/22 21:57	
EPA 5030/8260	Vinyl chloride	29.8	ug/L	2.0	03/24/22 02:18	
50311584007	**MW-30**					
EPA 5030/8260	cis-1,2-Dichloroethene	1430	ug/L	50.0	03/24/22 22:28	
EPA 5030/8260	trans-1,2-Dichloroethene	6.4	ug/L	5.0	03/24/22 02:49	
EPA 5030/8260	Tetrachloroethene	178	ug/L	5.0	03/24/22 02:49	
EPA 5030/8260	Trichloroethene	143	ug/L	5.0	03/24/22 02:49	
EPA 5030/8260	Vinyl chloride	79.9	ug/L	2.0	03/24/22 02:49	
50311584009	**MW-22**					
EPA 5030/8260	cis-1,2-Dichloroethene	6.5	ug/L	5.0	03/24/22 03:50	
50311584010	**MW-22D**					
EPA 5030/8260	cis-1,2-Dichloroethene	10.6	ug/L	5.0	03/24/22 05:22	
EPA 5030/8260	Tetrachloroethene	11.5	ug/L	5.0	03/24/22 05:22	
EPA 5030/8260	Trichloroethene	37.8	ug/L	5.0	03/24/22 05:22	
50311584011	**MW-42D**					
EPA 5030/8260	cis-1,2-Dichloroethene	171	ug/L	5.0	03/24/22 05:53	
EPA 5030/8260	trans-1,2-Dichloroethene	13.6	ug/L	5.0	03/24/22 05:53	
EPA 5030/8260	Trichloroethene	132	ug/L	5.0	03/24/22 05:53	
50311584012	**MW-42**					
EPA 5030/8260	Trichloroethene	84.0	ug/L	5.0	03/24/22 06:24	
50311584013	**DUP A**					
EPA 5030/8260	cis-1,2-Dichloroethene	1920	ug/L	50.0	03/26/22 00:26	
EPA 5030/8260	trans-1,2-Dichloroethene	6.1	ug/L	5.0	03/24/22 10:27	
EPA 5030/8260	Tetrachloroethene	167	ug/L	5.0	03/24/22 10:27	
EPA 5030/8260	Trichloroethene	139	ug/L	5.0	03/24/22 10:27	
EPA 5030/8260	Vinyl chloride	96.1	ug/L	2.0	03/24/22 10:27	
50311584014	**MW-14D**					
EPA 5030/8260	cis-1,2-Dichloroethene	25.2	ug/L	5.0	03/24/22 05:07	

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SUMMARY OF DETECTION

Project: HRID 1Q2022
Pace Project No.: 50311584

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50311584014	**MW-14D**					
EPA 5030/8260	Trichloroethene	234	ug/L	5.0	03/24/22 05:07	
50311584016	**MW-15D**					
EPA 5030/8260	cis-1,2-Dichloroethene	82.6	ug/L	5.0	03/24/22 06:08	
50311584017	**MW-15**					
EPA 5030/8260	Trichloroethene	13.5	ug/L	5.0	03/24/22 10:57	
50311584020	**MW-39**					
EPA 5030/8260	Tetrachloroethene	21.5	ug/L	5.0	03/24/22 12:30	
EPA 5030/8260	Trichloroethene	50.9	ug/L	5.0	03/24/22 12:30	
EPA 5030/8260	Vinyl chloride	3.5	ug/L	2.0	03/24/22 12:30	
50311584021	**MW-37**					
EPA 5030/8260	Tetrachloroethene	26.3	ug/L	5.0	03/24/22 14:02	
EPA 5030/8260	Trichloroethene	38.5	ug/L	5.0	03/24/22 14:02	
50311584022	**MW-32**					
EPA 5030/8260	cis-1,2-Dichloroethene	29.8	ug/L	5.0	03/24/22 14:33	
EPA 5030/8260	Tetrachloroethene	12.5	ug/L	5.0	03/24/22 14:33	
EPA 5030/8260	Trichloroethene	22.3	ug/L	5.0	03/24/22 14:33	
50311584023	**DUP (B)**					
EPA 5030/8260	cis-1,2-Dichloroethene	24.3	ug/L	5.0	03/24/22 15:03	
EPA 5030/8260	Tetrachloroethene	11.9	ug/L	5.0	03/24/22 15:03	
EPA 5030/8260	Trichloroethene	19.6	ug/L	5.0	03/24/22 15:03	
50311584024	**MW-26**					
EPA 5030/8260	cis-1,2-Dichloroethene	11.1	ug/L	5.0	03/24/22 15:34	
EPA 5030/8260	Trichloroethene	8.1	ug/L	5.0	03/24/22 15:34	
EPA 5030/8260	Vinyl chloride	80.2	ug/L	2.0	03/24/22 15:34	
50311584025	**MW-33D**					
EPA 5030/8260	cis-1,2-Dichloroethene	5.8	ug/L	5.0	03/24/22 16:05	
EPA 5030/8260	Tetrachloroethene	28.9	ug/L	5.0	03/24/22 16:05	
EPA 5030/8260	Trichloroethene	93.7	ug/L	5.0	03/24/22 16:05	
50311584026	**MW-33**					
EPA 5030/8260	cis-1,2-Dichloroethene	27.5	ug/L	5.0	03/24/22 16:35	
EPA 5030/8260	Tetrachloroethene	31.1	ug/L	5.0	03/24/22 16:35	
EPA 5030/8260	Trichloroethene	57.1	ug/L	5.0	03/24/22 16:35	
50311584027	**MW-40**					
EPA 5030/8260	cis-1,2-Dichloroethene	65.8	ug/L	5.0	03/24/22 17:06	
EPA 5030/8260	trans-1,2-Dichloroethene	66.2	ug/L	5.0	03/24/22 17:06	
EPA 5030/8260	Trichloroethene	197	ug/L	5.0	03/24/22 17:06	
50311584028	**MW-41D**					
EPA 5030/8260	cis-1,2-Dichloroethene	435	ug/L	50.0	03/26/22 00:57	
EPA 5030/8260	Vinyl chloride	3.3	ug/L	2.0	03/24/22 17:37	

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SUMMARY OF DETECTION

Project: HRID 1Q2022
Pace Project No.: 50311584

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50311584029	**MW-36**					
EPA 5030/8260	Tetrachloroethene	26.1	ug/L	5.0	03/24/22 18:07	
EPA 5030/8260	Trichloroethene	80.6	ug/L	5.0	03/24/22 18:07	
50311584030	**MW-24**					
EPA 5030/8260	cis-1,2-Dichloroethene	59.1	ug/L	5.0	03/24/22 18:38	
EPA 5030/8260	Tetrachloroethene	52.3	ug/L	5.0	03/24/22 18:38	
EPA 5030/8260	Trichloroethene	41.2	ug/L	5.0	03/24/22 18:38	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-12 **Lab ID: 50311584001** Collected: 03/14/22 11:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/23/22 23:44	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/23/22 23:44	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/23/22 23:44	107-13-1	
Benzene	ND	ug/L	5.0	1		03/23/22 23:44	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/23/22 23:44	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/23/22 23:44	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/23/22 23:44	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/23/22 23:44	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/23/22 23:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/23/22 23:44	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/23/22 23:44	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/23/22 23:44	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/23/22 23:44	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/23/22 23:44	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/23/22 23:44	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/23/22 23:44	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/23/22 23:44	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/23/22 23:44	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/23/22 23:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/23/22 23:44	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/23/22 23:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/23/22 23:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/23/22 23:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/23/22 23:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/23/22 23:44	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/23/22 23:44	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/23/22 23:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/23/22 23:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/23/22 23:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/23/22 23:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/23/22 23:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/23/22 23:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/23/22 23:44	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/23/22 23:44	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/23/22 23:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/23/22 23:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/23/22 23:44	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/23/22 23:44	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/23/22 23:44	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/23/22 23:44	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/23/22 23:44	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/23/22 23:44	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-12 **Lab ID: 50311584001** Collected: 03/14/22 11:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/23/22 23:44	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/23/22 23:44	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/23/22 23:44	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/23/22 23:44	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/23/22 23:44	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/23/22 23:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/23/22 23:44	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/23/22 23:44	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	103-65-1	
Styrene	ND	ug/L	5.0	1		03/23/22 23:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/23/22 23:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/23/22 23:44	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/23/22 23:44	127-18-4	
Toluene	ND	ug/L	5.0	1		03/23/22 23:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/23/22 23:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/23/22 23:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/23/22 23:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/23/22 23:44	79-00-5	
Trichloroethene	**24.5**	ug/L	5.0	1		03/23/22 23:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/23/22 23:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/23/22 23:44	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/23/22 23:44	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/23/22 23:44	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/23/22 23:44	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/23/22 23:44	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	78-120	1		03/23/22 23:44	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	78-117	1		03/23/22 23:44	460-00-4	
Toluene-d8 (S)	103	%.	77-118	1		03/23/22 23:44	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-12D **Lab ID: 50311584002** Collected: 03/14/22 11:55 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 00:15	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 00:15	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 00:15	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 00:15	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 00:15	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 00:15	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 00:15	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 00:15	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 00:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 00:15	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 00:15	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 00:15	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 00:15	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 00:15	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 00:15	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 00:15	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 00:15	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 00:15	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 00:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 00:15	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 00:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:15	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:15	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 00:15	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 00:15	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 00:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 00:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 00:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 00:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 00:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 00:15	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 00:15	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 00:15	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 00:15	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 00:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 00:15	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 00:15	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 00:15	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 00:15	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 00:15	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 00:15	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-12D **Lab ID: 50311584002** Collected: 03/14/22 11:55 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 00:15	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 00:15	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 00:15	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 00:15	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 00:15	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 00:15	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 00:15	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 00:15	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 00:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 00:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 00:15	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 00:15	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 00:15	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:15	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:15	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 00:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 00:15	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 00:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 00:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 00:15	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 00:15	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 00:15	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 00:15	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 00:15	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	78-120	1		03/24/22 00:15	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 00:15	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 00:15	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-41 **Lab ID: 50311584003** Collected: 03/14/22 13:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 00:46	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 00:46	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 00:46	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 00:46	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 00:46	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 00:46	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 00:46	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 00:46	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 00:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 00:46	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 00:46	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 00:46	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 00:46	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 00:46	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 00:46	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 00:46	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 00:46	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 00:46	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 00:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 00:46	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 00:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:46	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 00:46	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 00:46	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 00:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 00:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 00:46	75-35-4	
cis-1,2-Dichloroethene	**178**	ug/L	5.0	1		03/24/22 00:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 00:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 00:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 00:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 00:46	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 00:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 00:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 00:46	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 00:46	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 00:46	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 00:46	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 00:46	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 00:46	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-41 **Lab ID: 50311584003** Collected: 03/14/22 13:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 00:46	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 00:46	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 00:46	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 00:46	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 00:46	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 00:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 00:46	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 00:46	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 00:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 00:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 00:46	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 00:46	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 00:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 00:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 00:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 00:46	79-00-5	
Trichloroethene	**139**	ug/L	5.0	1		03/24/22 00:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 00:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 00:46	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 00:46	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 00:46	108-05-4	
Vinyl chloride	**2.9**	ug/L	2.0	1		03/24/22 00:46	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 00:46	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	78-120	1		03/24/22 00:46	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 00:46	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 00:46	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-29D **Lab ID: 50311584004** Collected: 03/14/22 14:10 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 01:17	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 01:17	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 01:17	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 01:17	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 01:17	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 01:17	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 01:17	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 01:17	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 01:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 01:17	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 01:17	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 01:17	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 01:17	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 01:17	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 01:17	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 01:17	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 01:17	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 01:17	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 01:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 01:17	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 01:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 01:17	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 01:17	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 01:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 01:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 01:17	75-35-4	
cis-1,2-Dichloroethene	**58.1**	ug/L	5.0	1		03/24/22 01:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 01:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 01:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 01:17	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 01:17	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 01:17	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 01:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 01:17	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 01:17	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 01:17	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 01:17	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 01:17	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 01:17	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-29D **Lab ID: 50311584004** Collected: 03/14/22 14:10 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 01:17	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 01:17	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 01:17	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 01:17	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 01:17	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 01:17	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 01:17	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 01:17	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 01:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 01:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 01:17	79-34-5	
Tetrachloroethene	**12.6**	ug/L	5.0	1		03/24/22 01:17	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 01:17	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:17	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:17	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 01:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 01:17	79-00-5	
Trichloroethene	**110**	ug/L	5.0	1		03/24/22 01:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 01:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 01:17	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 01:17	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 01:17	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 01:17	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 01:17	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 01:17	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	78-117	1		03/24/22 01:17	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 01:17	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-29 **Lab ID: 50311584005** Collected: 03/14/22 14:55 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 01:47	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 01:47	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 01:47	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 01:47	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 01:47	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 01:47	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 01:47	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 01:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 01:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 01:47	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 01:47	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 01:47	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 01:47	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 01:47	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 01:47	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 01:47	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 01:47	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 01:47	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 01:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 01:47	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 01:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 01:47	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 01:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 01:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 01:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 01:47	75-35-4	
cis-1,2-Dichloroethene	**41.0**	ug/L	5.0	1		03/24/22 01:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 01:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 01:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 01:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 01:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 01:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 01:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 01:47	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 01:47	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 01:47	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 01:47	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 01:47	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 01:47	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-29 **Lab ID: 50311584005** Collected: 03/14/22 14:55 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 01:47	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 01:47	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 01:47	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 01:47	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 01:47	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 01:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 01:47	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 01:47	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 01:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 01:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 01:47	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 01:47	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 01:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 01:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 01:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 01:47	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 01:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 01:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 01:47	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 01:47	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 01:47	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 01:47	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 01:47	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 01:47	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 01:47	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 01:47	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-23 **Lab ID: 50311584006** Collected: 03/15/22 10:30 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 02:18	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 02:18	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 02:18	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 02:18	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 02:18	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 02:18	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 02:18	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 02:18	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 02:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 02:18	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 02:18	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 02:18	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 02:18	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 02:18	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 02:18	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 02:18	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 02:18	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 02:18	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 02:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 02:18	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 02:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 02:18	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 02:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 02:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 02:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 02:18	75-35-4	
cis-1,2-Dichloroethene	**731**	ug/L	50.0	10		03/24/22 21:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 02:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 02:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 02:18	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 02:18	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 02:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 02:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 02:18	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 02:18	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 02:18	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 02:18	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 02:18	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 02:18	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-23 **Lab ID: 50311584006** Collected: 03/15/22 10:30 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 02:18	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 02:18	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 02:18	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 02:18	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 02:18	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 02:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 02:18	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 02:18	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 02:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 02:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 02:18	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 02:18	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 02:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 02:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 02:18	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 02:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 02:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 02:18	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 02:18	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 02:18	108-05-4	
Vinyl chloride	**29.8**	ug/L	2.0	1		03/24/22 02:18	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 02:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	78-120	1		03/24/22 02:18	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 02:18	460-00-4	
Toluene-d8 (S)	99	%.	77-118	1		03/24/22 02:18	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-30 **Lab ID: 50311584007** Collected: 03/15/22 11:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 02:49	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 02:49	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 02:49	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 02:49	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 02:49	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 02:49	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 02:49	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 02:49	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 02:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 02:49	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 02:49	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 02:49	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 02:49	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 02:49	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 02:49	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 02:49	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 02:49	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 02:49	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 02:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 02:49	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 02:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 02:49	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 02:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 02:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 02:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 02:49	75-35-4	
cis-1,2-Dichloroethene	**1430**	ug/L	50.0	10		03/24/22 22:28	156-59-2	
trans-1,2-Dichloroethene	**6.4**	ug/L	5.0	1		03/24/22 02:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 02:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 02:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 02:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 02:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 02:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 02:49	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 02:49	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 02:49	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 02:49	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 02:49	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 02:49	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-30 **Lab ID: 50311584007** Collected: 03/15/22 11:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 02:49	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 02:49	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 02:49	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 02:49	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 02:49	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 02:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 02:49	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 02:49	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 02:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 02:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 02:49	79-34-5	
Tetrachloroethene	**178**	ug/L	5.0	1		03/24/22 02:49	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 02:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 02:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 02:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 02:49	79-00-5	
Trichloroethene	**143**	ug/L	5.0	1		03/24/22 02:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 02:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 02:49	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 02:49	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 02:49	108-05-4	
Vinyl chloride	**79.9**	ug/L	2.0	1		03/24/22 02:49	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 02:49	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 02:49	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	78-117	1		03/24/22 02:49	460-00-4	
Toluene-d8 (S)	99	%.	77-118	1		03/24/22 02:49	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-11D **Lab ID: 50311584008** Collected: 03/15/22 11:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 03:19	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 03:19	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 03:19	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 03:19	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 03:19	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 03:19	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 03:19	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 03:19	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 03:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 03:19	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 03:19	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 03:19	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 03:19	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 03:19	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 03:19	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 03:19	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 03:19	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 03:19	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 03:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 03:19	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 03:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:19	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 03:19	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 03:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 03:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 03:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 03:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 03:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 03:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 03:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 03:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 03:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 03:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 03:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 03:19	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 03:19	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 03:19	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 03:19	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 03:19	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 03:19	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-11D **Lab ID: 50311584008** Collected: 03/15/22 11:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 03:19	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 03:19	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 03:19	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 03:19	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 03:19	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 03:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 03:19	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 03:19	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 03:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 03:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 03:19	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 03:19	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 03:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 03:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 03:19	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 03:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 03:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 03:19	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 03:19	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 03:19	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 03:19	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 03:19	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	78-120	1		03/24/22 03:19	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 03:19	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 03:19	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-22 **Lab ID: 50311584009** Collected: 03/15/22 12:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 03:50	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 03:50	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 03:50	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 03:50	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 03:50	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 03:50	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 03:50	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 03:50	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 03:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 03:50	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 03:50	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 03:50	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 03:50	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 03:50	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 03:50	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 03:50	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 03:50	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 03:50	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 03:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 03:50	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 03:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 03:50	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 03:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 03:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 03:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 03:50	75-35-4	
cis-1,2-Dichloroethene	**6.5**	ug/L	5.0	1		03/24/22 03:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 03:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 03:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 03:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 03:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 03:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 03:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 03:50	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 03:50	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 03:50	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 03:50	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 03:50	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 03:50	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-22 **Lab ID: 50311584009** Collected: 03/15/22 12:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 03:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 03:50	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 03:50	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 03:50	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 03:50	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 03:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 03:50	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 03:50	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 03:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 03:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 03:50	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 03:50	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 03:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 03:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 03:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 03:50	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 03:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 03:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 03:50	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 03:50	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 03:50	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 03:50	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 03:50	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	78-120	1		03/24/22 03:50	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	78-117	1		03/24/22 03:50	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 03:50	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-22D **Lab ID: 50311584010** Collected: 03/15/22 13:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 05:22	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 05:22	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 05:22	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 05:22	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 05:22	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 05:22	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 05:22	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 05:22	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 05:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 05:22	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 05:22	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 05:22	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 05:22	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 05:22	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 05:22	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 05:22	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:22	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:22	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 05:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 05:22	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 05:22	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:22	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:22	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:22	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 05:22	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 05:22	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:22	75-35-4	
cis-1,2-Dichloroethene	**10.6**	ug/L	5.0	1		03/24/22 05:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:22	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:22	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:22	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:22	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:22	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 05:22	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 05:22	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 05:22	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 05:22	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 05:22	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-22D **Lab ID: 50311584010** Collected: 03/15/22 13:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 05:22	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 05:22	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 05:22	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:22	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:22	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 05:22	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 05:22	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 05:22	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 05:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:22	79-34-5	
Tetrachloroethene	**11.5**	ug/L	5.0	1		03/24/22 05:22	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 05:22	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:22	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:22	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:22	79-00-5	
Trichloroethene	**37.8**	ug/L	5.0	1		03/24/22 05:22	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 05:22	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 05:22	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:22	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 05:22	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 05:22	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 05:22	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 05:22	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 05:22	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 05:22	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-42D **Lab ID: 50311584011** Collected: 03/15/22 14:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 05:53	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 05:53	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 05:53	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 05:53	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 05:53	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 05:53	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 05:53	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 05:53	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 05:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 05:53	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 05:53	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 05:53	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 05:53	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 05:53	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 05:53	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 05:53	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:53	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:53	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 05:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 05:53	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 05:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 05:53	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 05:53	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:53	75-35-4	
cis-1,2-Dichloroethene	**171**	ug/L	5.0	1		03/24/22 05:53	156-59-2	
trans-1,2-Dichloroethene	**13.6**	ug/L	5.0	1		03/24/22 05:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:53	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:53	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:53	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 05:53	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 05:53	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 05:53	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 05:53	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 05:53	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-42D **Lab ID: 50311584011** Collected: 03/15/22 14:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 05:53	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 05:53	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 05:53	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:53	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:53	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 05:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 05:53	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 05:53	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 05:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:53	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 05:53	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 05:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:53	79-00-5	
Trichloroethene	**132**	ug/L	5.0	1		03/24/22 05:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 05:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 05:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:53	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 05:53	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 05:53	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 05:53	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	78-120	1		03/24/22 05:53	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 05:53	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 05:53	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-42 **Lab ID: 50311584012** Collected: 03/15/22 15:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 06:24	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 06:24	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 06:24	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 06:24	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 06:24	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 06:24	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 06:24	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 06:24	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 06:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 06:24	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 06:24	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 06:24	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 06:24	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 06:24	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 06:24	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 06:24	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 06:24	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 06:24	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 06:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 06:24	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 06:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 06:24	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 06:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 06:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 06:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 06:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 06:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 06:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 06:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 06:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 06:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 06:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 06:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 06:24	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 06:24	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 06:24	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 06:24	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 06:24	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 06:24	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-42 **Lab ID: 50311584012** Collected: 03/15/22 15:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 06:24	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 06:24	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 06:24	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 06:24	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 06:24	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 06:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 06:24	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 06:24	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 06:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 06:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 06:24	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 06:24	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 06:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 06:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 06:24	79-00-5	
Trichloroethene	**84.0**	ug/L	5.0	1		03/24/22 06:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 06:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 06:24	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 06:24	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 06:24	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 06:24	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 06:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 06:24	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 06:24	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 06:24	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: DUP A **Lab ID: 50311584013** Collected: 03/15/22 08:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 10:27	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 10:27	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 10:27	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 10:27	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 10:27	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 10:27	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 10:27	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 10:27	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 10:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 10:27	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 10:27	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 10:27	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 10:27	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 10:27	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 10:27	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 10:27	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 10:27	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 10:27	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 10:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 10:27	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 10:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 10:27	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 10:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 10:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 10:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 10:27	75-35-4	
cis-1,2-Dichloroethene	**1920**	ug/L	50.0	10		03/26/22 00:26	156-59-2	
trans-1,2-Dichloroethene	**6.1**	ug/L	5.0	1		03/24/22 10:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 10:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 10:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 10:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 10:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 10:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 10:27	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 10:27	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 10:27	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 10:27	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 10:27	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 10:27	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: DUP A **Lab ID: 50311584013** Collected: 03/15/22 08:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 10:27	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 10:27	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 10:27	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 10:27	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 10:27	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 10:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 10:27	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 10:27	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 10:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 10:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 10:27	79-34-5	
Tetrachloroethene	**167**	ug/L	5.0	1		03/24/22 10:27	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 10:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 10:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 10:27	79-00-5	
Trichloroethene	**139**	ug/L	5.0	1		03/24/22 10:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 10:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 10:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 10:27	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 10:27	108-05-4	
Vinyl chloride	**96.1**	ug/L	2.0	1		03/24/22 10:27	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 10:27	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 10:27	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 10:27	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 10:27	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-14D **Lab ID: 50311584014** Collected: 03/16/22 09:30 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 05:07	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 05:07	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 05:07	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 05:07	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 05:07	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 05:07	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 05:07	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 05:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 05:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 05:07	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 05:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 05:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 05:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 05:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 05:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 05:07	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:07	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:07	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 05:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 05:07	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 05:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 05:07	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 05:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:07	75-35-4	
cis-1,2-Dichloroethene	**25.2**	ug/L	5.0	1		03/24/22 05:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 05:07	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 05:07	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 05:07	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 05:07	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 05:07	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-14D **Lab ID: 50311584014** Collected: 03/16/22 09:30 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 05:07	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 05:07	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 05:07	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:07	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:07	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 05:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 05:07	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 05:07	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 05:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:07	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 05:07	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 05:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:07	79-00-5	
Trichloroethene	**234**	ug/L	5.0	1		03/24/22 05:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 05:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 05:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:07	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 05:07	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 05:07	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 05:07	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 05:07	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 05:07	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 05:07	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-14 **Lab ID: 50311584015** Collected: 03/16/22 10:20 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 05:38	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 05:38	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 05:38	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 05:38	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 05:38	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 05:38	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 05:38	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 05:38	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 05:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 05:38	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 05:38	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 05:38	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 05:38	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 05:38	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 05:38	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 05:38	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:38	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 05:38	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 05:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 05:38	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 05:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:38	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 05:38	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 05:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 05:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 05:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 05:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 05:38	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 05:38	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 05:38	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 05:38	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 05:38	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 05:38	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-14 **Lab ID: 50311584015** Collected: 03/16/22 10:20 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 05:38	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 05:38	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 05:38	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:38	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 05:38	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 05:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 05:38	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 05:38	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 05:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 05:38	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 05:38	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 05:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 05:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 05:38	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 05:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 05:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 05:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 05:38	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 05:38	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 05:38	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 05:38	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 05:38	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	78-117	1		03/24/22 05:38	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 05:38	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-15D **Lab ID: 50311584016** Collected: 03/16/22 11:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 06:08	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 06:08	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 06:08	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 06:08	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 06:08	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 06:08	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 06:08	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 06:08	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 06:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 06:08	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 06:08	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 06:08	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 06:08	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 06:08	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 06:08	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 06:08	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 06:08	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 06:08	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 06:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 06:08	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 06:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 06:08	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 06:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 06:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 06:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 06:08	75-35-4	
cis-1,2-Dichloroethene	**82.6**	ug/L	5.0	1		03/24/22 06:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 06:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 06:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 06:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 06:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 06:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 06:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 06:08	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 06:08	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 06:08	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 06:08	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 06:08	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 06:08	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-15D **Lab ID: 50311584016** Collected: 03/16/22 11:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 06:08	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 06:08	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 06:08	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 06:08	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 06:08	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 06:08	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 06:08	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 06:08	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 06:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 06:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 06:08	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 06:08	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 06:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 06:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 06:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 06:08	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 06:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 06:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 06:08	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 06:08	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 06:08	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 06:08	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 06:08	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%.	78-120	1		03/24/22 06:08	1868-53-7	
4-Bromofluorobenzene (S)	96	%.	78-117	1		03/24/22 06:08	460-00-4	
Toluene-d8 (S)	105	%.	77-118	1		03/24/22 06:08	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-15 **Lab ID: 50311584017** Collected: 03/16/22 12:25 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 10:57	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 10:57	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 10:57	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 10:57	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 10:57	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 10:57	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 10:57	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 10:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 10:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 10:57	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 10:57	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 10:57	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 10:57	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 10:57	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 10:57	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 10:57	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 10:57	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 10:57	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 10:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 10:57	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 10:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:57	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 10:57	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 10:57	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 10:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 10:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 10:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 10:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 10:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 10:57	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 10:57	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 10:57	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 10:57	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 10:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 10:57	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 10:57	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 10:57	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 10:57	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 10:57	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 10:57	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-15 **Lab ID: 50311584017** Collected: 03/16/22 12:25 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 10:57	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 10:57	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 10:57	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 10:57	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 10:57	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 10:57	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 10:57	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 10:57	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 10:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 10:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 10:57	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 10:57	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 10:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 10:57	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 10:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 10:57	79-00-5	
Trichloroethene	**13.5**	ug/L	5.0	1		03/24/22 10:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 10:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 10:57	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 10:57	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 10:57	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 10:57	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 10:57	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	78-120	1		03/24/22 10:57	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	78-117	1		03/24/22 10:57	460-00-4	
Toluene-d8 (S)	98	%.	77-118	1		03/24/22 10:57	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-43D **Lab ID: 50311584018** Collected: 03/16/22 14:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 11:28	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 11:28	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 11:28	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 11:28	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 11:28	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 11:28	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 11:28	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 11:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 11:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 11:28	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 11:28	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 11:28	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 11:28	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 11:28	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 11:28	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 11:28	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 11:28	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 11:28	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 11:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 11:28	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 11:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:28	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 11:28	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 11:28	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 11:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 11:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 11:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 11:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 11:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 11:28	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 11:28	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 11:28	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 11:28	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 11:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 11:28	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 11:28	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 11:28	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 11:28	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 11:28	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 11:28	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-43D **Lab ID: 50311584018** Collected: 03/16/22 14:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 11:28	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 11:28	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 11:28	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 11:28	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 11:28	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 11:28	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 11:28	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 11:28	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 11:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 11:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 11:28	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 11:28	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 11:28	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 11:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 11:28	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 11:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 11:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 11:28	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 11:28	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 11:28	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 11:28	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 11:28	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	78-120	1		03/24/22 11:28	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 11:28	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 11:28	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-43 **Lab ID: 50311584019** Collected: 03/16/22 13:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 11:59	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 11:59	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 11:59	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 11:59	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 11:59	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 11:59	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 11:59	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 11:59	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 11:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 11:59	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 11:59	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 11:59	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 11:59	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 11:59	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 11:59	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 11:59	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 11:59	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 11:59	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 11:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 11:59	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 11:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:59	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 11:59	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 11:59	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 11:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 11:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 11:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 11:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 11:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 11:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 11:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 11:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 11:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 11:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 11:59	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 11:59	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 11:59	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 11:59	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 11:59	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 11:59	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-43 **Lab ID: 50311584019** Collected: 03/16/22 13:15 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 11:59	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 11:59	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 11:59	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 11:59	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 11:59	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 11:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 11:59	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 11:59	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 11:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 11:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 11:59	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 11:59	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 11:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 11:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 11:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 11:59	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 11:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 11:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 11:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 11:59	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 11:59	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 11:59	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 11:59	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 11:59	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	78-117	1		03/24/22 11:59	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 11:59	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-39 **Lab ID: 50311584020** Collected: 03/16/22 09:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 12:30	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 12:30	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 12:30	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 12:30	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 12:30	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 12:30	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 12:30	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 12:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 12:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 12:30	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 12:30	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 12:30	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 12:30	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 12:30	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 12:30	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 12:30	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 12:30	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 12:30	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 12:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 12:30	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 12:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 12:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 12:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 12:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 12:30	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 12:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 12:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 12:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 12:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 12:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 12:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 12:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 12:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 12:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 12:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 12:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 12:30	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 12:30	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 12:30	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 12:30	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 12:30	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 12:30	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-39 **Lab ID: 50311584020** Collected: 03/16/22 09:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 12:30	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 12:30	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 12:30	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 12:30	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 12:30	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 12:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 12:30	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 12:30	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 12:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 12:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 12:30	79-34-5	
Tetrachloroethene	**21.5**	ug/L	5.0	1		03/24/22 12:30	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 12:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 12:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 12:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 12:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 12:30	79-00-5	
Trichloroethene	**50.9**	ug/L	5.0	1		03/24/22 12:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 12:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 12:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 12:30	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 12:30	108-05-4	
Vinyl chloride	**3.5**	ug/L	2.0	1		03/24/22 12:30	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 12:30	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	78-120	1		03/24/22 12:30	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 12:30	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 12:30	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-37 **Lab ID: 50311584021** Collected: 03/16/22 10:25 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 14:02	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 14:02	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 14:02	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 14:02	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 14:02	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 14:02	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 14:02	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 14:02	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 14:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 14:02	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 14:02	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 14:02	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 14:02	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 14:02	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 14:02	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 14:02	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 14:02	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 14:02	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 14:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 14:02	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 14:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 14:02	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 14:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 14:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 14:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 14:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 14:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 14:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 14:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 14:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 14:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 14:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 14:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 14:02	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 14:02	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 14:02	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 14:02	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 14:02	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 14:02	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-37 **Lab ID: 50311584021** Collected: 03/16/22 10:25 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 14:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 14:02	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 14:02	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 14:02	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 14:02	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 14:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 14:02	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 14:02	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 14:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 14:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 14:02	79-34-5	
Tetrachloroethene	**26.3**	ug/L	5.0	1		03/24/22 14:02	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 14:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 14:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 14:02	79-00-5	
Trichloroethene	**38.5**	ug/L	5.0	1		03/24/22 14:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 14:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 14:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 14:02	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 14:02	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 14:02	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 14:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%.	78-120	1		03/24/22 14:02	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 14:02	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 14:02	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-32 **Lab ID: 50311584022** Collected: 03/16/22 11:13 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 14:33	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 14:33	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 14:33	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 14:33	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 14:33	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 14:33	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 14:33	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 14:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 14:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 14:33	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 14:33	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 14:33	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 14:33	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 14:33	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 14:33	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 14:33	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 14:33	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 14:33	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 14:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 14:33	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 14:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 14:33	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 14:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 14:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 14:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 14:33	75-35-4	
cis-1,2-Dichloroethene	**29.8**	ug/L	5.0	1		03/24/22 14:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 14:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 14:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 14:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 14:33	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 14:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 14:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 14:33	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 14:33	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 14:33	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 14:33	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 14:33	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 14:33	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-32 **Lab ID: 50311584022** Collected: 03/16/22 11:13 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 14:33	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 14:33	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 14:33	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 14:33	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 14:33	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 14:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 14:33	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 14:33	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 14:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 14:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 14:33	79-34-5	
Tetrachloroethene	**12.5**	ug/L	5.0	1		03/24/22 14:33	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 14:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 14:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 14:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 14:33	79-00-5	
Trichloroethene	**22.3**	ug/L	5.0	1		03/24/22 14:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 14:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 14:33	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 14:33	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 14:33	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 14:33	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 14:33	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%.	78-120	1		03/24/22 14:33	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 14:33	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 14:33	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: DUP (B) **Lab ID: 50311584023** Collected: 03/16/22 08:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 15:03	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 15:03	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 15:03	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 15:03	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 15:03	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 15:03	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 15:03	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 15:03	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 15:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 15:03	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 15:03	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 15:03	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 15:03	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 15:03	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 15:03	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 15:03	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 15:03	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 15:03	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 15:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 15:03	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 15:03	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:03	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 15:03	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 15:03	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 15:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 15:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 15:03	75-35-4	
cis-1,2-Dichloroethene	**24.3**	ug/L	5.0	1		03/24/22 15:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 15:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 15:03	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 15:03	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 15:03	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 15:03	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 15:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 15:03	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 15:03	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 15:03	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 15:03	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 15:03	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 15:03	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: DUP (B) **Lab ID: 50311584023** Collected: 03/16/22 08:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 15:03	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 15:03	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 15:03	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 15:03	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 15:03	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 15:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 15:03	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 15:03	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 15:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 15:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 15:03	79-34-5	
Tetrachloroethene	**11.9**	ug/L	5.0	1		03/24/22 15:03	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 15:03	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:03	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 15:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 15:03	79-00-5	
Trichloroethene	**19.6**	ug/L	5.0	1		03/24/22 15:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 15:03	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 15:03	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 15:03	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 15:03	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 15:03	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 15:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 15:03	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 15:03	460-00-4	
Toluene-d8 (S)	99	%.	77-118	1		03/24/22 15:03	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-26 **Lab ID: 50311584024** Collected: 03/16/22 12:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 15:34	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 15:34	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 15:34	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 15:34	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 15:34	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 15:34	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 15:34	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 15:34	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 15:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 15:34	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 15:34	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 15:34	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 15:34	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 15:34	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 15:34	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 15:34	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 15:34	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 15:34	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 15:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 15:34	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 15:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 15:34	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 15:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 15:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 15:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 15:34	75-35-4	
cis-1,2-Dichloroethene	**11.1**	ug/L	5.0	1		03/24/22 15:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 15:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 15:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 15:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 15:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 15:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 15:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 15:34	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 15:34	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 15:34	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 15:34	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 15:34	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 15:34	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-26 **Lab ID: 50311584024** Collected: 03/16/22 12:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 15:34	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 15:34	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 15:34	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 15:34	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 15:34	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 15:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 15:34	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 15:34	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 15:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 15:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 15:34	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 15:34	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 15:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 15:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 15:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 15:34	79-00-5	
Trichloroethene	**8.1**	ug/L	5.0	1		03/24/22 15:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 15:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 15:34	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 15:34	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 15:34	108-05-4	
Vinyl chloride	**80.2**	ug/L	2.0	1		03/24/22 15:34	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 15:34	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 15:34	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 15:34	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 15:34	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-33D **Lab ID: 50311584025** Collected: 03/16/22 13:10 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 16:05	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 16:05	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 16:05	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 16:05	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 16:05	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 16:05	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 16:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 16:05	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 16:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 16:05	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 16:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 16:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 16:05	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 16:05	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 16:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 16:05	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 16:05	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 16:05	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 16:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 16:05	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 16:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 16:05	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 16:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 16:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 16:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 16:05	75-35-4	
cis-1,2-Dichloroethene	**5.8**	ug/L	5.0	1		03/24/22 16:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 16:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 16:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 16:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 16:05	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 16:05	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 16:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 16:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 16:05	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 16:05	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 16:05	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 16:05	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 16:05	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-33D **Lab ID: 50311584025** Collected: 03/16/22 13:10 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 16:05	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 16:05	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 16:05	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 16:05	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 16:05	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 16:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 16:05	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 16:05	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 16:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 16:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 16:05	79-34-5	
Tetrachloroethene	**28.9**	ug/L	5.0	1		03/24/22 16:05	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 16:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 16:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 16:05	79-00-5	
Trichloroethene	**93.7**	ug/L	5.0	1		03/24/22 16:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 16:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 16:05	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 16:05	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 16:05	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 16:05	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 16:05	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 16:05	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 16:05	460-00-4	
Toluene-d8 (S)	100	%.	77-118	1		03/24/22 16:05	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-33 **Lab ID: 50311584026** Collected: 03/16/22 13:55 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 16:35	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 16:35	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 16:35	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 16:35	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 16:35	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 16:35	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 16:35	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 16:35	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 16:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 16:35	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 16:35	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 16:35	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 16:35	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 16:35	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 16:35	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 16:35	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 16:35	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 16:35	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 16:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 16:35	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 16:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 16:35	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 16:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 16:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 16:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 16:35	75-35-4	
cis-1,2-Dichloroethene	**27.5**	ug/L	5.0	1		03/24/22 16:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 16:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 16:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 16:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 16:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 16:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 16:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 16:35	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 16:35	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 16:35	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 16:35	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 16:35	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 16:35	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-33 **Lab ID: 50311584026** Collected: 03/16/22 13:55 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 16:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 16:35	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 16:35	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 16:35	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 16:35	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 16:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 16:35	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 16:35	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 16:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 16:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 16:35	79-34-5	
Tetrachloroethene	**31.1**	ug/L	5.0	1		03/24/22 16:35	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 16:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 16:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 16:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 16:35	79-00-5	
Trichloroethene	**57.1**	ug/L	5.0	1		03/24/22 16:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 16:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 16:35	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 16:35	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 16:35	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 16:35	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 16:35	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%.	78-120	1		03/24/22 16:35	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 16:35	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 16:35	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-40 **Lab ID: 50311584027** Collected: 03/16/22 14:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 17:06	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 17:06	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 17:06	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 17:06	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 17:06	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 17:06	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 17:06	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 17:06	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 17:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 17:06	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 17:06	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 17:06	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 17:06	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 17:06	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 17:06	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 17:06	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 17:06	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 17:06	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 17:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 17:06	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 17:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 17:06	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 17:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 17:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 17:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 17:06	75-35-4	
cis-1,2-Dichloroethene	**65.8**	ug/L	5.0	1		03/24/22 17:06	156-59-2	
trans-1,2-Dichloroethene	**66.2**	ug/L	5.0	1		03/24/22 17:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 17:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 17:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 17:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 17:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 17:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 17:06	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 17:06	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 17:06	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 17:06	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 17:06	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 17:06	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-40 **Lab ID: 50311584027** Collected: 03/16/22 14:40 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 17:06	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 17:06	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 17:06	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 17:06	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 17:06	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 17:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 17:06	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 17:06	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 17:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 17:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 17:06	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 17:06	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 17:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 17:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 17:06	79-00-5	
Trichloroethene	**197**	ug/L	5.0	1		03/24/22 17:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 17:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 17:06	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 17:06	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 17:06	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 17:06	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 17:06	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%.	78-120	1		03/24/22 17:06	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	78-117	1		03/24/22 17:06	460-00-4	
Toluene-d8 (S)	98	%.	77-118	1		03/24/22 17:06	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-41D **Lab ID: 50311584028** Collected: 03/17/22 11:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 17:37	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 17:37	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 17:37	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 17:37	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 17:37	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 17:37	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 17:37	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 17:37	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 17:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 17:37	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 17:37	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 17:37	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 17:37	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 17:37	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 17:37	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 17:37	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 17:37	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 17:37	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 17:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 17:37	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 17:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 17:37	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 17:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 17:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 17:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 17:37	75-35-4	
cis-1,2-Dichloroethene	**435**	ug/L	50.0	10		03/26/22 00:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 17:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 17:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 17:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 17:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 17:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 17:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 17:37	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 17:37	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 17:37	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 17:37	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 17:37	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 17:37	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-41D **Lab ID: 50311584028** Collected: 03/17/22 11:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 17:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 17:37	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 17:37	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 17:37	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 17:37	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 17:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 17:37	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 17:37	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 17:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 17:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 17:37	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 17:37	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 17:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 17:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 17:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 17:37	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 17:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 17:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 17:37	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 17:37	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 17:37	108-05-4	
Vinyl chloride	**3.3**	ug/L	2.0	1		03/24/22 17:37	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 17:37	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	78-120	1		03/24/22 17:37	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 17:37	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 17:37	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-36 **Lab ID: 50311584029** Collected: 03/17/22 11:50 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 18:07	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 18:07	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 18:07	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 18:07	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 18:07	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 18:07	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 18:07	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 18:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 18:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 18:07	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 18:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 18:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 18:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 18:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 18:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 18:07	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 18:07	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 18:07	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 18:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 18:07	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 18:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 18:07	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 18:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 18:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 18:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 18:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 18:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 18:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 18:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 18:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 18:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 18:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 18:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 18:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 18:07	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 18:07	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 18:07	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 18:07	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 18:07	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-36 **Lab ID: 50311584029** Collected: 03/17/22 11:50 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 18:07	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 18:07	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 18:07	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 18:07	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 18:07	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 18:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 18:07	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 18:07	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 18:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 18:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 18:07	79-34-5	
Tetrachloroethene	**26.1**	ug/L	5.0	1		03/24/22 18:07	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 18:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 18:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 18:07	79-00-5	
Trichloroethene	**80.6**	ug/L	5.0	1		03/24/22 18:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 18:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 18:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 18:07	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 18:07	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 18:07	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 18:07	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	78-120	1		03/24/22 18:07	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	78-117	1		03/24/22 18:07	460-00-4	
Toluene-d8 (S)	102	%.	77-118	1		03/24/22 18:07	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-24 **Lab ID: 50311584030** Collected: 03/17/22 12:20 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 18:38	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 18:38	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 18:38	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 18:38	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 18:38	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 18:38	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 18:38	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 18:38	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 18:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 18:38	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 18:38	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 18:38	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 18:38	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 18:38	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 18:38	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 18:38	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 18:38	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 18:38	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 18:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 18:38	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 18:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:38	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 18:38	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 18:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 18:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 18:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 18:38	75-35-4	
cis-1,2-Dichloroethene	**59.1**	ug/L	5.0	1		03/24/22 18:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 18:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 18:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 18:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 18:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 18:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 18:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 18:38	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 18:38	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 18:38	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 18:38	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 18:38	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 18:38	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: MW-24 **Lab ID: 50311584030** Collected: 03/17/22 12:20 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 18:38	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 18:38	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 18:38	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 18:38	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 18:38	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 18:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 18:38	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 18:38	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 18:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 18:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 18:38	79-34-5	
Tetrachloroethene	**52.3**	ug/L	5.0	1		03/24/22 18:38	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 18:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 18:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 18:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 18:38	79-00-5	
Trichloroethene	**41.2**	ug/L	5.0	1		03/24/22 18:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 18:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 18:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 18:38	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 18:38	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 18:38	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 18:38	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 18:38	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 18:38	460-00-4	
Toluene-d8 (S)	99	%.	77-118	1		03/24/22 18:38	2037-26-5	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: TRIP BLANK **Lab ID: 50311584031** Collected: 03/17/22 08:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		03/24/22 19:09	67-64-1	
Acrolein	ND	ug/L	50.0	1		03/24/22 19:09	107-02-8	
Acrylonitrile	ND	ug/L	100	1		03/24/22 19:09	107-13-1	
Benzene	ND	ug/L	5.0	1		03/24/22 19:09	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		03/24/22 19:09	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		03/24/22 19:09	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		03/24/22 19:09	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/24/22 19:09	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/24/22 19:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		03/24/22 19:09	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		03/24/22 19:09	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/24/22 19:09	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/24/22 19:09	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/24/22 19:09	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/24/22 19:09	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/24/22 19:09	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 19:09	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		03/24/22 19:09	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		03/24/22 19:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		03/24/22 19:09	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		03/24/22 19:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 19:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 19:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/24/22 19:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		03/24/22 19:09	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		03/24/22 19:09	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/24/22 19:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/24/22 19:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/24/22 19:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 19:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/24/22 19:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 19:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		03/24/22 19:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		03/24/22 19:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		03/24/22 19:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 19:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/24/22 19:09	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		03/24/22 19:09	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		03/24/22 19:09	87-68-3	
n-Hexane	ND	ug/L	5.0	1		03/24/22 19:09	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		03/24/22 19:09	591-78-6	
Iodomethane	ND	ug/L	10.0	1		03/24/22 19:09	74-88-4	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50311584

Sample: TRIP BLANK **Lab ID: 50311584031** Collected: 03/17/22 08:00 Received: 03/17/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		03/24/22 19:09	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		03/24/22 19:09	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		03/24/22 19:09	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 19:09	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		03/24/22 19:09	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		03/24/22 19:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		03/24/22 19:09	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		03/24/22 19:09	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	103-65-1	
Styrene	ND	ug/L	5.0	1		03/24/22 19:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 19:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/24/22 19:09	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/24/22 19:09	127-18-4	
Toluene	ND	ug/L	5.0	1		03/24/22 19:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 19:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		03/24/22 19:09	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/24/22 19:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/24/22 19:09	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/24/22 19:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/24/22 19:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		03/24/22 19:09	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		03/24/22 19:09	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		03/24/22 19:09	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		03/24/22 19:09	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		03/24/22 19:09	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	78-120	1		03/24/22 19:09	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	78-117	1		03/24/22 19:09	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		03/24/22 19:09	2037-26-5	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

QC Batch: 667787
QC Batch Method: EPA 5030/8260
Analysis Method: EPA 5030/8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50311584001, 50311584002, 50311584003, 50311584004, 50311584005, 50311584006, 50311584007, 50311584008, 50311584009, 50311584010, 50311584011, 50311584012

METHOD BLANK: 3074839
Matrix: Water
Associated Lab Samples: 50311584001, 50311584002, 50311584003, 50311584004, 50311584005, 50311584006, 50311584007, 50311584008, 50311584009, 50311584010, 50311584011, 50311584012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/23/22 23:14	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/23/22 23:14	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/23/22 23:14	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/23/22 23:14	
1,1-Dichloroethane	ug/L	ND	5.0	03/23/22 23:14	
1,1-Dichloroethene	ug/L	ND	5.0	03/23/22 23:14	
1,1-Dichloropropene	ug/L	ND	5.0	03/23/22 23:14	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/23/22 23:14	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/23/22 23:14	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/23/22 23:14	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/23/22 23:14	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/23/22 23:14	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/23/22 23:14	
1,2-Dichloroethane	ug/L	ND	5.0	03/23/22 23:14	
1,2-Dichloropropane	ug/L	ND	5.0	03/23/22 23:14	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/23/22 23:14	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/23/22 23:14	
1,3-Dichloropropane	ug/L	ND	5.0	03/23/22 23:14	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/23/22 23:14	
1-Methylnaphthalene	ug/L	ND	10.0	03/23/22 23:14	
2,2-Dichloropropane	ug/L	ND	5.0	03/23/22 23:14	
2-Butanone (MEK)	ug/L	ND	25.0	03/23/22 23:14	
2-Chlorotoluene	ug/L	ND	5.0	03/23/22 23:14	
2-Hexanone	ug/L	ND	25.0	03/23/22 23:14	
2-Methylnaphthalene	ug/L	ND	10.0	03/23/22 23:14	
4-Chlorotoluene	ug/L	ND	5.0	03/23/22 23:14	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/23/22 23:14	
Acetone	ug/L	ND	100	03/23/22 23:14	
Acrolein	ug/L	ND	50.0	03/23/22 23:14	
Acrylonitrile	ug/L	ND	100	03/23/22 23:14	
Benzene	ug/L	ND	5.0	03/23/22 23:14	
Bromobenzene	ug/L	ND	5.0	03/23/22 23:14	
Bromochloromethane	ug/L	ND	5.0	03/23/22 23:14	
Bromodichloromethane	ug/L	ND	5.0	03/23/22 23:14	
Bromoform	ug/L	ND	5.0	03/23/22 23:14	
Bromomethane	ug/L	ND	5.0	03/23/22 23:14	
Carbon disulfide	ug/L	ND	10.0	03/23/22 23:14	
Carbon tetrachloride	ug/L	ND	5.0	03/23/22 23:14	
Chlorobenzene	ug/L	ND	5.0	03/23/22 23:14	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

METHOD BLANK: 3074839 Matrix: Water

Associated Lab Samples: 50311584001, 50311584002, 50311584003, 50311584004, 50311584005, 50311584006, 50311584007, 50311584008, 50311584009, 50311584010, 50311584011, 50311584012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroethane	ug/L	ND	5.0	03/23/22 23:14	
Chloroform	ug/L	ND	5.0	03/23/22 23:14	
Chloromethane	ug/L	ND	5.0	03/23/22 23:14	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/23/22 23:14	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/23/22 23:14	
Dibromochloromethane	ug/L	ND	5.0	03/23/22 23:14	
Dibromomethane	ug/L	ND	5.0	03/23/22 23:14	
Dichlorodifluoromethane	ug/L	ND	5.0	03/23/22 23:14	
Ethyl methacrylate	ug/L	ND	100	03/23/22 23:14	
Ethylbenzene	ug/L	ND	5.0	03/23/22 23:14	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/23/22 23:14	
Iodomethane	ug/L	ND	10.0	03/23/22 23:14	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/23/22 23:14	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/23/22 23:14	
Methylene Chloride	ug/L	ND	5.0	03/23/22 23:14	
n-Butylbenzene	ug/L	ND	5.0	03/23/22 23:14	
n-Hexane	ug/L	ND	5.0	03/23/22 23:14	
n-Propylbenzene	ug/L	ND	5.0	03/23/22 23:14	
Naphthalene	ug/L	ND	1.2	03/23/22 23:14	
p-Isopropyltoluene	ug/L	ND	5.0	03/23/22 23:14	
sec-Butylbenzene	ug/L	ND	5.0	03/23/22 23:14	
Styrene	ug/L	ND	5.0	03/23/22 23:14	
tert-Butylbenzene	ug/L	ND	5.0	03/23/22 23:14	
Tetrachloroethene	ug/L	ND	5.0	03/23/22 23:14	
Toluene	ug/L	ND	5.0	03/23/22 23:14	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/23/22 23:14	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/23/22 23:14	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/23/22 23:14	
Trichloroethene	ug/L	ND	5.0	03/23/22 23:14	
Trichlorofluoromethane	ug/L	ND	5.0	03/23/22 23:14	
Vinyl acetate	ug/L	ND	50.0	03/23/22 23:14	
Vinyl chloride	ug/L	ND	2.0	03/23/22 23:14	
Xylene (Total)	ug/L	ND	10.0	03/23/22 23:14	
4-Bromofluorobenzene (S)	%.	100	78-117	03/23/22 23:14	
Dibromofluoromethane (S)	%.	100	78-120	03/23/22 23:14	
Toluene-d8 (S)	%.	101	77-118	03/23/22 23:14	

LABORATORY CONTROL SAMPLE: 3074840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.9	104	73-132	
1,1,2,2-Tetrachloroethane	ug/L	50	53.2	106	65-131	
1,1-Dichloroethene	ug/L	50	57.5	115	67-136	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

LABORATORY CONTROL SAMPLE: 3074840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	49.4	99	68-122	
1,2-Dibromoethane (EDB)	ug/L	50	47.9	96	76-126	
1,2-Dichloroethane	ug/L	50	51.5	103	69-135	
1,2-Dichloropropane	ug/L	50	51.7	103	78-134	
1,3,5-Trimethylbenzene	ug/L	50	50.7	101	68-120	
Benzene	ug/L	50	49.7	99	77-128	
Chlorobenzene	ug/L	50	49.0	98	76-124	
Chloroform	ug/L	50	51.6	103	77-120	
cis-1,2-Dichloroethene	ug/L	50	49.9	100	72-127	
Ethylbenzene	ug/L	50	50.1	100	76-119	
Isopropylbenzene (Cumene)	ug/L	50	50.8	102	77-128	
Methyl-tert-butyl ether	ug/L	50	49.8	100	75-129	
Naphthalene	ug/L	50	47.2	94	67-136	
Tetrachloroethene	ug/L	50	48.9	98	70-124	
Toluene	ug/L	50	49.7	99	72-117	
trans-1,2-Dichloroethene	ug/L	50	51.3	103	75-133	
Trichloroethene	ug/L	50	50.7	101	75-130	
Vinyl chloride	ug/L	50	51.3	103	51-140	
Xylene (Total)	ug/L	150	149	100	73-117	
4-Bromofluorobenzene (S)	%.			100	78-117	
Dibromofluoromethane (S)	%.			100	78-120	
Toluene-d8 (S)	%.			100	77-118	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3074841 3074842

Parameter	Units	50311584009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	53.2	54.3	106	109	53-161	2	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	57.4	55.5	115	111	58-134	3	20	
1,1-Dichloroethene	ug/L	ND	50	50	59.2	60.2	118	120	59-154	2	20	
1,2,4-Trimethylbenzene	ug/L	ND	50	50	48.8	50.6	98	101	11-145	4	20	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	52.3	50.7	105	101	54-144	3	20	
1,2-Dichloroethane	ug/L	ND	50	50	55.0	55.5	110	111	66-130	1	20	
1,2-Dichloropropane	ug/L	ND	50	50	54.6	54.1	109	108	65-136	1	20	
1,3,5-Trimethylbenzene	ug/L	ND	50	50	50.5	52.1	101	104	11-143	3	20	
Benzene	ug/L	ND	50	50	51.5	52.0	103	104	69-128	1	20	
Chlorobenzene	ug/L	ND	50	50	51.1	51.6	102	103	28-147	1	20	
Chloroform	ug/L	ND	50	50	53.3	54.1	105	106	54-141	1	20	
cis-1,2-Dichloroethene	ug/L	6.5	50	50	57.8	58.7	103	104	45-150	1	20	
Ethylbenzene	ug/L	ND	50	50	52.0	52.8	104	106	36-144	1	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	52.6	52.9	105	106	21-148	0	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	53.2	52.8	106	106	72-135	1	20	
Naphthalene	ug/L	ND	50	50	50.0	49.4	100	99	45-134	1	20	
Tetrachloroethene	ug/L	ND	50	50	53.1	53.4	100	101	26-148	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3074841 3074842

Parameter	Units	50311584009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Toluene	ug/L	ND	50	50	52.4	52.5	105	105	46-134	0	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	51.9	51.7	104	103	43-155	0	20	
Trichloroethene	ug/L	ND	50	50	55.5	56.7	102	104	35-151	2	20	
Vinyl chloride	ug/L	ND	50	50	53.0	54.8	106	110	59-146	3	20	
Xylene (Total)	ug/L	ND	150	150	155	159	103	106	32-140	3	20	
4-Bromofluorobenzene (S)	%.						101	100	78-117			
Dibromofluoromethane (S)	%.						101	102	78-120			
Toluene-d8 (S)	%.						102	100	77-118			

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

QC Batch: 667789
QC Batch Method: EPA 5030/8260
Analysis Method: EPA 5030/8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50311584014, 50311584015, 50311584016

METHOD BLANK: 3074849
Matrix: Water
Associated Lab Samples: 50311584014, 50311584015, 50311584016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/24/22 00:30	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/24/22 00:30	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/24/22 00:30	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/24/22 00:30	
1,1-Dichloroethane	ug/L	ND	5.0	03/24/22 00:30	
1,1-Dichloroethene	ug/L	ND	5.0	03/24/22 00:30	
1,1-Dichloropropene	ug/L	ND	5.0	03/24/22 00:30	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/24/22 00:30	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/24/22 00:30	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/24/22 00:30	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/24/22 00:30	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/24/22 00:30	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/24/22 00:30	
1,2-Dichloroethane	ug/L	ND	5.0	03/24/22 00:30	
1,2-Dichloropropane	ug/L	ND	5.0	03/24/22 00:30	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/24/22 00:30	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/24/22 00:30	
1,3-Dichloropropane	ug/L	ND	5.0	03/24/22 00:30	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/24/22 00:30	
1-Methylnaphthalene	ug/L	ND	10.0	03/24/22 00:30	
2,2-Dichloropropane	ug/L	ND	5.0	03/24/22 00:30	
2-Butanone (MEK)	ug/L	ND	25.0	03/24/22 00:30	
2-Chlorotoluene	ug/L	ND	5.0	03/24/22 00:30	
2-Hexanone	ug/L	ND	25.0	03/24/22 00:30	
2-Methylnaphthalene	ug/L	ND	10.0	03/24/22 00:30	
4-Chlorotoluene	ug/L	ND	5.0	03/24/22 00:30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/24/22 00:30	
Acetone	ug/L	ND	100	03/24/22 00:30	
Acrolein	ug/L	ND	50.0	03/24/22 00:30	
Acrylonitrile	ug/L	ND	100	03/24/22 00:30	
Benzene	ug/L	ND	5.0	03/24/22 00:30	
Bromobenzene	ug/L	ND	5.0	03/24/22 00:30	
Bromochloromethane	ug/L	ND	5.0	03/24/22 00:30	
Bromodichloromethane	ug/L	ND	5.0	03/24/22 00:30	
Bromoform	ug/L	ND	5.0	03/24/22 00:30	
Bromomethane	ug/L	ND	5.0	03/24/22 00:30	
Carbon disulfide	ug/L	ND	10.0	03/24/22 00:30	
Carbon tetrachloride	ug/L	ND	5.0	03/24/22 00:30	
Chlorobenzene	ug/L	ND	5.0	03/24/22 00:30	
Chloroethane	ug/L	ND	5.0	03/24/22 00:30	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

METHOD BLANK: 3074849 Matrix: Water
Associated Lab Samples: 50311584014, 50311584015, 50311584016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	03/24/22 00:30	
Chloromethane	ug/L	ND	5.0	03/24/22 00:30	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/24/22 00:30	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/24/22 00:30	
Dibromochloromethane	ug/L	ND	5.0	03/24/22 00:30	
Dibromomethane	ug/L	ND	5.0	03/24/22 00:30	
Dichlorodifluoromethane	ug/L	ND	5.0	03/24/22 00:30	
Ethyl methacrylate	ug/L	ND	100	03/24/22 00:30	
Ethylbenzene	ug/L	ND	5.0	03/24/22 00:30	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/24/22 00:30	
Iodomethane	ug/L	ND	10.0	03/24/22 00:30	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/24/22 00:30	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/24/22 00:30	
Methylene Chloride	ug/L	ND	5.0	03/24/22 00:30	
n-Butylbenzene	ug/L	ND	5.0	03/24/22 00:30	
n-Hexane	ug/L	ND	5.0	03/24/22 00:30	
n-Propylbenzene	ug/L	ND	5.0	03/24/22 00:30	
Naphthalene	ug/L	ND	1.2	03/24/22 00:30	
p-Isopropyltoluene	ug/L	ND	5.0	03/24/22 00:30	
sec-Butylbenzene	ug/L	ND	5.0	03/24/22 00:30	
Styrene	ug/L	ND	5.0	03/24/22 00:30	
tert-Butylbenzene	ug/L	ND	5.0	03/24/22 00:30	
Tetrachloroethene	ug/L	ND	5.0	03/24/22 00:30	
Toluene	ug/L	ND	5.0	03/24/22 00:30	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/24/22 00:30	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/24/22 00:30	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/24/22 00:30	
Trichloroethene	ug/L	ND	5.0	03/24/22 00:30	
Trichlorofluoromethane	ug/L	ND	5.0	03/24/22 00:30	
Vinyl acetate	ug/L	ND	50.0	03/24/22 00:30	
Vinyl chloride	ug/L	ND	2.0	03/24/22 00:30	
Xylene (Total)	ug/L	ND	10.0	03/24/22 00:30	
4-Bromofluorobenzene (S)	%.	103	78-117	03/24/22 00:30	
Dibromofluoromethane (S)	%.	102	78-120	03/24/22 00:30	1d
Toluene-d8 (S)	%.	102	77-118	03/24/22 00:30	

LABORATORY CONTROL SAMPLE: 3074850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.6	103	73-132	
1,1,2,2-Tetrachloroethane	ug/L	50	50.1	100	65-131	
1,1-Dichloroethene	ug/L	50	54.9	110	67-136	
1,2,4-Trimethylbenzene	ug/L	50	48.8	98	68-122	
1,2-Dibromoethane (EDB)	ug/L	50	49.0	98	76-126	

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Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

LABORATORY CONTROL SAMPLE: 3074850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50.7	101	69-135	
1,2-Dichloropropane	ug/L	50	50.8	102	78-134	
1,3,5-Trimethylbenzene	ug/L	50	49.5	99	68-120	
Benzene	ug/L	50	49.6	99	77-128	
Chlorobenzene	ug/L	50	47.6	95	76-124	
Chloroform	ug/L	50	49.9	100	77-120	
cis-1,2-Dichloroethene	ug/L	50	50.0	100	72-127	
Ethylbenzene	ug/L	50	48.4	97	76-119	
Isopropylbenzene (Cumene)	ug/L	50	49.6	99	77-128	
Methyl-tert-butyl ether	ug/L	50	49.6	99	75-129	
Naphthalene	ug/L	50	46.9	94	67-136	
Tetrachloroethene	ug/L	50	49.5	99	70-124	
Toluene	ug/L	50	48.9	98	72-117	
trans-1,2-Dichloroethene	ug/L	50	50.8	102	75-133	
Trichloroethene	ug/L	50	50.5	101	75-130	
Vinyl chloride	ug/L	50	56.9	114	51-140	
Xylene (Total)	ug/L	150	144	96	73-117	
4-Bromofluorobenzene (S)	%.			100	78-117	
Dibromofluoromethane (S)	%.			99	78-120	
Toluene-d8 (S)	%.			100	77-118	

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(317)228-3100

QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

QC Batch: 667950
QC Batch Method: EPA 5030/8260
Analysis Method: EPA 5030/8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50311584013, 50311584017, 50311584018, 50311584019, 50311584020, 50311584021, 50311584022, 50311584023, 50311584024, 50311584025, 50311584026, 50311584027, 50311584028, 50311584029, 50311584030, 50311584031

METHOD BLANK: 3075603
Matrix: Water
Associated Lab Samples: 50311584013, 50311584017, 50311584018, 50311584019, 50311584020, 50311584021, 50311584022, 50311584023, 50311584024, 50311584025, 50311584026, 50311584027, 50311584028, 50311584029, 50311584030, 50311584031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/24/22 09:56	
1,1,1-Trichloroethane	ug/L	ND	5.0	03/24/22 09:56	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/24/22 09:56	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/24/22 09:56	
1,1-Dichloroethane	ug/L	ND	5.0	03/24/22 09:56	
1,1-Dichloroethene	ug/L	ND	5.0	03/24/22 09:56	
1,1-Dichloropropene	ug/L	ND	5.0	03/24/22 09:56	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	03/24/22 09:56	
1,2,3-Trichloropropane	ug/L	ND	5.0	03/24/22 09:56	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	03/24/22 09:56	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	03/24/22 09:56	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	03/24/22 09:56	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/24/22 09:56	
1,2-Dichloroethane	ug/L	ND	5.0	03/24/22 09:56	
1,2-Dichloropropane	ug/L	ND	5.0	03/24/22 09:56	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	03/24/22 09:56	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/24/22 09:56	
1,3-Dichloropropane	ug/L	ND	5.0	03/24/22 09:56	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/24/22 09:56	
1-Methylnaphthalene	ug/L	ND	10.0	03/24/22 09:56	
2,2-Dichloropropane	ug/L	ND	5.0	03/24/22 09:56	
2-Butanone (MEK)	ug/L	ND	25.0	03/24/22 09:56	
2-Chlorotoluene	ug/L	ND	5.0	03/24/22 09:56	
2-Hexanone	ug/L	ND	25.0	03/24/22 09:56	
2-Methylnaphthalene	ug/L	ND	10.0	03/24/22 09:56	
4-Chlorotoluene	ug/L	ND	5.0	03/24/22 09:56	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	03/24/22 09:56	
Acetone	ug/L	ND	100	03/24/22 09:56	
Acrolein	ug/L	ND	50.0	03/24/22 09:56	
Acrylonitrile	ug/L	ND	100	03/24/22 09:56	
Benzene	ug/L	ND	5.0	03/24/22 09:56	
Bromobenzene	ug/L	ND	5.0	03/24/22 09:56	
Bromochloromethane	ug/L	ND	5.0	03/24/22 09:56	
Bromodichloromethane	ug/L	ND	5.0	03/24/22 09:56	
Bromoform	ug/L	ND	5.0	03/24/22 09:56	
Bromomethane	ug/L	ND	5.0	03/24/22 09:56	
Carbon disulfide	ug/L	ND	10.0	03/24/22 09:56	

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7726 Moller Road
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(317)228-3100

QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

METHOD BLANK: 3075603 Matrix: Water

Associated Lab Samples: 50311584013, 50311584017, 50311584018, 50311584019, 50311584020, 50311584021, 50311584022, 50311584023, 50311584024, 50311584025, 50311584026, 50311584027, 50311584028, 50311584029, 50311584030, 50311584031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbon tetrachloride	ug/L	ND	5.0	03/24/22 09:56	
Chlorobenzene	ug/L	ND	5.0	03/24/22 09:56	
Chloroethane	ug/L	ND	5.0	03/24/22 09:56	
Chloroform	ug/L	ND	5.0	03/24/22 09:56	
Chloromethane	ug/L	ND	5.0	03/24/22 09:56	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/24/22 09:56	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/24/22 09:56	
Dibromochloromethane	ug/L	ND	5.0	03/24/22 09:56	
Dibromomethane	ug/L	ND	5.0	03/24/22 09:56	
Dichlorodifluoromethane	ug/L	ND	5.0	03/24/22 09:56	
Ethyl methacrylate	ug/L	ND	100	03/24/22 09:56	
Ethylbenzene	ug/L	ND	5.0	03/24/22 09:56	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	03/24/22 09:56	
Iodomethane	ug/L	ND	10.0	03/24/22 09:56	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	03/24/22 09:56	
Methyl-tert-butyl ether	ug/L	ND	4.0	03/24/22 09:56	
Methylene Chloride	ug/L	ND	5.0	03/24/22 09:56	
n-Butylbenzene	ug/L	ND	5.0	03/24/22 09:56	
n-Hexane	ug/L	ND	5.0	03/24/22 09:56	
n-Propylbenzene	ug/L	ND	5.0	03/24/22 09:56	
Naphthalene	ug/L	ND	1.2	03/24/22 09:56	
p-Isopropyltoluene	ug/L	ND	5.0	03/24/22 09:56	
sec-Butylbenzene	ug/L	ND	5.0	03/24/22 09:56	
Styrene	ug/L	ND	5.0	03/24/22 09:56	
tert-Butylbenzene	ug/L	ND	5.0	03/24/22 09:56	
Tetrachloroethene	ug/L	ND	5.0	03/24/22 09:56	
Toluene	ug/L	ND	5.0	03/24/22 09:56	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/24/22 09:56	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/24/22 09:56	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/24/22 09:56	
Trichloroethene	ug/L	ND	5.0	03/24/22 09:56	
Trichlorofluoromethane	ug/L	ND	5.0	03/24/22 09:56	
Vinyl acetate	ug/L	ND	50.0	03/24/22 09:56	
Vinyl chloride	ug/L	ND	2.0	03/24/22 09:56	
Xylene (Total)	ug/L	ND	10.0	03/24/22 09:56	
4-Bromofluorobenzene (S)	%.	101	78-117	03/24/22 09:56	
Dibromofluoromethane (S)	%.	104	78-120	03/24/22 09:56	
Toluene-d8 (S)	%.	102	77-118	03/24/22 09:56	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

LABORATORY CONTROL SAMPLE: 3075604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.8	108	73-132	
1,1,2,2-Tetrachloroethane	ug/L	50	52.7	105	65-131	
1,1-Dichloroethene	ug/L	50	58.6	117	67-136	
1,2,4-Trimethylbenzene	ug/L	50	53.5	107	68-122	
1,2-Dibromoethane (EDB)	ug/L	50	51.2	102	76-126	
1,2-Dichloroethane	ug/L	50	52.5	105	69-135	
1,2-Dichloropropane	ug/L	50	52.6	105	78-134	
1,3,5-Trimethylbenzene	ug/L	50	54.5	109	68-120	
Benzene	ug/L	50	50.9	102	77-128	
Chlorobenzene	ug/L	50	51.4	103	76-124	
Chloroform	ug/L	50	50.6	101	77-120	
cis-1,2-Dichloroethene	ug/L	50	51.8	104	72-127	
Ethylbenzene	ug/L	50	51.6	103	76-119	
Isopropylbenzene (Cumene)	ug/L	50	54.0	108	77-128	
Methyl-tert-butyl ether	ug/L	50	51.1	102	75-129	
Naphthalene	ug/L	50	49.6	99	67-136	
Tetrachloroethene	ug/L	50	53.9	108	70-124	
Toluene	ug/L	50	52.2	104	72-117	
trans-1,2-Dichloroethene	ug/L	50	52.2	104	75-133	
Trichloroethene	ug/L	50	53.2	106	75-130	
Vinyl chloride	ug/L	50	58.2	116	51-140	
Xylene (Total)	ug/L	150	157	105	73-117	
4-Bromofluorobenzene (S)	%.			100	78-117	
Dibromofluoromethane (S)	%.			97	78-120	
Toluene-d8 (S)	%.			102	77-118	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075605 3075606

Parameter	Units	50311584020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	54.4	53.9	109	108	53-161	1	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	53.6	54.1	107	108	58-134	1	20	
1,1-Dichloroethene	ug/L	ND	50	50	59.8	57.1	120	114	59-154	5	20	
1,2,4-Trimethylbenzene	ug/L	ND	50	50	53.9	47.6	108	95	11-145	12	20	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50.6	52.6	101	105	54-144	4	20	
1,2-Dichloroethane	ug/L	ND	50	50	53.3	54.9	107	110	66-130	3	20	
1,2-Dichloropropane	ug/L	ND	50	50	53.3	53.6	107	107	65-136	0	20	
1,3,5-Trimethylbenzene	ug/L	ND	50	50	53.1	48.3	106	97	11-143	9	20	
Benzene	ug/L	ND	50	50	51.3	51.6	103	103	69-128	1	20	
Chlorobenzene	ug/L	ND	50	50	52.1	49.8	104	100	28-147	5	20	
Chloroform	ug/L	ND	50	50	52.2	52.1	103	102	54-141	0	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	52.9	51.7	106	103	45-150	2	20	
Ethylbenzene	ug/L	ND	50	50	52.5	50.4	105	101	36-144	4	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	54.5	51.1	109	102	21-148	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50311584

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075605 3075606

Parameter	Units	50311584020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methyl-tert-butyl ether	ug/L	ND	50	50	50.7	52.1	101	104	72-135	3	20	
Naphthalene	ug/L	ND	50	50	48.8	46.7	98	93	45-134	4	20	
Tetrachloroethene	ug/L	21.5	50	50	79.3	70.4	116	98	26-148	12	20	
Toluene	ug/L	ND	50	50	52.4	51.6	105	103	46-134	2	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.4	49.2	105	98	43-155	6	20	
Trichloroethene	ug/L	50.9	50	50	108	98.2	115	95	35-151	10	20	
Vinyl chloride	ug/L	3.5	50	50	66.0	61.1	125	115	59-146	8	20	
Xylene (Total)	ug/L	ND	150	150	159	149	106	100	32-140	6	20	
4-Bromofluorobenzene (S)	%.						100	101	78-117			
Dibromofluoromethane (S)	%.						97	98	78-120			
Toluene-d8 (S)	%.						101	101	77-118			

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(317)228-3100

QUALIFIERS

Project: HRID 1Q2022
Pace Project No.: 50311584

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.

TNTC - Too Numerous To Count

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1d	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HRID 1Q2022
Pace Project No.: 50311584

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50311584001	**MW-12**	EPA 5030/8260	667787		
50311584002	**MW-12D**	EPA 5030/8260	667787		
50311584003	**MW-41**	EPA 5030/8260	667787		
50311584004	**MW-29D**	EPA 5030/8260	667787		
50311584005	**MW-29**	EPA 5030/8260	667787		
50311584006	**MW-23**	EPA 5030/8260	667787		
50311584007	**MW-30**	EPA 5030/8260	667787		
50311584008	**MW-11D**	EPA 5030/8260	667787		
50311584009	**MW-22**	EPA 5030/8260	667787		
50311584010	**MW-22D**	EPA 5030/8260	667787		
50311584011	**MW-42D**	EPA 5030/8260	667787		
50311584012	**MW-42**	EPA 5030/8260	667787		
50311584013	**DUP A**	EPA 5030/8260	667950		
50311584014	**MW-14D**	EPA 5030/8260	667789		
50311584015	**MW-14**	EPA 5030/8260	667789		
50311584016	**MW-15D**	EPA 5030/8260	667789		
50311584017	**MW-15**	EPA 5030/8260	667950		
50311584018	**MW-43D**	EPA 5030/8260	667950		
50311584019	**MW-43**	EPA 5030/8260	667950		
50311584020	**MW-39**	EPA 5030/8260	667950		
50311584021	**MW-37**	EPA 5030/8260	667950		
50311584022	**MW-32**	EPA 5030/8260	667950		
50311584023	**DUP (B)**	EPA 5030/8260	667950		
50311584024	**MW-26**	EPA 5030/8260	667950		
50311584025	**MW-33D**	EPA 5030/8260	667950		
50311584026	**MW-33**	EPA 5030/8260	667950		
50311584027	**MW-40**	EPA 5030/8260	667950		
50311584028	**MW-41D**	EPA 5030/8260	667950		
50311584029	**MW-36**	EPA 5030/8260	667950		
50311584030	**MW-24**	EPA 5030/8260	667950		
50311584031	**TRIP BLANK**	EPA 5030/8260	667950		

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WO# : 50311584

50311584

CHAIN-OF-CUSTODY / Analytical Request Document

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

cknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A
Required Clie

Company:	Patriot_Indianapolis
Address:	6150 E. 75th St.
	Indianapolis, IN 46250
Email:	mcasper@patrioteng.com
Phone:	317-576-8058 Fax:
Requested Due Date:	10 day TAT

on:

Report To:	James Cody
Copy To:	Mike Casper
Purchase Order #:	21-1359-01E
Project Name:	HRID 1Q2022
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	Patriot
Address:	
Pace Quote:	
Pace Project Manager:	tina.sayer@pacelabs.com,
Pace Profile #:	6950-7

Regulatory Agency

Date / Location

IN

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	Analysis Test Y/N	VOC 8260	Residual Chlorine (Y/N)	
1	MW-12	WT	G			3-14	11:15		3				✓						✓		001
2	MW-12D	WT	G			3-14	11:55		3				✓						✓		002
3	MW-41	WT	G			3-14	13:15		3				✓						✓		003
4	MW-29D	WT	G			3-14	14:10		3				✓						✓		004
5	MW-29	WT	G			3-14	14:55		3				✓						✓		005
6	MW-23	WT	G			3-15	10:30		3				✓						✓		006
7	MW-30	WT	G			3-15	11:00		3				✓						✓		007
8	MW-11D	WT	G			3-15	11:40		3				✓						✓		008
9	MW-22	WT	G			3-15	12:15		3				✓						✓		009
10	MW-22D	WT	G			3-15	13:40		3				✓						✓		010
11	MW-42D	WT	G			3-15	14:15		3				✓						✓		011
12	MW-42	WT	G			3-15	1500		3				✓						✓		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	SBailey / Patriot	3/14/22	1500	D Richardson / Patriot	3/14/22	1500				
	D. Richardson / Patriot	3/17/22	1500	Danielle Richardson / Pace	03/17/22	1500	0.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Danielle Richardson	
SIGNATURE of SAMPLER:	Danielle Richardson	DATE Signed: 3/17/22

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Patriot_Indianapolis	Report To:	James Cody	Attention:	
Address:	6150 E. 75th St.	Copy To:	Mike Casper	Company Name:	Patriot
	Indianapolis, IN 46250			Address:	
Email:	mcasper@patrioteng.com	Purchase Order #:	21-1359-01E	Pace Quote:	
Phone:	317-576-8058 Fax:	Project Name:	HRID 1Q2022	Pace Project Manager:	tina.sayer@pacelabs.com,
Requested Due Date:	10 day TAT	Project #:		Pace Profile #:	6950-7

IN

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

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	Analysis Test: VOC 8260	Residual Chlorine (Y/N)	
1	MS (A)	WT	G			3-15	1215		3				✓					✓		
2	MSD (A)	WT	G			3-15	1215		3				✓					✓		
3	DUP A	WT	G			3-15			3				✓					✓		013
4	MW-14D	WT	G			3-16	930		3				✓					✓		014
5	MW-14	WT	G			3-16	1020		3				✓					✓		015
6	MW-15D	WT	G			3-16	1100		3				✓					✓		016
7	MW-15	WT	G			3-16	1225		3				✓					✓		017
8	MW-43D	WT	G			3-16	1400		3				✓					✓		018
9	MW-43	WT	G			3-16	1315		3				✓					✓		019
10	MW-39	WT	G			3-16	940		3				✓					✓		~~019~~ 020
11	MW-39-MS	WT	G			3-16	940		3				✓					✓		
12	MW-39-MSD	WT	G			3-16	940		3				✓					✓		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				Vincent Pendson / Pace	03/17/22	1500	0.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Page : 3 Of 3

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Patriot_Indianapolis	Report To:	James Cody	Attention:	
Address:	6150 E. 75th St.	Copy To:	Mike Casper	Company Name:	Patriot
	Indianapolis, IN 46250			Address:	
Email:	mcasper@patrioteng.com	Purchase Order #:	21-1359-01E	Pace Quote:	
Phone:	317-576-8058 Fax:	Project Name:	HRID 1Q2022	Pace Project Manager:	tina.sayer@pacelabs.com,
Requested Due Date:	10 day TAT	Project #:		Pace Profile #:	6950-7

Regulatory Agency

State / Location

IN

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	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analysis Test Y/N	VOC 8260	Residual Chlorine (Y/N)	
1	MW-37	WT	G			3-16	10:25		3				✓						✓		021
2	MW-32	WT	G			3-16	11:13		3				✓						✓		022
3	DUP (B)	WT	G			3-16			3				✓						✓		023
4	MW-26	WT	G			3-16	12:00		3				✓						✓		~~023~~ JC 024
5	MW-33D	WT	G			3-16	13:10		3				✓						✓		025
6	MW-33	WT	G			3-16	13:55		3				✓						✓		026
7	MW-40	WT	G			3-16	14:40		3				✓						✓		027
8	MW-41D	WT	G			3-17	1100		3				✓						✓		028
9	MW-36	WT	G			3-17	1150		3				✓						✓		029
10	MW-24	WT	G			3-17	1220		3				✓						✓		030
11																					031
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				[signature] Pace	03/17/22	1800	0.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

Pace Analytical®

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: DMP 03/17/22 18:04

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ USPS ☐ OTHER _____

2. Custody Seal on Cooler/Box Present: ☑ Yes ☐ No

(If yes)Seals Intact: ☑ Yes ☐ No **(leave blank if no seals were present)**

3. Thermometer: 1 2 3 4 5 6 A (B) C D E F

4. Cooler Temperature: 0.4/0.6°C

Temp should be above freezing to 6°C **(Initial/Corrected)**

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

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. If temp. is over 6°C or under 0°C, was the PM notified?: ☐ Yes ☐ No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A ✓
Rush TAT Requested (4 days or less): WO10		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Custody Signatures Present? Pg 2 + 3 no sig.		✓	Headspace Wisconsin Sulfide?			✓
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present ✓	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		✓	Trip Blank Present?	✓		
Extra labels on Terracore Vials? (soils only)		N/A	Trip Blank Custody Seals?:	✓		

COMMENTS: Rcvd 3 VG9H Trip Blanks, not on COC. /DMP 03/17/22

COC PAGE 1 of 3

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	SBS / DI / MeOH (only) / BK / Kit: R	DG9H / VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1			3	1/3																								WT			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9			9																												
10			3																												
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass
GN	General	AG3C	250mL NaOH amber glass

Plastic / Misc.

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

F-IN-Q-270-rev.15, 27Oct2021

COC PAGE 2 of 3

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	SBS / DI / MeOH (only) / BK / Kit: R	DG9H (VG9H)	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1																															
2																															
3			3																												
4																															
5																															
6																															
7																															
8																															
9																															
10			9	1/9																								WT			
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass
GN	General	AG3C	250mL NaOH amber glass

Plastic / Misc.

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
Syringe Kit	LL Cr+6 sampling kit
AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag
WT	Water
SL	Solid
NAL / OL	Non-aqueous liquid / Oil
WP	Wipe

F-IN-Q-270-rev.15, 27Oct2021

COC PAGE 3 of 3

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	SBS / DI / MeOH (only) / BK / Kit: R	DG9H / VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1			3																									WT			
2			3	1/3																								WT			
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11			3			Trip	Blank																								
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass
GN	General	AG3C	250mL NaOH amber glass

Plastic / Misc.

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

April 19, 2022

Mr. James Cody
Patriot Engineering
6150 E 75th St
Indianapolis, IN 46250

RE: Project: HRID 1Q2022
Pace Project No.: 50312950

Dear Mr. Cody:

Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,

Tina Sayer

Tina Sayer
tina.sayer@pacelabs.com
(317)228-3100
Project Manager

Enclosures

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: HRID 1Q2022
Pace Project No.: 50312950

Pace Analytical Services Indianapolis
7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: HRID 1Q2022
Pace Project No.: 50312950

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50312950001	**MW-30**	Water	04/05/22 10:10	04/05/22 16:45
50312950002	**MW-39**	Water	04/05/22 11:00	04/05/22 16:45
50312950003	**MW-22**	Water	04/05/22 11:50	04/05/22 16:45
50312950004	**MW-40**	Water	04/05/22 12:50	04/05/22 16:45
50312950005	**MW-41**	Water	04/05/22 14:00	04/05/22 16:45
50312950006	**MW-41D**	Water	04/05/22 14:40	04/05/22 16:45
50312950007	**MW-38D**	Water	04/05/22 15:40	04/05/22 16:45

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7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: HRID 1Q2022
Pace Project No.: 50312950

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50312950001	**MW-30**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	SWJ	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I
50312950002	**MW-39**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	ZM	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I
50312950003	**MW-22**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	ZM	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I
50312950004	**MW-40**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	ZM	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I
50312950005	**MW-41**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	ZM	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I
50312950006	**MW-41D**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: HRID 1Q2022
Pace Project No.: 50312950

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	ZM	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I
50312950007	**MW-38D**	EPA 9056	BK1	1	PASI-I
		EPA 9056	BK1	1	PASI-I
		RSK 175 Modified	DAP	3	PASI-I
		EPA 6010	MTM	1	PASI-I
		EPA 410.4	ZM	1	PASI-I
		SM 5210B	MCM	1	PASI-I
		SM 5310C	ZM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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SUMMARY OF DETECTION

Project: HRID 1Q2022
Pace Project No.: 50312950

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50312950001	**MW-30**					
EPA 9056	Nitrate as N	3.0	mg/L	0.050	04/06/22 10:00	
EPA 9056	Sulfate	10.7	mg/L	0.25	04/06/22 10:00	
RSK 175 Modified	Ethane	17.8	ug/L	10.0	04/11/22 21:59	
RSK 175 Modified	Ethene	225	ug/L	10.0	04/11/22 21:59	
RSK 175 Modified	Methane	1300	ug/L	10.0	04/11/22 21:59	
EPA 410.4	Chemical Oxygen Demand	232	mg/L	20.0	04/13/22 13:05	
SM 5210B	BOD, 5 day	156	mg/L	2.0	04/11/22 10:05	
SM 5310C	Total Organic Carbon	83.7	mg/L	10.0	04/12/22 20:19	
50312950002	**MW-39**					
EPA 9056	Nitrate as N	2.6	mg/L	0.050	04/06/22 10:49	
EPA 9056	Sulfate	5.1	mg/L	0.25	04/06/22 10:49	
RSK 175 Modified	Methane	318	ug/L	10.0	04/11/22 22:20	
SM 5310C	Total Organic Carbon	3.8	mg/L	1.0	04/11/22 22:02	
50312950003	**MW-22**					
EPA 9056	Nitrate as N	0.98	mg/L	0.050	04/06/22 11:38	
EPA 9056	Sulfate	16.2	mg/L	0.25	04/06/22 11:38	
RSK 175 Modified	Methane	3950	ug/L	10.0	04/11/22 22:41	
SM 5210B	BOD, 5 day	4.8	mg/L	2.0	04/11/22 10:09	
SM 5310C	Total Organic Carbon	3.8	mg/L	1.0	04/11/22 22:21	
50312950004	**MW-40**					
EPA 9056	Nitrate as N	6.9	mg/L	0.50	04/06/22 12:59	
EPA 9056	Sulfate	115	mg/L	2.5	04/06/22 12:59	
RSK 175 Modified	Methane	40.6	ug/L	10.0	04/08/22 21:15	BM,CL,P2
SM 5310C	Total Organic Carbon	3.7	mg/L	1.0	04/11/22 22:41	
50312950005	**MW-41**					
EPA 9056	Sulfate	2.5	mg/L	0.25	04/06/22 13:32	
RSK 175 Modified	Methane	344	ug/L	10.0	04/11/22 23:02	
SM 5210B	BOD, 5 day	6.7	mg/L	2.0	04/11/22 10:11	
SM 5310C	Total Organic Carbon	4.6	mg/L	1.0	04/11/22 23:00	
50312950006	**MW-41D**					
EPA 9056	Nitrate as N	1.6	mg/L	0.050	04/06/22 14:21	
EPA 9056	Sulfate	0.40	mg/L	0.25	04/06/22 14:21	
RSK 175 Modified	Methane	3480	ug/L	10.0	04/11/22 23:23	
SM 5210B	BOD, 5 day	4.3	mg/L	2.0	04/11/22 10:15	
SM 5310C	Total Organic Carbon	2.4	mg/L	1.0	04/11/22 23:26	
50312950007	**MW-38D**					
EPA 9056	Nitrate as N	0.29	mg/L	0.050	04/06/22 15:43	
EPA 9056	Sulfate	17.2	mg/L	0.25	04/06/22 15:43	
RSK 175 Modified	Methane	10.4	ug/L	10.0	04/11/22 23:45	
SM 5210B	BOD, 5 day	10.4	mg/L	2.0	04/11/22 10:17	
SM 5310C	Total Organic Carbon	1.0	mg/L	1.0	04/11/22 23:51	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-30 **Lab ID: 50312950001** Collected: 04/05/22 10:10 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	**3.0**	mg/L	0.050	1		04/06/22 10:00	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**10.7**	mg/L	0.25	1		04/06/22 10:00	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	**17.8**	ug/L	10.0	1		04/11/22 21:59	74-84-0	
Ethene	**225**	ug/L	10.0	1		04/11/22 21:59	74-85-1	
Methane	**1300**	ug/L	10.0	1		04/11/22 21:59	74-82-8	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 14:41	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	**232**	mg/L	20.0	1	04/13/22 09:04	04/13/22 13:05		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	**156**	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:05		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**83.7**	mg/L	10.0	10		04/12/22 20:19	7440-44-0	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-39 **Lab ID: 50312950002** Collected: 04/05/22 11:00 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	**2.6**	mg/L	0.050	1		04/06/22 10:49	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**5.1**	mg/L	0.25	1		04/06/22 10:49	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	ND	ug/L	10.0	1		04/11/22 22:20	74-84-0	
Ethene	ND	ug/L	10.0	1		04/11/22 22:20	74-85-1	
Methane	**318**	ug/L	10.0	1		04/11/22 22:20	74-82-8	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 14:49	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	ND	mg/L	10.0	1	04/08/22 11:55	04/08/22 15:27		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	ND	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:07		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**3.8**	mg/L	1.0	1		04/11/22 22:02	7440-44-0	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-22 **Lab ID: 50312950003** Collected: 04/05/22 11:50 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	**0.98**	mg/L	0.050	1		04/06/22 11:38	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**16.2**	mg/L	0.25	1		04/06/22 11:38	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	ND	ug/L	10.0	1		04/11/22 22:41	74-84-0	
Ethene	ND	ug/L	10.0	1		04/11/22 22:41	74-85-1	
Methane	**3950**	ug/L	10.0	1		04/11/22 22:41	74-82-8	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 14:51	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	ND	mg/L	10.0	1	04/08/22 11:55	04/08/22 15:27		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	**4.8**	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:09		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**3.8**	mg/L	1.0	1		04/11/22 22:21	7440-44-0	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-40 **Lab ID: 50312950004** Collected: 04/05/22 12:50 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	**6.9**	mg/L	0.50	10		04/06/22 12:59	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**115**	mg/L	2.5	10		04/06/22 12:59	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	ND	ug/L	10.0	1		04/08/22 21:15	74-84-0	BM,CL, P2
Ethene	ND	ug/L	10.0	1		04/08/22 21:15	74-85-1	BM,CL, P2
Methane	**40.6**	ug/L	10.0	1		04/08/22 21:15	74-82-8	BM,CL, P2
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 14:53	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	ND	mg/L	10.0	1	04/08/22 11:55	04/08/22 15:27		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	ND	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:10		B2
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**3.7**	mg/L	1.0	1		04/11/22 22:41	7440-44-0	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-41 **Lab ID: 50312950005** Collected: 04/05/22 14:00 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	ND	mg/L	0.050	1		04/06/22 13:32	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**2.5**	mg/L	0.25	1		04/06/22 13:32	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	ND	ug/L	10.0	1		04/11/22 23:02	74-84-0	
Ethene	ND	ug/L	10.0	1		04/11/22 23:02	74-85-1	
Methane	**344**	ug/L	10.0	1		04/11/22 23:02	74-82-8	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 14:59	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	ND	mg/L	10.0	1	04/08/22 11:55	04/08/22 15:27		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	**6.7**	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:11		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**4.6**	mg/L	1.0	1		04/11/22 23:00	7440-44-0	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-41D **Lab ID: 50312950006** Collected: 04/05/22 14:40 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	**1.6**	mg/L	0.050	1		04/06/22 14:21	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**0.40**	mg/L	0.25	1		04/06/22 14:21	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	ND	ug/L	10.0	1		04/11/22 23:23	74-84-0	
Ethene	ND	ug/L	10.0	1		04/11/22 23:23	74-85-1	
Methane	**3480**	ug/L	10.0	1		04/11/22 23:23	74-82-8	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 15:01	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	ND	mg/L	10.0	1	04/08/22 11:55	04/08/22 15:27		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	**4.3**	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:15		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**2.4**	mg/L	1.0	1		04/11/22 23:26	7440-44-0	

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ANALYTICAL RESULTS

Project: HRID 1Q2022
Pace Project No.: 50312950

Sample: MW-38D **Lab ID: 50312950007** Collected: 04/05/22 15:40 Received: 04/05/22 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Nitrate as N	**0.29**	mg/L	0.050	1		04/06/22 15:43	14797-55-8	
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Sulfate	**17.2**	mg/L	0.25	1		04/06/22 15:43	14808-79-8	
RSK 175 Headspace	Analytical Method: RSK 175 Modified Pace Analytical Services - Indianapolis							
Ethane	ND	ug/L	10.0	1		04/11/22 23:45	74-84-0	
Ethene	ND	ug/L	10.0	1		04/11/22 23:45	74-85-1	
Methane	**10.4**	ug/L	10.0	1		04/11/22 23:45	74-82-8	
6010 MET ICP, Lab Filtered	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Iron, Dissolved	ND	ug/L	100	1	04/14/22 14:30	04/14/22 15:04	7439-89-6	
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	ND	mg/L	10.0	1	04/08/22 11:55	04/08/22 15:27		
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B Pace Analytical Services - Indianapolis							
BOD, 5 day	**10.4**	mg/L	2.0	1	04/06/22 11:20	04/11/22 10:17		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1.0**	mg/L	1.0	1		04/11/22 23:51	7440-44-0	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 669785
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3084205
Matrix: Water
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.050	04/06/22 09:27	

LABORATORY CONTROL SAMPLE: 3084206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	0.5	0.48	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3084207 3084208

Parameter	Units	50312950007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.29	0.5	0.5	0.76	0.76	96	95	80-120	0	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 669786
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3084209
Matrix: Water
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	0.25	04/06/22 09:27	

LABORATORY CONTROL SAMPLE: 3084210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	2.5	2.9	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3084211 3084212

Parameter	Units	50312950007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	17.2	2.5	2.5	19.8	19.8	102	100	80-120	0	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 670301
QC Batch Method: RSK 175 Modified
Analysis Method: RSK 175 Modified
Analysis Description: RSK 175 HEADSPACE
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950004

METHOD BLANK: 3086620
Matrix: Water
Associated Lab Samples: 50312950004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	10.0	04/08/22 19:50	BM
Ethene	ug/L	ND	10.0	04/08/22 19:50	BM
Methane	ug/L	ND	10.0	04/08/22 19:50	1d,BM

LABORATORY CONTROL SAMPLE: 3086621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethane	ug/L	1980	2000	101	74-139	BM
Ethene	ug/L	2250	2460	109	79-138	BM
Methane	ug/L	1980	2060	104	66-126	BM

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 670590
QC Batch Method: RSK 175 Modified
Analysis Method: RSK 175 Modified
Analysis Description: RSK 175 HEADSPACE
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3088170 Matrix: Water
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	10.0	04/11/22 21:38	
Ethene	ug/L	ND	10.0	04/11/22 21:38	
Methane	ug/L	ND	10.0	04/11/22 21:38	

LABORATORY CONTROL SAMPLE: 3088171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethane	ug/L	1980	1900	96	74-139	
Ethene	ug/L	2250	2260	101	79-138	
Methane	ug/L	1980	1920	97	66-126	

SAMPLE DUPLICATE: 3088172

Parameter	Units	50313299014 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

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Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 671171
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3090611
Matrix: Water
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	100	04/14/22 14:34	

LABORATORY CONTROL SAMPLE: 3090612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	10400	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090613 3090614

Parameter	Units	50312950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	ND	10000	10000	10300	10500	103	105	75-125	2	20	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 670353
QC Batch Method: EPA 410.4
Analysis Method: EPA 410.4
Analysis Description: 410.4 COD
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3086923
Matrix: Water
Associated Lab Samples: 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	04/08/22 15:27	

LABORATORY CONTROL SAMPLE: 3086924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	49.5	47.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3086925 3086926

Parameter	Units	50312950002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	49.5	49.5	46.2	49.1	93	99	90-110	6	20	

MATRIX SPIKE SAMPLE: 3086927

Parameter	Units	50312993001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	49.5	52.7	103	90-110	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 670949
QC Batch Method: EPA 410.4
Analysis Method: EPA 410.4
Analysis Description: 410.4 COD
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001

METHOD BLANK: 3089581
Matrix: Water
Associated Lab Samples: 50312950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	04/13/22 13:05	

LABORATORY CONTROL SAMPLE: 3089582

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	49.5	49.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3089583 3089584

Parameter	Units	50313057001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	49.5	49.5	58.7	60.4	108	112	90-110	3	20	M0

MATRIX SPIKE SAMPLE: 3089585

Parameter	Units	50313057003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	30.6	49.5	79.6	99	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 669665
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, 5 day
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3083555 Matrix: Water
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	04/11/22 09:34	B3

LABORATORY CONTROL SAMPLE: 3083557

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	151	76	85-115	B4

SAMPLE DUPLICATE: 3083558

Parameter	Units	50312832001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	698	674	3	20	

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QUALITY CONTROL DATA

Project: HRID 1Q2022
Pace Project No.: 50312950

QC Batch: 670472
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

METHOD BLANK: 3087777
Matrix: Water
Associated Lab Samples: 50312950001, 50312950002, 50312950003, 50312950004, 50312950005, 50312950006, 50312950007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	04/11/22 17:44	

LABORATORY CONTROL SAMPLE: 3087778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	10.3	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3087779 3087780

Parameter	Units	50312857008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<1.0	10	10	10.2	10.7	101	105	80-120	4	20	

MATRIX SPIKE SAMPLE: 3087781

Parameter	Units	50312950007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.0	10	11.2	102	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HRID 1Q2022
Pace Project No.: 50312950

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.

TNTC - Too Numerous To Count

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 670301

[BM]	Matrix precision data could not be provided for this analytical batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1d	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
B2	Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
B3	The dissolved oxygen depletion of the dilution water blank exceeded 0.2 mg/L.
B4	The glucose/glutamic acid standard exceeded the range of 198 plus or minus 30.5 mg/L.
BM	Matrix precision data could not be provided for this analytical batch due to insufficient sample volume.
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P2	Re-extraction or re-analysis could not be performed due to insufficient sample amount.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HRID 1Q2022
Pace Project No.: 50312950

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50312950001	**MW-30**	EPA 9056	669785		
50312950002	**MW-39**	EPA 9056	669785		
50312950003	**MW-22**	EPA 9056	669785		
50312950004	**MW-40**	EPA 9056	669785		
50312950005	**MW-41**	EPA 9056	669785		
50312950006	**MW-41D**	EPA 9056	669785		
50312950007	**MW-38D**	EPA 9056	669785		
50312950001	**MW-30**	EPA 9056	669786		
50312950002	**MW-39**	EPA 9056	669786		
50312950003	**MW-22**	EPA 9056	669786		
50312950004	**MW-40**	EPA 9056	669786		
50312950005	**MW-41**	EPA 9056	669786		
50312950006	**MW-41D**	EPA 9056	669786		
50312950007	**MW-38D**	EPA 9056	669786		
50312950001	**MW-30**	RSK 175 Modified	670590		
50312950002	**MW-39**	RSK 175 Modified	670590		
50312950003	**MW-22**	RSK 175 Modified	670590		
50312950004	**MW-40**	RSK 175 Modified	670301		
50312950005	**MW-41**	RSK 175 Modified	670590		
50312950006	**MW-41D**	RSK 175 Modified	670590		
50312950007	**MW-38D**	RSK 175 Modified	670590		
50312950001	**MW-30**	EPA 3010	671171	EPA 6010	671219
50312950002	**MW-39**	EPA 3010	671171	EPA 6010	671219
50312950003	**MW-22**	EPA 3010	671171	EPA 6010	671219
50312950004	**MW-40**	EPA 3010	671171	EPA 6010	671219
50312950005	**MW-41**	EPA 3010	671171	EPA 6010	671219
50312950006	**MW-41D**	EPA 3010	671171	EPA 6010	671219
50312950007	**MW-38D**	EPA 3010	671171	EPA 6010	671219
50312950001	**MW-30**	EPA 410.4	670949	EPA 410.4	670962
50312950002	**MW-39**	EPA 410.4	670353	EPA 410.4	670864
50312950003	**MW-22**	EPA 410.4	670353	EPA 410.4	670864
50312950004	**MW-40**	EPA 410.4	670353	EPA 410.4	670864
50312950005	**MW-41**	EPA 410.4	670353	EPA 410.4	670864
50312950006	**MW-41D**	EPA 410.4	670353	EPA 410.4	670864
50312950007	**MW-38D**	EPA 410.4	670353	EPA 410.4	670864
50312950001	**MW-30**	SM 5210B	669665	SM 5210B	669915
50312950002	**MW-39**	SM 5210B	669665	SM 5210B	669915
50312950003	**MW-22**	SM 5210B	669665	SM 5210B	669915
50312950004	**MW-40**	SM 5210B	669665	SM 5210B	669915
50312950005	**MW-41**	SM 5210B	669665	SM 5210B	669915
50312950006	**MW-41D**	SM 5210B	669665	SM 5210B	669915
50312950007	**MW-38D**	SM 5210B	669665	SM 5210B	669915
50312950001	**MW-30**	SM 5310C	670472		
50312950002	**MW-39**	SM 5310C	670472		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HRID 1Q2022
Pace Project No.: 50312950

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50312950003	**MW-22**	SM 5310C	670472		
50312950004	**MW-40**	SM 5310C	670472		
50312950005	**MW-41**	SM 5310C	670472		
50312950006	**MW-41D**	SM 5310C	670472		
50312950007	**MW-38D**	SM 5310C	670472		

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WO# : 50312950

50312950

CHAIN-OF-CUSTODY / Analytical Request Document

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

...titutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Page : 1 Of 1

Section A	Required Project Information:	Section C Invoice Information:
Company: Patriot_Indianapolis	Report To: James Cody	Attention:
Address: 6150 E. 75th St.	Copy To: Mike Casper	Company Name: Patriot
Indianapolis, IN 46250		Address:
Email: mcasper@patrioteng.com	Purchase Order #: 21-1359-01E	Pace Quote:
Phone: 317-576-8058 Fax:	Project Name: HRID 1Q2022	Pace Project Manager: tina.sayer@pacelabs.com,
Requested Due Date: 10 day TAT	Project #:	Pace Profile #: 6950-7

Regulatory Agency	State / Location
	IN

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

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	Analyses Test (Y/N)	Methane,Ethane,Ethene RSK-175	Nitrate by 9056*	Sulfate by 9056	Dissolved Fe by 6010	BOD by 5210*	COD by 410.4	TOC by 5310	Residual Chlorine (Y/N)	
1	MW-36	WT	G			4/5	1010		7	X	X								X	X	X	X	X	X	X		001
2	MW-39						1100		7	X	X								X	X	X	X	X	X	X		002
3	MW-22						1150		7	X	X								X	X	X	X	X	X	X		003
4	MW-40						1250		7	X	X								X	X	X	X	X	X	X		004
5	MW-41						1400		7	X	X								X	X	X	X	X	X	X		005
6	MW-41D						1440		7	X	X								X	X	X	X	X	X	X		006
7	MW-38D						1540		7	X	X								X	X	X	X	X	X	X		007
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*48 hour hold time	D. Richardson / Patriot	4/5/22	1645	JW	4.5.22	1645	2.7	Y	Y	Y
Dissolved Fe Lab filtered										

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Danielle Richardson					
SIGNATURE of SAMPLER: Danielle Richardson	DATE Signed: 4/5/22				

Pace Analytical®

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: JW 4.5.22 1700

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ USPS ☐ OTHER _____
2. **Custody Seal on Cooler/Box Present:** ☑ Yes ☐ No
   (If yes)Seals Intact: ☑ Yes ☐ No **(leave blank if no seals were present)**
3. **Thermometer:** 1 2 3 4 5 6 (A) B C D E F
4. **Cooler Temperature:** 2.3/2.7
   Temp should be above freezing to 6°C **(Initial/Corrected)**
5. **Packing Material:** ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____
6. **Ice Type:** ☑ Wet ☐ Blue ☐ None
7. **If temp. is over 6°C or under 0°C, was the PM notified?:** ☐ Yes ☐ No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2) (H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? **Analysis:** BOD, NO3	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?			✓
			Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Containers Intact?:	✓					
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	SBS / DI / MeOH (only) / BK / Kit: R	DG9H VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1					3							1					1	2										WT	✓		
2					3							1					1	2											✓		
3					3							1					1	2											✓		
4					3							1					1	2											✓		
5					3							1					1	2											✓		
6					3							1					1	2											✓		
7					3							1					1	2											✓		
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass
GN	General	AG3C	250mL NaOH amber glass

Plastic / Misc.

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

Pace Container Order #935271

Addresses

Order By :		Ship To :		Return To:	
Company	Patriot_Indianapolis	Company	Patriot_Indianapolis	Company	Pace Analytical Indianapolis
Contact	Cody, James	Contact	Cody, James	Contact	Sayer, Tina
Email	jcody@patrioteng.com	Email	jcody@patrioteng.com	Email	tina.sayer@pacelabs.com
Address	6150 E 75th St	Address	6150 E 75th St	Address	7726 Moller Road
Address 2		Address 2		Address 2	
City	Indianapolis	City	Indianapolis	City	Indianapolis
State	IN Zip 46250	State	IN Zip 46250	State	IN Zip 46268
Phone	(317)576-8058	Phone	(317)576-8058	Phone	(317)228-3100 127

Info

Project Name HRID 1Q2022 21-1359-01E **Due Date** 03/31/2022 **Profile** 6950-7 **Quote**

Project Manager Sayer, Tina **Return Date** **Carrier** Pace Courier **Location** IN

Trip Blanks

- [ ] Include Trip Blanks

Bottle Labels

- [ ] Blank
- [x] Pre-Printed No Sample IDs
- [ ] Pre-Printed With Sample IDs

Bottles

- [ ] Boxed Cases
- [ ] Individually Wrapped
- [ ] Grouped By Sample ID/Matrix

Return Shipping Labels

- [ ] No Shipper
- [ ] With Shipper

COC Options

- [ ] Number of Blanks
- [x] Pre-Printed 1

Misc

- [ ] Sampling Instructions
- [x] Custody Seal
- [x] Temp. Blanks
- [x] Coolers
- [ ] Syringes
- [ ] Extra Bubble Wrap
- [x] Short Hold/Rush Stickers
- [ ] DI Water Liter(s)
- [ ] USDA Regulated Soils

# of Samples	Matrix	Test	Container	Total	# of	Lot #	Notes
7	WT	IN Dissolved Gases, RSK-175	3-40mL unpres vials, yellow cap	21	0		
7	WT	IN Nitrate/Sulfate 9056	250mL plastic, unpres	7	0		*48 hour hold time
7	WT	IN Metals, Field Filtered	250mL plastic, HNO3 +FF labels	7	0		Fe
7	WT	IN BOD 5210B	500mL plastic, unpres	7	0		*48 hour hold time
7	WT	IN COD/TOC	250mL amber glass, H2SO4	7	0		

Hazard Shipping Placard In Place : NO

*Sample receiving hours are typically 8am-5pm, but may differ by location. Please check with your Pace Project Manager.

*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

*Payment term are net 30 days.

*Please include the proposal number on the chain of custody to insure proper billing.

LAB USE:

Ship Date :	03/30/2022
Prepared By:	KD
Verified By:	SMC
Tracking Num:	

Sample

CLIENT USE (Optional):

Date Rec'd:	
Received By:	
Verified By:	

Internal

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: James Cody
Patriot Engineering
6150 East 75th Street
Indianapolis, IN 46250

Phone:

Fax:

Identifier: 008TD **Date Rec:** 04/06/2022 **Report Date:** 04/12/2022

Client Project #: 21-1359-01E **Client Project Name:** HRID 1Q2022

Purchase Order #:

Test results provided for: CENSUS

Reviewed By:

Charles Slater

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Patriot Engineering**
Project: HRID 1Q2022

MI Project Number: **008TD**
Date Received: 04/06/2022

Sample Information

Client Sample ID:		**MW-30**	**MW-39**	**MW-22**	**MW-40**	**MW-41**
Sample Date:		04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		BB/CS	BB/CS	BB/CS	BB/CS	BB/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**3.71E+01**	**6.00E-01**	**3.74E+01**	**5.00E+00**	**3.30E+00**
tceA Reductase	TCE	**7.60E+00**	<5.00E-01	**9.70E+00**	<5.00E-01	**3.00E-01 (J)**
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	**1.05E+01**	<5.00E-01	**9.60E+00**	<5.00E-01	**4.00E-01 (J)**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

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Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Patriot Engineering**
Project: HRID 1Q2022

MI Project Number: **008TD**
Date Received: 04/06/2022

Sample Information

Client Sample ID:	**MW-41D**	**MW-38D**
Sample Date:	04/05/2022	04/05/2022
Units:	cells/mL	cells/mL
Analyst/Reviewer:	BB/CS	BB/CS

Dechlorinating Bacteria

Dehalococcoides	*DHC*	**3.34E+02**	**2.70E+00**
tceA Reductase	TCE	**2.33E+01**	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	**2.32E+01**	<5.00E-01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **4/6/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	04/06/2022	04/12/2022	1 °C	98%	non-detect	non-detect
BVC	04/06/2022	04/12/2022	1 °C	103%	non-detect	non-detect
TCE	04/06/2022	04/12/2022	1 °C	105%	non-detect	non-detect
VCR	04/06/2022	04/12/2022	1 °C	105%	non-detect	non-detect