REPORT OF THE POLISHING REMEDIAL INJECTIONS AND THE FIFTH PERFORMANCE GROUNDWATER MONITORING EVENT

Former TORX Facility
4366 North Old US Highway 31
Rochester, Indiana

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CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS

µg/L	micrograms per liter
ABC	Anaerobic Biochem (ABC®)
Amec Foster Wheeler	Amec Foster Wheeler Environment & Infrastructure, Inc.
BGS	below ground surface
cells/mL	cells per milliliter
CVOC	chlorinated volatile organic compounds
DCE	dichloroethene
DHC	Dehalococcoides bacteria
DO	dissolved oxygen
ERD	Enhanced Reductive Dechlorination
HDPE	high density polyethylene
IDEM	Indiana Department of Environmental Management
ISCR	In-situ Chemical Reduction
mg/L	milligrams per liter
mV	millivolts
NTU	Nephelometric Turbidity Units
ORP	oxygen reduction potential
QAPP	Quality Assurance Project Plan
qPCR	Quantitative Polymerase Chain Reaction
RWP	Remediation Work Plan
TCE	trichloroethene
TOC	total organic carbon
Site	former TORX facility
USEPA	U.S. Environmental Protection Agency
VFA	volatile fatty acid
VOC	Volatile organic compound
ZVI	zero valent iron

1.0 Introduction

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) has prepared this report to document performance monitoring results associated with implementation of In-Situ Chemical Reduction (ISCR) and Enhanced Reductive Dechlorination (ERD) remedies for groundwater containing chlorinated volatile organic compounds (VOCs) at and in the vicinity of the former TORX Facility (now operated by Acument) located at 4366 North Old US Highway 31 in Rochester, Indiana (Site). A Site location map is presented as Figure 1.

2.0 Polishing Injections

2.1 Background

Amec Foster Wheeler was retained by Textron, Inc. to conduct remedial injection activities at the former TORX facility. A Remediation Work Plan (RWP) was prepared in June 2014 and submitted to the Indiana Department of Environmental Management (IDEM) for approval. IDEM approved the RWP with comments provided in September and October 2014. Amec Foster Wheeler provided a response to comments from IDEM in December 2014. The first stage of the implementation of the RWP began in November 2014 with the installation of the injection well network (305 injection wells). Details of the injection array layout and injection well construction were provided in Amec Foster Wheeler's January 25, 2016 *Report of Injection Well and Monitoring Well Installation*. Figure 2 details the arrays and injection well locations.

Upon completion of the installation of the injection well network, implementation of the ERD remedial injection activities began in June 2015. The overall remedial approach involves treatment of a portion of the source area near the Western Pond behind (west of) the facility using ISCR technology. The remainder of the source area west of the building, beneath the manufacturing plant, and in most of the downgradient plume is being addressed by stimulating biologically mediated reductive dechlorination, referred to as ERD or biostimulation. In the vicinity of MW-26 and MW-17, a biobarrier was installed based on the use of a very long lived reductive dechlorination amendment. The treatment zones, injection wells, and monitoring well locations are shown on Figure 2.

ISCR injections were implemented in the source area behind the plant building in June and July 2015. ERD injections were implemented in the source area behind the building and in downgradient treatment zones A through D between July and September 2015. The first performance monitoring event was conducted in August and October 2015. These activities are documented in Amec Foster Wheeler's *Report of Remedial Injection Activities and Initial Performance Monitoring*, dated 16 March 2016. The ERD injections for the source area located beneath the building were performed in February 2016. The first performance monitoring event was conducted in August and October 2015 and is documented in Amec Foster Wheeler's *Report of Remedial Injection Activities and Initial Performance Monitoring*, dated 16 March 2016. The second performance monitoring event was conducted in February and March 2016 and is documented in Amec Foster Wheeler's *Report of Remedial Injection Activities and Second Performance Monitoring*, dated 6 July 2016. The third performance monitoring event was conducted in June 2016. It is documented in Amec Foster Wheeler's *Report of the Third Remedial Injection Performance Groundwater Monitoring Event in Support of Remedial Activities*, dated 16 December 2016.

As detailed in the RWP, the performance of the remediation of the CVOCs in groundwater at the site is monitored on a regular basis through the implementation of the Performance Groundwater Monitoring Program. The results of the third Performance Groundwater Monitoring event (June 2016) indicated the need for the addition of biostimulant amendment in certain treatment arrays. The addition of the biostimulant amendment is considered a "polishing injection" and is discussed in the subsequent section.

2.2 Polishing Injections

COCs in certain areas in the treatment zones at the site exhibited desorption of CVOCs from the aquifer matrix. A polishing injection program was designed by an Amec Foster Wheeler remedial engineer to target these areas. Polishing injections were designed to use a combination of existing injection wells in combination with injection through the rods using Direct Push Technology (DPT).

Amec Foster Wheeler performed polishing injection services within the source and treatment areas shown in Figures 2 through 5 during October through December 2016. In addition to the ERD polishing injections, certain areas within Treatment Zone B were

selected to receive additional treatment using ISCR. The ISCR injections were also completed using DPT.

2.3 ERD Injection Activities

As detailed in previous Performance Groundwater Monitoring reports and the RWP, the ERD injections consisted of mid-range fatty acid and ethyl lactate based formulas designed by Amec Foster Wheeler and supplied by Redox Tech, LLC (Redox Tech), referred to as product Anaerobic Biochem (ABC®), referred to as "ABC" hereinafter. Several different formulations of ABC were designed depending upon the characteristics of the aquifer and aquifer matrix. The various ABC product blends were diluted approximately 10:1 to 6:1 with water to create the final injection amendment. Overall the polishing injections utilized approximately 5,300 gallons of standard ABC, 980 gallons of ABC Ole, and 4,775 gallons of ABC high fatty acid. Amec Foster Wheeler performed the injection services within the ERD treatment areas shown in Figure 2. The material mixing process consisted of two 1,700-gallon, high density polyethylene (HDPE) tanks, transfer/mixing pumps, injection pump, flow and pressure instrumentation and control valves. The ISCR injections were also performed by Amec Foster Wheeler personnel. Services for the direct injection technology were subcontracted to M&W Drilling, LLC.

Details of the polishing injections for each treatment area are described in the subsequent sections.

2.3.1 Source Area at Western Pond

This area was previously treated in 2015 using ISCR technology. The polishing injection design specified the use of a longer lasting biostimulant amendment, therefore ABC OLE was utilized for these injections. The polishing injections at the Western Pond were performed from November 9, 2016 through November 14, 2016. There were 23 injection points on four rows that were installed using DPT (Figure 3). The injections were conducted using a bottom-up injection sequence. Each injection point treated the following intervals: 24-20; 28-24; 32-28; 36-32; 40-36; and 44-40 feet below ground surface (BGS). A total of 1,195 gallons of ABC-OLE was diluted with 7,160 gallons of water. Each injection interval received a total of 60.5 gallons of amendment. Table 1 presents a summary of the quantities of ABC-OLE injected into each point. During the injection of polishing point SP-4,

daylighting of the amendment was observed during the injection of interval 36 - 32 feet BGS. Injections were stopped in SP-4 due to the daylighting.

2.3.2 Source Area Outside Building

The area east of the Western Pond and access road behind the manufacturing plant within the source area is shown in Figure 4. A total of 19 existing injection wells were previously installed in two rows to address two separate vertical contaminant intervals. The polishing injections only utilized the shallow injection wells, i.e., A-1 through A-3, INJ-2, A-4, and B-5 through B-9. The ABC substrate used for these injections consisted of 516 gallons of ABC-High Fatty Acid Blend diluted with 3,620 gallons of water. Each injection well received a total of 413 gallons of amendment. The injections occurred on November 16, 2016. Table 2 presents a summary of the quantities of ABC-High fatty Acid Blend injected into each well.

2.3.3 Source Area Beneath Building

The area beneath the manufacturing plant within the source area is shown in Figure 5. A total of 45 individual existing injection wells were previously installed in six arrays in order to address the CVOC plume beneath the building. The polishing injections only utilized existing injection wells C-1 through C-6, C-8, D-9 through D-15, and E-17 through E21.

Approximately 824 gallons of product ABC was diluted with 7,420 gallons of water for a 10:1 water to product ratio that was injected to promote additional reductive dechlorination in this area.

The injections took place between on November 29 and 30, 2016. Table 3 presents the quantities of ABC injected into each well. Most injection wells received approximately 437 gallons of amendment, while injection wells C-4, C-6, C-8, D-15, E-20 and E-21 received 500 gallons.

2.3.4 Downgradient Treatment Zone A

The area east of the manufacturing plant is divided into four downgradient treatment zones (Zones A through D) as shown in Figure 2. A total of 68 injection wells installed as two nested wells are at 34 locations to address the vertical contaminant profile in Treatment Zone A. Standard product ABC formulation was used to promote reductive dechlorination in this area. Only a sub-set of the existing Treatment Zone A injection well network was used for the polishing injections. The shallow injection wells in arrays I, J, K, L and M were used

for the polishing injections. Figure 6 presents the locations of the injection wells arrays used for the polishing injections.

The polishing injections occurred between October 26 and October 31, 2016. Table 4 presents a summary of the quantities of ABC amendment injected into each well. Injection well array I was treated with a total of 452 gallons of standard ABC that was diluted with 4,070 gallons of water, with each injection well receiving 753 gallons of amendment. Injection well arrays J, K, L and M were treated with 1,810 gallons of standard ABC diluted with 16,290 gallons of water, with each injection well receiving 786 gallons of amendment.

2.3.5 Downgradient Treatment Zone B

Thirty-nine (39) existing injection wells were previously installed at 17 locations in Treatment Zone B. Each location has two injection wells, one for an upper and one for an intermediate interval. Locations 9 and 14 have a third injection well for a deep interval, while locations 15 through 17 also have a third injection well to address the deeper contamination observed in a clay and silt layer at MW-24. The polishing injections in Treatment Zone B were designed to address residual CVOC concentrations in the shallow zone in the upgradient portion of Treatment Zone B and the deeper silt layer near MW-24 and at well OW-3(55). In order to accomplish the second objective, the design specified utilizing not only the deeper injection wells but the ISCR technology. A total of 10 direct push ISCR points were proposed to be installed in Treatment Zone B along with three direct push injections (BP-01 through BP-03) using only ABC biostimulant amendment. The locations of the ISCR injections, the direct push injections and the injection wells are shown on Figure 6.

The existing injection wells had the polishing injections performed on November 1 through November 4, 2016 except for injection well S-I, which had the amendment added on November 17 in conjunction with the injection performed in Treatment Zone C due to a different formulation of ABC used for this injection well. A total of 1,809 gallons of standard ABC formulation was diluted in 18,090 gallons of water and used in the polishing injections. Table 5 presents a summary of the volumes of amendment injected into the existing injection wells and Table 6 shows the amount of amendment injected into direct push injection borings BP-01 through BP-03.

The ISCR injections were implemented using a combination of zero valent iron (ZVI) and lactate based carbon source ABC. The combination of anaerobic biodegradation and direct reduction via ZVI is designed to drive aquifer chemistry to a highly reductive environment. The ISCR injection points are shown on Figure 6.

The ISCR injections occurred during November 30 through December 5, 2016. A total of 302 gallons of ABC, 2,700 pounds of ZVI, and 250 pounds of guar gum were combined to produce 3,200 gallons of ABC+® slurry to be injected into 9 injection points within the treatment zone. It should be noted that the 3,200 gallons of ABC+® slurry was the design basis. The actual amounts that were injected into the formation are listed in Table 6.

The slurry was injected using a pneumatic powered ChemGrout piston pump through 1.5 inch inner diameter Geoprobe® rods. The rods were advanced to the target depths using a track-mounted 6610 DT direct push Geoprobe® rig. Upon completing injections at each location, the boreholes were abandoned using bentonite chips to the water table and the remaining portion of the borehole was filled with cement grout to grade.

The injection points were arranged in strategic spacing surrounding the areas that required the polishing ISCR injections (see Figure 6). There were two areas that were addressed with the ISCR injections, the MW-24 area and the area surrounding OW-3. Direct push borings BP-04 – BP-08 targeted the MW-24 area whereas direct push borings BP-09 – BP-13 addressed the OW-3 area. The injected intervals for the MW-24 area were from 42 feet to 54 feet BGS. The injected intervals for the OW-3 area were from 48 feet to 60 feet BGS. The injections were completed in approximate three foot increments and each three foot interval received 64 to 80 gallons of slurry for a total of 256 to 320 gallons per injection location.

The shallow interval in direct injection boring BP-13 exhibited intrusion of the slurry into adjacent monitoring well OW-3(55) well casing. Injections in proposed boring BP-12 [which is closer to OW-3(55)] were not completed due to this occurrence.

The injections occurred between December 1 and December 6, 2016. Table 6 presents a summary of the quantities of the ABC water slurry, ZVI and ABC injected into each boring.

2.3.6 Downgradient Treatment Zone C

Twenty existing injection wells were previously installed at 10 locations in Treatment Zone C in order to address the vertical contaminant profile. Each location has two injection wells, one for an upper and one for a lower interval. The polishing injection design specified augmenting the injection well network in Treatment Zone C by utilizing direct push injections for biostimulant amendment placement. Existing injection wells S-1 (shallow zone), S-4, S-5 (deep zone), and T-7 through T-10 (deep zone) received polishing biostimulant amendment injections. This was augmented with direct push injections CP-01 through CP-05. The locations of the injection wells and direct push injection locations are shown on Figure 6.

Injection well S-1 (shallow interval) had 703 gallons of water/ABC high fatty acid blend injected into the well on November 17, 2016. Injection wells S-4 and S-5 had 2,424 gallons of water/standard ABC injected into the deep well screens between November 2 and November 4, 2016. The deep interval in injection wells in Array T (T7 – T10) were injected with standard ABC on December 1, 2016. Approximately 844 gallons of standard ABC was diluted in 6,623 gallons of water. The deeper screened interval in injection wells T-7 – T-10 had 1,085 gallons of amendment injected. Table 7 presents a summary of the screened intervals and volume of amendment injected into each well.

The direct push injections occurred during November 16 and 17, 2016 and December 1 and 2, 2016. Table 8 presents a summary of the quantities of standard ABC and ABC high fatty acid blend injected into each boring. Direct push injection borings CP-01 and CP-02 had approximately 1,369 gallons of ABC high fatty acid blend injected into the depth interval between 27 feet – 36 feet BGS. Injection borings CP-03 through CP-05 had approximately 2,800 gallons of standard ABC injected into the depth interval between 41 feet – 53 feet BGS. The deeper intervals in direct injection borings CP-04 and CP-05 developed high pressure and only accepted 25% of the total design volume of the amendment.

2.3.7 Downgradient Treatment Zone D

Injection wells are installed at 38 locations in Treatment Zone D, with all but one location designed to treat three discrete vertical intervals. Injection well 1 did not have a deep injection interval due to high clay content at that location. Two of the existing injection well arrays (Arrays U and V) were utilized in the polishing injection program. In addition, 27 direct push injection borings were installed in strategic areas throughout Treatment Zone D

as part of the polishing injection design. Figure 6 presents the locations of the injection wells and direct push injection borings.

Injection well Arrays U and V in the northern portion of Treatment Zone D were selected to have biostimulant amendment injected as part of the polishing injection program. The deep screened interval in injections well in Array U received the biostimulant amendment. All three intervals in the injection wells located in Array V received the biostimulant amendment. A total of 11,692 gallons of ABC high fatty acid blend amendment was injected into the injection wells. The total volume of amendment injected into each injection well in Arrays U and V is summarized in Table 9. The majority of the amendment was injected into the wells on November 17, 2016, however the wells in Array U had their final amendment injected on November 30, 2016. In Array U, the deep screened interval in injection wells U-1 through U-5 each had 753 gallons of amendment injected.

With the exception of the deeper zone in injection well V-10, which did not accept any amendment, the injection wells in Array V (V-6 through V-10) had all intervals (shallow, intermediate and deep) injected with amendment. The shallow zones each had 320 gallons whereas the intermediate and deeper zones each received 703 gallons of amendment.

The design of the polishing injections for Treatment Zone D included 27 direct injection borings. These direct injection borings targeted five primary areas:

- between the injection wells in Array U (DP-01 through DP-04);
- upgradient of monitoring well OW-5 (DP-05 through DP-13);
- upgradient of monitoring well MW-16 (DP-14 through DP-20);
- upgradient of monitoring well MW-17 (DP-21 through DP-24);
- upgradient of monitoring well MW-26 (DP-25 through DP27).

The injections occurred between November 15 and November 17, 2016 and December 1 through December 6, 2016. Table 10 presents a summary of the quantities of ABC high fatty acid blend injected into each interval in each direct push injection boring. In total, 31,717 gallons of biostimulant amendment was injected in the 27 direct push injection borings.

Two direct push boring locations did not accept any amendment due to high injection pressures (DP-06) or formation sand flowing to the ground surface under pressure (DP-20). There were also two injection intervals in two borings that didn't accept the designed amendment, DP-05 (10 feet - 20 feet BGS) and DP-18 (28 feet – 31 feet BGS), which only accepted 90 gallons.

3.0 Performance Monitoring Objectives

Amec Foster Wheeler conducted the fifth groundwater performance monitoring sampling event between December 2016 and February 2017. The purpose of the groundwater performance monitoring is to assess the short-term performance of ISCR and ERD remedies implemented for the Site. The objectives of the performance monitoring are to assess the following within the Treatment Zones:

- Distribution of the remedial amendments,
- Geochemistry effects of the amendment, and
- Contaminant concentrations and transformation.

The performance monitoring results were also used to identify refinements to the biostimulant and ISCR amendment polish injections plans in order to optimize remedy effectiveness.

Scope of Work

Amec Foster Wheeler conducted groundwater monitoring and sampling at 42 monitoring wells located within and downgradient of the treatment zones. The fifth groundwater performance monitoring event took place between December 12, 2016 and February 1, 2017.

For most performance monitoring wells, groundwater was purged using low-flow sampling techniques. Certain smaller diameter wells were purged by bailing. Field water quality parameters were monitored during purging. Groundwater was sampled once field water quality parameters had stabilized. Groundwater samples were analyzed for VOCs, total organic carbon (TOC), dissolved gases (methane, ethane, and ethene), select metals (iron,

and manganese), alkalinity, anions (nitrate, chloride, and sulfate), Dehalococcoides bacteria (DHCs), and volatile fatty acids (VFAs).

4.0 Baseline Results

Baseline groundwater monitoring consisting of a complete set of analytical parameters was conducted in 2012 prior to initiating the Pilot Study. A subset of the performance monitoring wells were purged and sampled using low-flow groundwater sampling techniques.

Groundwater was assessed for geochemical parameters [oxidation-reduction potential (ORP), dissolved oxygen (DO), and pH], VOCs, anions (nitrate, chloride, and sulfate), TOC, alkalinity, DHC, dissolved gases (methane, ethane, and ethene), VFAs, and select metals (arsenic, selenium, iron, and manganese). The analytical methods used are presented in Table 10. The results of this baseline sampling, supplemented with results of routine groundwater monitoring conducted from 2012 through 2014, are included on Tables 11 through 13. We note that the baseline initial sampling event for certain wells included in the performance monitoring sampling occurred at later dates (e.g., in 2013 or 2014).

5.0 Field Activities

The performance monitoring wells that were sampled are consistent with Table 10, with the exception of OW-3(35), which was not sampled as explained in Section 7.4. The 1-inch diameter monitoring wells, MW-12 and MW-13 located east of North Old US Highway 31 and monitoring wells MW-67, MW-68, MW-71 and MW-72 located inside the Acument building were purged and sampled using disposable 0.75-inch diameter polyvinyl chloride bailers. Prior to sample collection, at least three well volumes of groundwater were removed from each well. Groundwater field parameters including pH, temperature, conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity were measured during purging and recorded. Groundwater samples were collected directly from the bailers.

The remainder of the performance monitoring wells are 2-inch diameter and were purged and sampled using a bladder pump. Prior to sample collection, groundwater was purged from the wells using a modified low-flow procedure. Groundwater field parameters including pH, temperature, conductivity, ORP, dissolved oxygen, and turbidity, as well as,

groundwater elevation, were measured approximately every 5 minutes until at least three sequential readings showed stabilization, i.e., +/- 0.1 for pH, +/- 10 millivolts (mV) for ORP, +/- 10 Nephelometric Turbidity Units (NTUs) for turbidity, and +/- 10% for dissolved oxygen. Upon achieving stabilization, groundwater samples were collected directly from the pump discharge tubing. Copies of the field sample collection logs are presented in Appendix A.

Groundwater samples were collected into laboratory-supplied, pre-preserved vials and labeled with the sampling information. Quality control samples including field blanks, equipment blanks, and trip blanks were also submitted. Field blanks were collected by filling a laboratory supplied container with distilled water. Equipment blanks were collected by pumping distilled water through the decontaminated pump and into the sampling container. Trip blanks were prepared by the laboratory and accompanied the samples during transport. A trip blank accompanied each shipment of VOC samples.

Following sample collection, the sample containers were placed on ice in coolers and shipped under chain of custody to ALS Environmental laboratory in Holland, Michigan for VOC analysis by United States Environmental Protection Agency (USEPA) Method 8260B, as well as, TOC by Method 9060, iron and manganese by Method 6020A, alkalinity by Method A2320B, and anions by Method SW9056. Samples for VFAs and dissolved gas analyses were shipped under chain-of-custody to Microseeps, a division of Pace Analytical, in Pittsburgh, Pennsylvania. Samples for DHCs were shipped under chain-of-custody to Microbial Insights in Knoxville, Tennessee.

Sampling pumps were decontaminated between wells using a liquinox wash, potable water rinse, and distilled water rinse. Dedicated sampling tubing was used to purge and sample each well, and new disposable bailers were used for sampling monitoring wells MW-12, MW-13, MW-67, MW-68, MW-71 and MW-72. Disposable equipment was changed out between each well.

6.0 Analytical Methods and Use

Groundwater samples were collected and analyzed to provide data pertinent to the amendment distribution, geochemical conditions, and contaminant concentrations and

transformation. The analytical methods and purpose of the data is described below and in Table 11.

6.1 Amendment Distribution Indicators

6.1.1 Total Organic Carbon

The groundwater samples were analyzed for TOC by Method 9060. The amendment injected to promote ISCR and ERD provides an organic carbon source to the aquifer system. Therefore, increases in TOC relative to baseline conditions are an indicator of amendment distribution to the performance monitoring well. TOC results above 20 milligrams per liter (mg/L) are considered favorable.

6.1.2 Volatile Fatty Acids

The groundwater samples were analyzed for VFAs by Method AM23G. The injected amendment contains VFAs, and therefore VFAs are an indicator of substrate distribution to the performance monitoring wells.

6.2 Redox Conditions

6.2.1 Oxidation-Reduction Potential

ORP was measured during groundwater purging using a YSI 6920 multi-parameter water quality sonde. ORP is a potentiometric measurement of the tendency for electron transfer. ORP is measured in voltage with positive values indicating an oxidizing environment (ability to accept electrons) and negative values indicating a reducing environment (ability to furnish electrons). A reducing environment is favorable for anaerobic reductive dechlorination of chlorinated VOCs (CVOCs).

6.2.2 Manganese, Iron, Nitrate, and Sulfate

The groundwater samples were analyzed for manganese and iron by Method 6020A, nitrate by Method 353.2, sulfate and chloride by Method 9056A. These constituents are competing electron acceptors for microbial respiration in the absence of oxygen. Once dissolved oxygen is depleted, anaerobic microbes typically use other electron acceptors in the following order: nitrate, manganese, ferric iron, and sulfate. Typically sufficient amendment is needed to deplete these competing electron acceptors before significant dechlorination can occur. Elevated levels of dissolved iron and manganese indicate that the groundwater geochemistry is sufficiently reducing. The preferable concentration for nitrate is < 1 mg/L and for sulfate is < 20 mg/L.

6.2.3 Dissolved Oxygen

Dissolved oxygen was measured during groundwater purging using a YSI 6920 multi-parameter water quality sonde. Dissolved oxygen readings provide data on whether aerobic or anaerobic conditions exist. In an anaerobic setting, the dissolved oxygen is depleted (<0.5 mg/L).

6.3 Dechlorinating Bacteria and Functional Genes

The groundwater samples were analyzed for DHCs and reductase genes by Quantitative Polymerase Chain Reaction (qPCR). DHCs are a bacterial group capable of complete reductive dechlorination of chlorinated hydrocarbons to ethene/ethane. An abundance of reductanse of functional genes is indicative of dechlorination processes at work. Vinyl chloride reductase genes facilitate complete reductive dechlorination to ethene.

6.4 Buffering

6.4.1 pH

A YSI 6920 multi-parameter water quality sonde was used to measure pH during groundwater purging. Microbial growth and the desired biological processes can be hindered or halted at low and high pH. The ideal pH range for degrading bacteria is 6 to 8. Fermentation processes associated with the remediation can result in alteration of the natural pH. If pH is lower than 5 or higher than 9, a buffering agent may be needed to provide a suitable environment for the desired biological activity.

6.4.2 Alkalinity

The groundwater samples were analyzed for alkalinity by Method A2320B. Alkalinity, evaluated in conjunction with pH, is an indicator of buffering capacity of the aquifer. An increase in alkalinity and stable pH indicates the buffering capacity of the aquifer is sufficient to neutralize metabolic acids produced during degradation of the amendment. If the pH is lower than 5 and alkalinity remains at or below background, a buffering agent may be needed to provide a suitable environment for the desired biological activity.

6.5 Degradation of Chlorinated VOCs

6.5.1 VOCs

The groundwater samples were analyzed for VOCs by Method 8260B. The objective of the remediation is to reduce the mass of chlorinated VOCs in the groundwater to demonstrate that the downgradient plume concentrations are declining or stable. Although the CVOCs

are expected to decline as a result of the remedial measures, degradation products such as dichloroethene (DCE) and vinyl chloride may temporarily increase as a result of dechlorination.

6.5.2 Dissolved Gases

The groundwater samples were analyzed for dissolved gases including methane, ethane, and ethene by Method AM20GAX. Elevated levels of methane are an indicator that fermentation is occurring under anaerobic conditions. Methane concentrations greater than 1 mg/L are considered favorable. Elevated levels of ethene and ethane are indicative that complete anaerobic dechlorination of CVOCs is occurring.

7.0 Data Evaluation

Tables 12 through 14 present the analytical results. The measured field parameters referenced in Section 4.0 are included in Table 11. Figures 7 through 9 present a summary of the results of the VOC analyses performed on samples from the monitoring wells in the treatment areas. Copies of the laboratory reports and chain-of-custodies are presented in Appendix B.

The following subsections discuss the response of the aquifer to the biostimulant and the concentration of CVOCs in each treatment area.

7.1 Source Zone Behind (West of) Plant

Four monitoring wells located in the source zone behind the plant were sampled for performance monitoring: MW81-(27), MW59-(29), PM-2, and PM-3. The contaminant mass has been fully reduced at PM-2, and therefore this well is not included in the subsequent discussions on indicator parameters. TOC concentrations were above 20 mg/L and VFAs are substantially present in MW-81(27), MW-59(29), and PM-3, indicating continued presence of amendment. The TOC concentration is low at PM-2 (14 mg/L) and greatest at PM-3 (12,000 mg/L). This change in concentration of TOC may indicate that the groundwater gradient is causing the transport of the bioamendment from the injection wells closer to the Western Pond to the area behind the Acument building where the groundwater gradient decreases.

The pH at PM-3 was 4.78, which is lower than ideal for biological activity, however the concentration of alkalinity remains at baseline levels. For the other two wells, the pH was 6.28 and 6.44, which is in the ideal range for biological-based treatment. With the exception of PM-3, the ORP was negative, which indicates reducing conditions. The dissolved oxygen readings were less than 1 mg/L, which is similar to baseline conditions. Iron and manganese concentrations were generally comparable or higher than baseline conditions. Nitrate and sulfate concentrations were within their target range, except at PM-3.

Trichloroethene (TCE) remained below reporting limits in all wells, indicating remediation of the parent contaminant has occurred at this location. No CVOCs were detected in the sample from PM-2, indicating the remedial measures may be complete at this well. For the other three wells the cis-1,2-DCE concentrations and vinyl chloride concentrations were lower than in the September 2016 monitoring event results.

The DHC populations are adequate for complete dechlorination at all wells except PM-3. The reductase genes indicate potential for biological activity, although the vinyl chloride reductase gene was not detected at PM-3.

Methane concentrations for the wells remain high, indicating anaerobic fermentation is occurring. Ethene concentrations remain elevated, indicating complete dechlorination of some of the contaminant mass.

A summary of the pertinent results for the performance monitoring wells in the Source Area Behind the Plant is provided below:

Source Zone Behind Plant Performance Monitoring Wells	Molar Mass % Reduction Relative to Baseline				Amendment Indicator				Gases	Geochemical Environment	
	Total CVOC	TCE	cis-1,2-DCE	Vinyl Chloride	TOC > 20 mg/L	DHC > 1E+03 cells/mL	DHC > 1E+05 cells/mL	VCR > 1E+03	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW-81(27)	45%	100%	79%	-146%	YES	YES	YES	YES	YES	-	YES
MW-59(29)	99.9%	--	99.9%	99.9%	YES	YES	NO	YES	YES	-	NO
PM-2	100%	100%	100%	100%	NO	YES	NO	YES	YES	-	NO
PM-3	72%	--	89%	20%	YES	NO	NO	NO	YES	+	NO
Total (4 wells)	73%										

Conclusions

- Total CVOC mass has decreased by 73% relative to baseline.
- Contaminant mass is substantially reduced in PM-3, MW-59(29), and MW-81(27) and has been fully reduced at PM-2.
- The DHC population is low at PM-3, which may be due to low pH.

7.2 Source Zone Inside (Beneath) Plant

Seven monitoring wells located in the source zone beneath the plant were sampled for performance monitoring: MW-67, MW-68, MW-71, MW-72, MW-76, MW-77, and MW-78. The contaminant mass has been fully reduced at MW-78, and therefore this well is not included in the subsequent discussions on indicator parameters.

TOC concentrations were above 20 mg/L in all the wells. VFAs were substantially present in all wells, indicating effective substrate distribution.

The pH ranged from 5.68 to 7.21, which is adequate for biological-based treatment. The ORP was negative for all the wells, which indicates reducing conditions. Dissolved oxygen readings were greater than 1 mg/L except at MW-76. Except at MW-67, iron and manganese concentrations were comparable or higher than baseline conditions. The iron concentration at MW67 was lower than baseline but increased relative to the March 2016 sampling event. Nitrate and sulfate concentrations were within their target range.

A significant reduction in CVOC mass is observed in all the wells except for MW-76. The rate of dechlorination at MW-76 is likely being slowed due to desorption of COVCs from a silt layer in close proximity to the well screen at MW-76. TCE was below reporting limits in all the wells. Cis-1,2-DCE concentration at MW-77 was slightly higher than the September 2016 monitoring event result. Cis-1,2-DCE concentrations decreased at MW-67, MW-68, MW-76, and MW-78 and were similar in the other two wells in comparison to the September 2016 monitoring event results. The vinyl chloride concentrations at MW-68, MW-71, and MW-77 increased relative to the September 2016 results. The vinyl chloride concentrations in the other four wells were similar or decreased relative to the September 2016 results.

The DHC populations were low (less than 1E+03 cells per milliliter [cells/mL]) at MW-67 and MW-76. DHC populations were sufficient for complete dechlorination the other four wells ranging from 4.12E+03 to 5.19E+05 cells/mL. The reductase genes indicate potential for biological activity.

Methane concentrations remain high, indicating anaerobic fermentation is occurring. Ethene concentrations were high, indicative that complete anaerobic dechlorination is occurring.

A summary of the pertinent results for the performance monitoring wells in the Source Area Inside (Beneath) the Plant is provided below:

Source Zone Inside (Beneath) Plant Performance Monitoring Wells	Molar Mass % Reduction Relative to Baseline				Amendment Indicator				Gases	Geochemical Environment	
	Total CVOC	TCE	cis-1,2-DCE	Vinyl Chloride	TOC > 20 mg/L	DHC > 1E+03 cells/mL	DHC > 1E+05 cells/mL	VCR > 1E+03	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW-67	99.9%	--	99.9%	99.4%	YES	NO	NO	NO	YES	-	NO
MW-68	88%	--	99.5%	20%	YES	YES	NO	YES	YES	-	NO
MW-71	99.1%	--	99.9%	96%	YES	YES	YES	YES	YES	-	NO
MW-72	99.9%	--	99.9%	99.7%	YES	YES	NO	NO	YES	-	NO
MW-76	-207%	--	31%	-1900%	YES	NO	NO	NO	YES	-	NO
MW-77	53%	--	91%	-55%	YES	YES	NO	NO	YES	-	NO
MW-78	100%	--	100%	100%	YES	NO	NO	NO	NO	-	NO
Total (7 wells)	87%										

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 87% in the Source Zone Inside (Beneath) the Plant based upon data from the seven performance monitoring wells relative to baseline.
- Contaminant mass has been fully reduced at MW-78.
- While total CVOC mass at MW-76 has increased overall compared to baseline, the remaining mass is now primarily daughter product vinyl chloride, indicating that reductive dechlorination is occurring.

7.3 Treatment Zone A

Nine monitoring wells located in Treatment Zone A were sampled for performance monitoring: MW-6C, MW-12, MW-13, MW-62, MW-20(35), MW-20(51), MW-82, OW-1(28), and OW-1(39). The contaminant mass at MW-20(35), MW-20(51), MW-82(58), and OW-

1(39) has been reduced by 100%, and therefore these wells are not included in the subsequent discussions on indicator parameters.

TOC concentrations were above 20 mg/L in MW-12, MW-20(35), MW-62, and MW-82, but low at MW-6C, MW13, OW-1(28), and OW-1(39). VFAs were low at MW-6C and MW-13 but substantially present in the other wells. The substrate may be depleting at MW-6C and MW-13.

The pH ranged from 6.74 to 7.37, which is in the ideal range for biological-based treatment. ORP indicates reducing conditions in all wells. The dissolved oxygen reading at MW-62, MW-20(35), and OW-1(39) was less than 0.5 mg/L, indicating anaerobic conditions. Dissolved oxygen readings at MW-6C, MW-12, and MW1-3 were greater than 1 mg/L, indicating aerobic conditions. Iron and manganese concentrations were comparable or higher than baseline conditions, except at MW-13. At MW-13 the iron concentration was lower than baseline. Nitrate concentrations were within target range. Sulfate concentrations were within target range except at MW-13.

TCE was below reporting limits in all the wells. The cis-1,2-DCE concentration at MW6C was higher than the September 2016 monitoring event result. At MW-62, the cis 1,2 DCE concentrations was consistent with the September 2016 result, but the vinyl chloride concentration increased an order of magnitude. Cis-1,2-DCE concentrations decreased at MW-12 and MW-13 in comparison to the September 2016 monitoring event results and were comparable at minimal concentrations or not detected at the other wells. Where detected, the vinyl chloride concentrations increased relative to the previous sampling event, except at MW-12.

The DHC populations were sufficient for complete reductive dechlorination. The reductase genes generally indicate potential for continued biological activity.

Methane concentrations were high in the wells, indicating anaerobic fermentation is occurring. Ethene was substantially present in most wells, indicating complete reductive dechlorination is occurring.

A summary of the pertinent results for the performance monitoring wells in Treatment Zone A is provided below:

Treatment Zone A Performance Monitoring Well	Molar Mass % Reduction Relative to Baseline				Amendment Indicator				Gases	Geochemical Environment	
	Total CVOC	TCE	cis-1,2-DCE	Vinyl Chloride	TOC > 20 mg/L	DHC > 1E+03 cells/mL	DHC > 1E+05 cells/mL	VCR > 1E+03	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW-6C	13%	--	51%	-25%	NO	YES	NO	YES	YES	-	NO
MW-12	96%	--	98%	73%	YES	YES	YES	YES	YES	-	NO
MW-13	97%	--	98%	97%	NO	YES	YES	YES	YES	-	NO
MW-62(36)	98%	--	99.9%	96%	YES	YES	NO	YES	YES	-	YES
MW-20(35)	100%	--	100%	100%	YES	YES	NO	YES	YES	-	YES
MW-20(51)	100%	--	100%	100%	NO	YES	NO	NO	NO	-	NO
MW-82(58)	100%	100%	100%	100%	YES	YES	NO	NO	NO	-	NO
OW-1(28)	99.8%	--	100%	99.5%	NO	YES	NO	YES	YES	-	NO
OW-1(39)	100%	--	100%	100%	NO	YES	NO	NO	NO	-	YES
Total (9 wells)	88%										

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 88% in Treatment Zone A based upon data from the nine performance monitoring wells relative to baseline.
- Contaminant mass has been fully reduced in MW-20(35), MW-20(51), MW-82(58), and OW-1(39).
- CVOC mass reduction has been observed in all wells.

7.4 Treatment Zone B

Seven monitoring wells located in Treatment Zone B are monitored for performance monitoring: MW-14, MW-24(24.9), MW-24(55.4), OW-2(33), OW-2(53), OW-3(35), and OW-3(55). Performance monitoring well OW-3(55) was not sampled during the fifth performance

monitoring event due to the presence of ZVI slurry in the well. ZVI slurry was observed in OW-3(55) in December 2016. Thereafter the well was purged in an attempt to clear the slurry, but by January 2017, the ZVI slurry had returned and; therefore, a sample was not collected from this well. Additional well development on OW-3(55) will occur in the future.

Contaminant mass has historically not been present at MW-24(24.9), and the mass at OW-2(53) and OW-3(35) has been reduced by 100%; therefore, these wells are not included in the subsequent discussions on indicator parameters. The indicator parameter discussion is focused on MW-14, MW-24(55.4), and OW-2(33).

TOC concentrations at MW-14 and MW-24(55.4) were above 20 mg/L. VFAs were substantially present in MW-14 and MW-24(55.4), indicating effective substrate distribution.

The pH at the three wells ranged from 6.95 to 7.31, which is within the ideal range for biological-based treatment. The ORP was negative, which indicates reducing conditions. Dissolved oxygen readings were less than 1 mg/L, except at MW-24(55.4). Iron and manganese concentrations were comparable or higher than baseline conditions. The iron concentration detected in MW-25(55.4) increased by two orders of magnitude compare to the October 2015 concentrations. This increase indicates that the ISCR amendments reached the targeted areas. Nitrate and sulfate concentrations were within their target range.

A reduction in CVOC mass is observed in all the wells except MW-24(55). However, reductive dechlorination is occurring at MW-24(55) based on the decrease of TCE and increase of daughter compounds. TCE was below reporting limits except at MW-24(55.4). Cis-1,2-DCE concentrations were lower or comparable to the previous sampling event (September 2016) except at MW-24(55.4). The increase in cis-1,2-DCE at MW-24(55.4) coincides with a decrease in TCE, which is reflective of the dechlorination process. Vinyl chloride concentrations were lower or comparable to the previous sampling event except for a low detection at MW-24(55.4).

The DHC populations were adequate for complete dechlorination MW-14, MW-24(55.4), and OW-2(33), ranging from 1.27E+03 to 2.26E+05 cells/mL. The reductase genes indicate potential for biological activity.

Methane concentrations remain high in MW-14 and OW-2(33), indicating anaerobic fermentation is occurring. Ethene concentrations were high except at MW-24(55.4). High ethene concentrations are indicative that complete anaerobic dechlorination is occurring.

A summary of the pertinent results for the performance monitoring wells in Treatment Zone B is provided below:

Treatment Zone B Performance Monitoring Well	Molar Mass % Reduction Relative to Baseline				Amendment Indicator				Gases	Geochemical Environment	
	Total CVOC	TCE	cis-1,2-DCE	Vinyl Chloride	TOC > 20 mg/L	DHC > 1E+03 cells/mL	DHC > 1E+05 cells/mL	VCR > 1E+03	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW-14	98%	100%	97%	55%	YES	YES	YES	YES	YES	-	NO
MW-24(24.9)	--	--	--	--	NO	NO	NO	NO	NO	-	NO
MW-24(55.4)	6%	99%	-128%	--	YES	YES	NO	NO	NO	-	NO
OW-2(33)	92%	--	97%	87%	NO	YES	NO	YES	YES	-	YES
OW-2(53)	100%	--	100%	100%	YES	YES	NO	NO	NO	-	YES
OW-3(35)	100%	100%	100%	100%	NO	YES	NO	YES	YES	-	YES
OW-3(55)	Not Sampled										
Total (7 wells)	81%										

Note: September 2016 results for OW3(55) were used as proxy in calculating the total CVOC molar mass % reduction

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 81% in Treatment Zone B based upon data from the seven performance monitoring wells relative to baseline.
- Contaminant mass historically has not been present in MW-24(24.9) and has been fully reduced in OW-2(53) and OW-3(35).
- A significant reduction in the concentrations of degradation products has occurred at OW-2(33) relative to the September 2016 performance monitoring event.

- A significant reduction in the TCE parent compound occurred at MW-24(55.4).
- Data indicates reductive dechlorination is occurring at MW-24(55.4).

7.5 Treatment Zone C

Six monitoring wells located in Treatment Zone C were sampled for performance monitoring: MW-15, MW-25(16.4), MW-25(32.6), MW-25(45.2), OW-4(35), and OW-4(54). Contaminant mass has been reduced 100% or is not present at MW-25(32.6), MW-25(45.2), and OW-4(54) and; therefore, these wells are not included in the subsequent discussion on indicator parameters.

TOC concentrations were above 500 mg/L at the remaining three wells that were the target of the injections in the deeper interval. TOC concentrations were above 20-mg/L at MW-25(16.4) but were declining since polishing injections were not conducted on that interval. VFAs were substantially present, indicating substrate has distributed to the wells.

The pH ranged from 5.92 to 7.34, which is adequate for biological-based treatment. ORP indicates reducing conditions in the wells. Dissolved oxygen readings were less than 1 mg/L. Iron and manganese concentrations were comparable or higher than baseline conditions. Nitrate and sulfate concentrations were within their target range.

A reduction in CVOC mass is observed in all the wells, with the exception of MW-25(16.4), wherea slight increase in cis-1,2-DCE and vinyl chloride was observed at MW-25(16.4) in comparison to the September 2016 results. TCE was below reporting limits in all the wells. Significant reductions in cis-1,2-DCE and vinyl chloride concentrations were observed at MW-15, OW-4(35), and MW25(45,2) relative to the previous sample event.

DHC populations were adequate for dechlorination MW15, MW-25(16.4), and OW-4(35), ranging from 3.10E+03 to 1.78E+05 cells/mL. The reductase genes indicate potential for biological activity. Methane concentrations were very high in the wells, and ethene was substantially present except at MW-25(16.4).

High methane concentrations indicate that anaerobic fermentation is occurring. High ethene concentrations are indicative that complete anaerobic dechlorination is occurring. The

ethene concentration in MW-15 increased by over 100% when compared to the September 2016 results.

A summary of the pertinent results for the performance monitoring wells in Treatment Zone C is provided below:

Treatment Zone C Performance Monitoring Well	Molar Mass % Reduction Relative to Baseline				Amendment Indicator				Gases	Geochemical Environment	
	Total CVOC	TCE	cis-1,2-DCE	Vinyl Chloride	TOC > 20 mg/L	DHC > 1E+03 cells/mL	DHC > 1E+05 cells/mL	VCR > 1E+03	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW-15	93%	100%	97%	83%	YES	YES	YES	YES	YES	-	YES
MW-25(16.4)	99%	--	99%	98%	YES	YES	NO	YES	YES	-	YES
MW-25(32.6)	100%	100%	100%	100%	YES	YES	NO	NO	NO	-	YES
MW-25(45.2)	100%	100%	100%	100%	YES	YES	YES	YES	YES	-	YES
OW-4(35)	88%	100%	92%	88%	YES	YES	NO	NO	YES	-	NO
OW-4(54)	100%	--	100%	--	YES	NO	NO	YES	NO	-	YES
Total (6 wells)	97%										

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 97% in Treatment Zone C based upon data from the six performance monitoring wells relative to baseline.
- TCE has been reduced to below reporting limits in all wells.
- Contaminant mass has been fully reduced at MW-25(32.6), MW-25(45.2), and OW-4(54).
- Significant reductions in concentrations of degradation products were observed at MW-15, MW-25(45.2), and OW-4(35) relative to the previous sampling event.

- There was a slight increase in cis-1,2-DCE and vinyl chloride at MW-25(16.4) relative to the previous event but conditions are favorable for continued reductive dechlorination.

7.6 Treatment Zone D

Ten monitoring wells located in Treatment Zone D were sampled for performance monitoring: MW-16, MW-17, MW-26(17.5), MW-26(28.8), MW-26(58.8), ZVI-2(17.5), ZVI-2(32.5), OW-5(16), OW-5(35), and OW-5(45). The contaminant mass at MW-26(17.5), MW-26(28.8), ZVI-2(17.5), and OW-5(35) has been reduced 100%, therefore these wells are not included in the subsequent discussions on indicator parameters. The indicator parameter discussion is focused on MW-16, MW-17, MW-26(58.8), OW-5(16), and OW-5(45).

TOC levels were greater than 20 mg/L at MW-16, MW-26(58.8), and OW-5(45).

The pH ranged from 6.74 to 7.76, which is in the ideal range for biological-based treatment. ORP indicates reducing conditions in all wells. Iron and manganese concentrations were slightly lower than baseline at OW-5(16), and comparable or higher than baseline conditions in the other wells. Nitrate and sulfate concentrations were within their target range.

TCE was below reporting limits in all the wells except MW-17. The TCE concentration at MW17 was significantly lower than observed in the September 2016 sample. Cis-1,2-DCE concentrations and vinyl chloride concentrations were comparable or lower in all the wells compared to the previous sampling event (September 2016). The polishing injections have reduced the CVOC concentrations at OW-5 well nest, MW-16 and ZVI-2(32.5).

The DHC populations at MW-17 were low (1.56E+02), but were adequate for dechlorination in the other wells (MW-16, MW-26(58.8), OW-5(16), and OW-5(45)), ranging from 1.18E+05 to 3.24E+05 cells/mL. Reductase genes were not detected at MW-17, but at the other wells indicate potential for biological activity. Except at MW-17, methane concentrations were high, indicating that anaerobic fermentation is occurring. Ethene was substantially present at MW-16, MW-26(58.8), and OW-5(45). High ethene concentrations are indicative that complete anaerobic dechlorination is occurring.

A summary of the pertinent results for the performance monitoring wells in Treatment Zone D is provided below:

Treatment Zone D Performance Monitoring Well	Molar Mass % Reduction Relative to Baseline				Amendment Indicator				Gases	Geochemical Environment	
	Total CVOC	TCE	cis-1,2-DCE	Vinyl Chloride	TOC > 20 mg/L	DHC > 1E+03 cells/mL	DHC > 1E+05 cells/mL	VCR > 1E+03	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW-16	78%	100%	96%	53%	YES	YES	YES	YES	YES	-	YES
MW-17	64%	60%	75%	--	NO	NO	NO	NO	NO	-	YES
MW-26(17.5)	100%	--	100%	100%	NO	YES	NO	NO	NO	-	YES
MW-26(28.8)	100%	100%	100%	100%	YES	YES	NO	NO	NO	-	YES
MW-26(58.8)	-457%	--	-25%	-420%	YES	YES	YES	YES	YES	-	YES
ZVI-2(17.5)	100%	--	100%	100%	NO	YES	NO	NO	NO	-	YES
ZVI-2(32.5)	100%	--	100%	100%	YES	YES	NO	YES	YES	-	YES
OW-5(16)	99.7%	100%	100%	99%	NO	YES	YES	YES	NO	-	NO
OW-5(35)	100%	100%	100%	100%	YES	YES	NO	YES	NO	-	YES
OW-5(45)	99.3%	100%	99%	99%	YES	YES	YES	YES	YES	-	NO
Total (10 wells)	98%										

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 98% in Treatment Zone D based upon data from the 10 performance monitoring wells relative to baseline.
- Total CVOC mass has decreased from baseline in all the performance monitoring wells except MW-26(58.8), where the mass is very low.
- Contaminant mass has been fully reduced at MW-26(17.5), MW-26(28.8), ZVI-2(17.5), ZVI-2(32.5), and OW-5(35).

- Significant reductions in concentrations of degradation products were observed at MW-16, MW-17, MW-26(58.8), ZVI-2(32.5), OW-5(16) and OW-5(45) relative to the previous sampling event.

- TCE was detected only at MW-17, and decreased significantly from the previous event.

7.7 Quality Control Results

The VOC data was validated in general accordance with the Quality Assurance Project Plan (QAPP). The validation included an evaluation of the data quality and a review of the field quality assurance sample results. The data validation report is included in Appendix B.

The laboratory data conformed to the guidelines in the QAPP with a few exceptions. Acetone was reported in the method blank associated with a subset of the samples, and in consequence, the low concentration detection of acetone in the sample from OW-5(45) was qualified as non-detect (U). The reporting limit for 2-hexanone was qualified as estimated due to low recovery in the laboratory control sample. Carbon disulfide results were qualified as estimated for a subset of the samples due to high percent difference in the continuing calibration standard and for the sample and duplicate sample collected from MW-59 due to poor reproducibility in the field duplicate. Matrix spike and/or matrix spike duplicate recovery for a subset of the samples were outside the control limits for 2-butanone, bromoform, bromomethane, cis-1,2-dichloroethene, cis-1,3-dichloropropene, dibromochloromethane, trans-1,3-dichloropropene, and vinyl chloride, therefore the associated concentrations were J (estimated) or UJ (undetected and reporting limit is estimated) flagged. The results for the sample from MW62 were qualified as estimated, J or UJ flagged as applicable, due to low surrogate percent recovery. No data was rejected during validation. Though the data validation identified some data that needed to be qualified, the overall majority of the data is acceptable.

Three equipment blanks, one field blank, and three field replicates were submitted and analyzed for VOCs, TOC, nitrate, chloride, sulfate, alkalinity, iron, and manganese. Four trip blanks were also submitted and analyzed for VOCs. No VOCs were detected in the trip blank samples or field blank. Total organic carbon was detected in two of the equipment blanks and the field blank at concentrations ranging from 1.4 mg/L to 1.9 mg/L. Nitrate was

detected in two of the equipment blanks at 0.036 mg/L and 0.042 mg/L. Chloride was detected in two of the equipment blanks at 1.2 mg/L and 1.3 mg/L. Chloroform was detected in two of the equipment blanks at 4.5 micrograms per liter (µg/L) and 4.2 µg/L.

8.0 Conclusions

Based on the ISCR and ERD injections and subsequent performance monitoring results, Amec Foster Wheeler offers the following observations:

- The CVOC concentrations in groundwater at the Site have decreased significantly since the ISCR and ERD injections were initiated in 2015, as overall total site-wide treatment area mass has been reduced by 82% from baseline concentrations.

- A slight increase in concentrations of dechlorination by-products (1,2-cis DCE and vinyl chloride) were observed in several monitoring wells located in the source area beneath the building and immediately east of the building.

The CVOC plume appears to be stable. Pertinent observed elements demonstrating plume stability include the following:

- The overall total site-wide treatment area mass has been reduced by 82% from baseline concentrations.

- The source area mass (combined behind building and inside building) has been reduced 81% from baseline.

- The mass at the leading edge of the treatment area (MW-17, MW-26, and ZVI-2) has been reduced by 99% from baseline.

- The parent compound, TCE, was below reporting limits in all but two wells: MW-24(55.4) [at a minimal concentration of 1.4 µg/L] and MW-17 [at a concentration of 76 µg/L, significantly less than the previous sampling event).

- Based on the results presented in the 2016 Annual Groundwater Monitoring Report, the leading edge of the plume has not advanced beyond MW-34, located outside the treatment area, since sampling began in 2009.

9.0 Upcoming Activities

The performance monitoring results show significant and substantial reduction in CVOCs at and in the vicinity of the site. The sixth Performance Groundwater Monitoring Event was completed in the June 2017. The analytical results are currently going through data validation. Once that step is complete the report documenting the sixth Performance Groundwater Monitoring Event will be prepared.

TABLES

FIGURES

APPENDIX A

GROUNDWATER SAMPLE COLLECTION FIELD LOGS

APPENDIX B

LABORATORY REPORTS AND DATA VALIDATION REPORTS

TABLES

Table 1

Volume of ABC-Ole Injected into the DPT Boreholes in the Source Area at Pond TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Injection Elevation (feet)	ABC-Ole (gals)	Comments
SP-1	11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-2	11/12/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-3	11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-4	11/10/16 & 11/11/16	776-780	---	Observed daylighting
		772-776	---	Observed daylighting
		768-772	---	Observed daylighting
		764-768	---	Observed daylighting
		760-764	60.5	
		756-760	60.5	
SP-5	11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-6	11/14/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-7	11/13/16 & 11/14/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-8	11/12/16 & 11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	

Table 1

Volume of ABC-Ole Injected into the DPT Boreholes in the Source Area at Pond TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Injection Elevation (feet)	ABC-Ole (gals)	Comments
SP-9	11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-10	11/10/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-11	11/9/16 & 11/10/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-12	11/10/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-13	11/10/16 & 11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-14	11/10/16 & 11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-15	11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-16	11/10/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	

Table 1

Volume of ABC-Ole Injected into the DPT Boreholes in the Source Area at Pond TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Injection Elevation (feet)	ABC-Ole (gals)	Comments
SP-17	11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-18	11/10/16 & 11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-19	11/11/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-20	11/12/16 & 11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-21	11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-22	11/12/16 & 11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	
SP-23	11/12/16 & 11/13/16	776-780	60.5	
		772-776	60.5	
		768-772	60.5	
		764-768	60.5	
		760-764	60.5	
		756-760	60.5	

Prepared By: LH/SP

Checked By: PJS

Table 2
Volume of ABC-High Fatty Acid Injected in the Source Area Outside Building
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Injection Well Location	Date	Interval (feet BGS)	Elevation (feet)	High Fatty Acid ABC / Water (gals)	Comments
A-1	11/16/16	24.5 - 29.5	775.93 - 770.93	413.6	
A-2	11/16/16	22.0 - 27.0	777.74 - 772.74	413.6	
A-3	11/16/16	25.0 - 30.0	774.09 - 769.09	413.6	19 psi
INJ-2	11/16/16	18.9 - 23.6	779.78 - 775.08	413.6	
A-4	11/16/16	15.0 - 20.0	783.62 - 778.62	413.6	
B-5	11/16/16	25.5 - 30.5	783.11 - 778.11	413.6	
B-6	11/16/16	30.5 - 35.5	777.38 - 772.38	413.6	
B-7	11/16/16	29.5 - 34.5	778.63 - 773.63	413.6	18 psi
B-8	11/16/16	27.5 - 32.5	780.83 - 775.83	413.6	
B-9	11/16/16	25.0 - 30.0	783.17 - 778.17	413.6	

Prepared By: LH/SP
Checked By: PJS

Table 3
Volume of Standard ABC Injected in the Source Area Beneath Building
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Injection Well Location	Date	Interval (feet BGS)	Elevation (feet)	Standard ABC / Water (gals)	Comments
C-1	11/29 - 11/30/16	25 - 30	789.74 - 784.74	437	
C-2	11/29 - 11/30/16	27 - 32	787.73 - 782.73	437	
C-3	11/29 - 11/30/16	27 - 32	787.74 - 782.74	437	
C-4	11/30/16	27 - 32	787.74 - 782.74	500	
C-5	11/30/16	27 - 32	787.71 - 782.71	437	
C-6	11/30/16	27 - 30	787.68 - 782.68	500	
C-8	11/29 - 11/30/16	27 - 30	787.66 - 782.66	500	
D-9	11/29 - 11/30/16	27.25 - 31.25	787.48 - 782.48	437	
D-10	11/29 - 11/30/16	27.1 - 31.6	782.66 - 778.16	437	
D-11	11/29 - 11/30/16	27 - 32	787.74 - 782.74	437	
D-12	11/29 - 11/30/16	27 - 32	787.76 - 782.76	437	
D-13	11/30/16	27 - 32	787.73 - 782.73	437	
D-14	11/30/16	27 - 32	787.74 - 782.74	437	
D-15	11/29 - 11/30/16	27 - 32	787.72 - 782.72	500	
E-17	11/29 - 11/30/16	27 - 32	787.75 - 782.75	437	
E-18	11/29 - 11/30/16	27 - 32	787.72 - 782.72	437	
E-19	11/29 - 11/30/16	27 - 32	787.77 - 782.77	437	
E-20	11/29 - 11/30/16	27 - 32	787.75 - 782.75	500	
E-21	11/30/16	27 - 32	787.74 - 782.74	500	

Prepared By: LH/SP
Checked By: PJS

Table 4
Volume of Standard ABC Injected in Treatment Zone A
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Injection Well Location	Date	Interval (feet BGS)	Elevation (feet)	Standard ABC / Water (gals)	Comments
I-1	10/31/16	29 - 34	782.97 - 777.97	753	
I-2	10/31/16	30.5 - 35.5	782.02 - 777.02	753	
I-3	10/31/16	27.0 - 37.0	785.53 - 775.53	753	
I-4	10/31/16	29.0 - 39.0	783.69 - 773.69	753	
I-5	10/31/16	29.0 - 39.0	783.52 - 773.52	753	
I-6	10/31/16	29.0 - 39.0	782.71 - 772.71	753	
J-7	10/27/16	26.0 - 31.0	783.38 - 778.38	786	
J-8	10/27/16	26.5 - 31.5	782.97 - 777.97	786	
J-9	10/27/16	26.0 - 31.0	783.05 - 778.05	786	
J-10	10/27/16	24.0 - 29.0	784.48 - 779.48	786	
J-11	10/27/16	25.0 - 30.0	783.07 - 778.07	786	
J-12	10/27/16	25.0 - 30.0	782.72 - 777.72	786	
K-13	10/27/16	26.0 - 31.0	782.82 - 777.82	786	
K-14	10/27/16	25.2 - 30.2	783.36 - 778.36	786	
K-15	10/27/16	25.0 - 30.0	782.74 - 777.74	786	
K-16	10/27/16	23.5 - 28.5	782.94 - 777.94	786	
K-17	10/27/16	22.0 - 27.0	783.36 - 778.36	786	
K-18	10/27/16	22.0 - 27.0	783.41 - 778.41	786	
L-19	10/27/16	26.0 - 31.0	782.94 - 777.94	786	
L-20	10/26/16	25.0 - 30.0	783.33 - 778.33	786	
L-21	10/26/16	25.0 - 30.0	782.80 - 777.80	786	
L-22	10/26/16	24.0 - 29.0	782.73 - 777.73	786	
L-23	10/26/16	22.0 - 27.0	783.08 -778.08	786	
L-24	10/26/16	21.5 - 26.5	783.14 - 778.14	786	
M-25	10/26/16	24.0 - 29.0	783.60 - 778.60	786	
M-26	10/26/16	24.0 - 29.0	783.08 - 778.08	786	
M-27	10/26/16	23.0 - 28.0	783.21 - 778.21	786	
M-28	10/26/16	22.0 - 27.0	783.35 - 778.35	786	
M-29	10/26/16	22.0 - 27.0	782.95 - 777.95	786	

Prepared By: LH/SP
Checked By: PJS

Table 5
Volume of Standard ABC Injected in Treatment Zone B
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Injection Well Location	Date	Interval (feet BGS)	Elevation (feet)	Standard ABC / Water (gals)	Comments
O-1	11/1/16	26.5 - 36.5	780.10 - 770.10	1,105	Shallow
O-2	11/1/16	25.5 - 35.5	780.27 - 770.27	1,105	Shallow
O-3	11/1/16	26.0 - 36.0	779.91 - 769.91	1,105	Shallow
O-4	11/1/16	25.5 - 35.5	780.11 - 770.11	1,105	Shallow
P-5	11/2/16	24.0 - 34.0	777.86 - 767.86	1,105	Shallow
P-6	11/2/16	25.5 - 35.5	767.47 - 757.47	1,105	Shallow
P-7	11/2/16	25.0 - 35.0	780.02 - 770.02	1,105	Shallow
P-8	11/2/16	25.0 - 35.0	779.81 - 769.81	1,105	Shallow
P-9	11/2/16	24.5 - 34.5	779.86 - 769.86	1,105	Shallow
R-15	11/2/16 thru 11/4/16	46.0 - 51.0	756.24 - 751.24	1,212	Deep
R-16	11/2/16 thru 11/4/16	50.0 - 55.0	752.57 - 747.57	1,212	Deep
R-17	11/2/16 thru 11/4/16	49.5 - 54.5	752.95 - 747.95	1,212	Deep

Prepared By: LH/SP
Checked By: PJS

Table 6
Volume of Standard ABC and ZVI Injected into the DPT Boreholes in Treatment Zone B
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Interval (feet BGS)	Elevation (feet)	Standard ABC / Water Slurry (gals)	ZVI (lbs)	Comments
BP-01	12/3/16 - 12/4/16	28-31	776-779	370	NA	ABC Ammendment with water
		31-34	773-776	370	NA	ABC Ammendment with water
		34-37	770-773	370	NA	ABC Ammendment with water
BP-02	12/3/16 - 12/4/16	28-31	776-779	370	NA	ABC Ammendment with water
		31-34	773-776	370	NA	ABC Ammendment with water
		34-37	770-773	370	NA	ABC Ammendment with water
BP-03	12/3/16 - 12/4/16	28-31	776-779	370	NA	ABC Ammendment with water
		31-34	773-776	370	NA	ABC Ammendment with water
		34-37	770-773	370	NA	ABC Ammendment with water
BP-04	12/3/16	42-45	757-760	80.4	75	
		45-48	754-757	80.4	75	
		48-51	751-754	80.4	75	
		51-54	748-751	80.4	75	
BP-05	12/3/16	42-45	757-760	80.4	75	
		45-48	754-757	80.4	75	
		48-51	751-754	80.4	75	
		51-54	748-751	80.4	75	
BP-06	12/3/16 - 12/4/16	42-45	757-760	80.4	75	
		45-48	754-757	80.4	75	
		48-51	751-754	80.4	75	
		51-54	748-751	80.4	75	
BP-07	12/4/16	42-45	757-760	80.4	75	
		45-48	754-757	80.4	75	
		48-51	751-754	80.4	75	
		51-54	748-751	80.4	75	
BP-08	12/4/16	42-45	757-760	80.4	75	
		45-48	754-757	80.4	75	
		48-51	751-754	80.4	75	
		51-54	748-751	---	---	High Pressure
BP-09	11/30/16	48-51	749-752	---	---	Observed daylighting
		51-54	746-749	63.7	60	
		54-57	743-746	63.7	60	
		57-60	740-743	---	---	High Pressure
BP-10	11/30/16	48-51	749-752	63.7	60	
		51-54	746-749	63.7	60	
		54-57	743-746	63.7	60	
		57-60	740-743	63.7	60	
BP-11	12/1/16 - 12/2/16	48-51	749-752	63.7	60	
		51-54	746-749	63.7	60	
		54-57	743-746	63.7	60	
		57-60	740-743	63.7	60	
BP-12	12/1/16	48-51	749-752	---	---	Not completed
		51-54	746-749	---	---	due to proximity
		54-57	743-746	---	---	to OW-3.
		57-60	740-743	---	---	
BP-13	12/1/16	48-51	749-752	---	---	Infiltration to OW-3
		51-54	746-749	63.7	60	
		54-57	743-746	---	---	High Pressure
		57-60	740-743	63.7	60	

Prepared By: LH/SP
Checked By: PJS

Table 7
Volume of Standard ABC Injected in Treatment Zone C
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Injection Well Location	Date	Interval (feet BGS)	Elevation (feet)	Standard ABC / Water (gals)	Comments
S-1	11/17/16	22.5 - 32.5	780.0 - 770.0	703	ABC-High Fatty Acid
S-4	11/2/16 thru 11/4/16	37.5 - 47.5	768.0 - 758.0	1,212	Deep
S-5	11/2/16 thru 11/4/16	38.0 - 48.0	768.0 - 758.0	1,212	Deep
T-7	12/1/2016	42 - 52	757 - 747	1,085	
T-8	12/1/2016	35.5 - 45.5	760 - 750	1,085	
T-9	12/1/2016	40 - 50	754 - 744	1,085	
T-10	12/1/2016	42.5 - 52.5	750 - 740	1,085	

Prepared By: LH/SP
Checked By: PJS

Table 8
Volume of Standard ABC and High Fatty Acid ABC Injected into the DPT Boreholes in Treatment Zone C
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Interval (feet BGS)	Elevation (feet)	High Fatty Acid ABC / Water (gals)	Standard ABC / Water (gals)	Comments
CP-01	11/16/16	27 - 30	766 - 769	228.3	---	
		30 - 33	763 - 766	228.3	---	
		33 - 36	760 - 763	228.3	---	
CP-02	11/17/16	27 - 30	766 - 769	228.3	---	
		30 - 33	763 - 766	228.3	---	
		33 - 36	760 - 763	228.3	---	
CP-03	12/1/16	41 - 44	748 - 751	---	271	
		44 - 47	745 - 748	---	271	
		47 - 50	742 - 745	---	271	
		50 - 53	739 - 742	---	223	
CP-04	12/1/16	41 - 44	748 - 751	---	271	
		44 - 47	745 - 748	---	271	
		47 - 50	742 - 745	---	271	
		50 - 53	739 - 742	---	69	High pressure
CP-05	12/1/16 - 12/2/16	41 - 44	748 - 751	---	271	
		44 - 47	745 - 748	---	271	
		47 - 50	742 - 745	---	271	
		50 - 53	739 - 742	---	69	High pressure

Prepared By: LH/SP
Checked By: PJS

Table 9
Volume of High Fatty Acid ABC Injected in Treatment Zone D
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Injection Well Location	Date	Interval (feet BGS)	Elevation (feet)	High Fatty Acid ABC / Water (gals)	Comments
U-1	11/17/16 and 11/30/16	27 - 32	765 - 770	753	
U-2	11/17/16 and 11/30/16	44 - 49	745 - 750	753	
U-3	11/17/16 and 11/30/16	42 - 47	745 - 750	753	
U-4	11/17/16 and 11/30/16	40 - 45	747 - 752	753	
U-5	11/17/16 and 11/30/16	41 - 46	745 - 750	753	
V-6	11/17/16	13 - 18	781.42 - 776.42	320	
		24 - 29	770.42 - 765.42	703	
		42 - 47	752.42 - 747.42	703	
V-7	11/17/16	11 - 16	780.77 - 775.77	320	
		26.5 - 31.5	765.27 - 760.27	703	
		41.5 - 46.5	750.27 - 745.27	703	
V-8	11/17/16	9 - 14	782.21 - 777.21	320	
		26 - 31	765.21 - 760.21	703	
		41 - 46	750.21 - 745.21	703	
V-9	11/17/16	10 - 15	780.83 - 775.83	320	
		26 - 31	764.83 - 759.83	703	
		41 - 46	749.83 - 744.83	703	
V-10	11/17/16	8 -10	782.05 - 777.05	320.5	
		25 - 30	765.05 - 760.05	703	
		40 - 45	750.05 - 745.05	0	High pressure, did not accept biostimulant

Prepared By: LH/SP
Checked By: PJS

Table 10
Volume of High Fatty Acid ABC Injected into the DPT Boreholes in Treatment Zone D
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Interval (feet BGS)	Elevation (feet)	High Fatty Acid ABC / Water (gals)	Comments
DP-01	11/15/16	38-41	751-754	284	
		41-44	748-751	284	
		44-47	745-748	284	
DP-02	11/15/16	38-41	751-754	284	
		41-44	748-751	284	
		44-47	745-748	284	
DP-03	11/15/16	38-41	751-754	284	
		41-44	748-751	284	
		44-47	745-748	284	
DP-04	11/15/16	38-41	751-754	284	
		41-44	748-751	284	
		44-47	745-748	284	
DP-05	11/16/16	10-14	778-782	---	High pressure
		23-26	766-769	234	
		26-29	763-766	234	
		29-32	760-763	234	
		38-41	751-754	234	
		41-44	748-751	234	
		44-47	745-748	234	
DP-06	11/16/16	10-14	778-782	---	High pressure
		23-26	766-769	---	High pressure
		26-29	763-766	---	High pressure
		29-32	760-763	---	High pressure
		38-41	751-754	---	High pressure
		41-44	748-751	---	High pressure
		44-47	745-748	---	High pressure
DP-07	11/17/16	10-14	778-782	320	
		23-26	766-769	234	
		26-29	763-766	234	
		29-32	760-763	234	
		38-41	751-754	234	
		41-44	748-751	234	
		44-47	745-748	234	
DP-08	11/17/16	10-14	778-782	320	
		23-26	766-769	234	
		26-29	763-766	234	
		29-32	760-763	234	
		38-41	751-754	234	
		41-44	748-751	234	
		44-47	745-748	234	
DP-09	11/17/16	10-14	778-782	320	
		23-26	766-769	234	
		26-29	763-766	234	
		29-32	760-763	234	
		38-41	751-754	234	
		41-44	748-751	234	
		44-47	745-748	234	

Table 10
Volume of High Fatty Acid ABC Injected into the DPT Boreholes in Treatment Zone D
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Interval (feet BGS)	Elevation (feet)	High Fatty Acid ABC / Water (gals)	Comments
DP-10	11/17/16	10-14	778-782	468	
		23-26	766-769	468	
		26-29	763-766	468	
		29-32	760-763	468	
		38-41	751-754	468	
		41-44	748-751	468	
		44-47	745-748	468	
DP-11	11/17/16	10-14	778-782	468	
		23-26	766-769	468	
		26-29	763-766	468	
		29-32	760-763	468	
		38-41	751-754	468	
		41-44	748-751	468	
		44-47	745-748	468	
DP-12	11/17/16	10-14	778-782	468	
		23-26	766-769	468	
		26-29	763-766	468	
		29-32	760-763	468	
		38-41	751-754	468	
		41-44	748-751	468	
		44-47	745-748	468	
DP-13	11/17/16	10-14	778-782	468	
		23-26	766-769	468	
		26-29	763-766	468	
		29-32	760-763	468	
		38-41	751-754	468	
		41-44	748-751	468	
		44-47	745-748	468	
DP-14	11/17/16	28-31	761-764	257	
		31-34	758-761	257	
		34-37	755-758	257	
DP-15	11/17/16	28-31	761-764	257	
		31-34	758-761	257	
		34-37	755-758	257	
DP-16	11/17/16	28-31	761-764	257	
		31-34	758-761	257	
		34-37	755-758	257	
DP-17	11/17/16	28-31	761-764	257	
		31-34	758-761	257	
		34-37	755-758	257	
DP-18	11/17/16	28-31	761-764	90	High pressure
		31-34	758-761	257	
		34-37	755-758	257	
DP-19	11/17/16	28-31	761-764	257	
		31-34	758-761	257	
		34-37	755-758	257	

Table 10

Volume of High Fatty Acid ABC Injected into the DPT Boreholes in Treatment Zone D
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Location	Date	Interval (feet BGS)	Elevation (feet)	High Fatty Acid ABC / Water (gals)	Comments
DP-20	11/17/16	28-31	761-764	---	Note: Flowing sands,
		31-34	758-761	---	moved location to south, off-set
		34-37	755-758	---	also had flowing sands.
DP-21	12/4/16 - 12/5/16	37-40	752-755	165	
		40-43	749-752	165	
		43-46	746-749	165	
		46-49	743-746	165	
DP-22	12/4/16 - 12/5/16	37-40	752-755	165	
		40-43	749-752	165	
		43-46	746-749	165	
		46-49	743-746	165	
DP-23	12/4/16 - 12/5/16	37-40	752-755	165	
		40-43	749-752	165	
		43-46	746-749	165	
		46-49	743-746	165	
DP-24	12/4/16 - 12/5/16	37-40	752-755	165	
		40-43	749-752	165	
		43-46	746-749	165	
		46-49	743-746	165	
DP-25	12/6/16	22-25	772.5-769.5	98	
		25-28	769.5-766.5	98	
		28-31	766.5-763.5	98	
		49-52	745.5-742.5	72	
		52-55	742.5-739.5	72	
		55-58	739.5-736.5	72	
DP-26	12/6/16	22-25	771-768	98	
		25-28	768-765	98	
		28-31	765-762	98	
		49-52	744-741	72	
		52-55	741-738	72	
		55-58	738-735	72	
DP-27	12/6/16	22-25	769.5-766.5	98	
		25-28	766.5-763.5	98	
		28-31	793.5-790.5	98	
		49-52	742.5-739.5	72	
		52-55	739.5-736.5	72	
		55-58	736.5-733.5	72	

Prepared By: LH/SP

Checked By: PJS

Table 11

Biostimulation Post Injection Performance Monitoring Parameters and Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Frequency	**Third Month and Sixth Month after Injections**						**Ninth and Twelfth Month after Injections**						
Treatment Areas	Source Zone Behind Plant	Source Zone Inside Plant	Zone A	Zone B	Zone C	Zone D	**Treatment Areas**	Source Zone Behind Plant	Source Zone Inside Plant	Zone A	Zone B	Zone C	Zone D
Objectives	Evaluate changes in aquifer chemistry and VOC concentrations in groundwater						**Objectives**	Evaluate Changes in VOC concentrations, Organic substrate, and ERD end products in groundwater					
Fixed Laboratory Analyses							**Fixed Laboratory Analyses**						
VOCs[1]; TOC[2]; Dissolved Gases[3]	4 Wells	7 Wells	9 Wells	7 Wells	6 Wells	10 Wells	VOCs; TOC; Dissolved Gases	4 Wells	7 Wells	9 Wells	7 Wells	6 Wells	10 Wells
Metals[4]; Alkalinity[5]	MW-81(27); MW-59(29); PM-2; PM-3	MW-67; MW-68; MW-71; MW-72; MW-76; MW-77; MW-78	MW-6C; MW-12; MW-13; MW-62: MW-20(35); MW-20(51); MW-82; OW-1(28); OW-1(39)	MW-14; MW-24(24.9); MW-24(55.4); OW-2(33); OW-2(53); OW-3(35); OW-3(55)	MW-15; MW-25(16.4); MW-25(32.6); MW-25(45.2); OW-4(35); OW-4(54)	MW-16; MW-17; MW-26(17.5); MW-26(28.8); MW-26(58.2); ZVI-2(17.5); ZVI-2(32.5); OW-5(16); OW-5(35); OW-5(44)	MW-81(27); MW-59(29); PM-2; PM-3	MW-67; MW-68; MW-71; MW-72; MW-76; MW-77; MW-78	MW-6C; MW-12; MW-13; MW-62: MW-20(35); MW-20(51); MW-82; OW-1(28); OW-1(39)	MW-14; MW-24(24.9); MW-24(55.4); OW-2(s); OW-2(d); OW-3(s); OW-3(d)	MW-15; MW-25(16.4); MW-25(32.6); MW-25(45.2); OW-4(35); OW-4(54)	MW-16; MW-17; MW-26(17.5); MW-26(28.8); MW-26(58.2); ZVI-2(17.5); ZVI-2(32.5); OW-5(16); OW-5(35); OW-5(44)
Anions[6]													
DHC[7]													
VFAs[8]													
Field Readings							**Field Readings**						
Water Level[9]	x	x	x	x	x	x	Water Level	x	x	x	x	x	x
ORP[10]	x	x	x	x	x	x	ORP	x	x	x	x	x	x
pH	x	x	x	x	x	x	pH	x	x	x	x	x	x
Cond.	x	x	x	x	x	x	Cond.	x	x	x	x	x	x
Temperature	x	x	x	x	x	x	Temperature	x	x	x	x	x	x
DO[11]	x	x	x	x	x	x	DO	x	x	x	x	x	x
Turbidity	x	x	x	x	x	x	Turbidity	x	x	x	x	x	x

[1] - VOCs: volatile organic compounds (Method 8260)
[2] - TOC: total organic carbon (Method 9060)
[3] - Dissolved gases include methane, ethane, and ethene (Method AM20GAX)
[4] - Iron and Manganese (Method 6020A)
[5] - Alkalinity (Method A2320B)
[6] - Anions include sulfate, nitrate, and chloride (Method SW9056)
[7] - DHCs: dehalococcoides [Quantitative Polymerase Chain Reaction (qPCR)]
[8] - VFAs: volatile fatty acids (Method AM23G)
[9] - Depth to water measurements using a water level indicator
[10] - ORP: Oxidation Reduction Potential
[11] - DO: Dissolved Oxygen

Prepared by: RJC
Checked by: PJS

Table 12
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Source - Behind	ATR-MW81(27)-G110512	11/5/2012	6.82	0.486	15.32	5.3	0.09	-65.6	160	160	9.7	51	0.02 U	2.9	5.1	0.33
	ATR-MW81(27)	12/27/2012	6.57	0.495	14.35	0.0	0.34	152.4	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW81(27)-G010713	1/7/2013	6.65	0.488	14.51	8.3	0.22	-55.8	230	230	190	55	0.02 U	5.7	5.2	0.53
	ATR-MW81(27)-G020513	2/5/2013	7.08	0.448	14.13	8.7	0.34	-153.2	360	360	26	56	0.02 U	5.7	3.2	0.32
	ATR-MW81(27)-G030613	3/6/2013	6.72	0.416	13.26	1.2	0.14	-75.1	170	170	12	60	0.02 U	5.1	3.2	0.36
	ATR-MW81(27)-G050313	5/3/2013	6.78	0.419	13.64	4.8	NM	-81.1	180	180	11	61	0.02 U	3.6	3.4	0.2
	ATR-MW81(27)-G082715	8/27/2015	5.68	0.804	15.26	4.9	0.24	-25.1	210	210	370	65	0.027	1.1	14	0.78
	ATR-MW81(27)-G022316	2/23/2016	5.99	1.302	13.35	5.1	1.76	-37.3	190	190	280	110	0.2	1 U	63	1.1
	ATR-MW81(27)-G061616	6/16/2016	5.59	0.961	14.86	9.0	0.57	-55.1	NA	NA	220	NA	NA	NA	NA	NA
	ATR-MW81(27)-G092916	9/29/2016	5.86	0.776	18.03	8.4	1.73	-64.8	NA	NA	140	NA	NA	NA	NA	NA
	ATR-MW81(27)-G121316	12/13/2016	6.28	0.716	12.14	1.1	0.14	-73.2	110 X	110 X	120	82	0.065	2.0 U	47	0.41
	ATR-MW59(29)-G092712	9/27/2012	6.86	0.417	14.92	0.9	0.35	-81.6	140	140	10	64	0.02 U	3.8	2.8	0.21
	ATR-MW59(29)-G122812	12/28/2012	5.56	1.178	14.15	5.0	0.25	-59.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW59(29)-G010713	1/7/2013	5.28	1.864	14.31	6.1	0.41	55.7	570	570	1,300	78	0.057	2.7	27	1.4
	ATR-MW59(29)-G020413	2/4/2013	6.81	1.012	13.84	4.5	0.55	-132.3	360	360	430	120	0.02 U	1 U	13	0.66
	ATR-MW59(29)-G030613	3/6/2013	6.12	0.802	13.64	14.4	0.13	-75.8	270	270	200	110	0.02 U	1 U	8.5	0.52
	ATR-MW59(29)-G050313	5/3/2013	6.61	0.476	14.09	9.0	0.17	-105.4	180	180	17	77	0.02 U	2.3	1.6	0.54
	ATR-MW59(29)-G082715	8/27/2015	6.61	0.477	14.77	3.1	0.32	-73.6	230	230	89	48	0.022	1.0 U	3.6	0.32
	ATR-MW59(29)-G022316	2/23/2016	6.37	1.744	13.42	13.7	2.06	-44.7	360	360	6.2	160	0.13	1.0 U	23	1.1
	ATR-MW59(29)-G061716	6/17/2016	5.83	1.247	17.39	29.6	0.59	-69.0	NA	NA	150	NA	NA	NA	NA	NA
	ATR-MW59(29)-G061716R	6/17/2016	NA	NA	NA	NA	NM	NA	NA	NA	140	NA	NA	NA	NA	NA
	ATR-MW59(29)-G093016	9/30/2016	6.42	1.350	16.64	1.4	2.23	-70.1	NA	NA	140	NA	NA	NA	NA	NA
	ATR-MW59(29)-G093016R	9/30/2016	NA	NA	NA	NA	NM	NA	NA	NA	120	NA	NA	NA	NA	NA
	ATR-MW59(29)-G121316	12/13/2016	6.44	0.838	10.05	1.8	0.83	-59.2	400 X	400 X	150	130	0.030	2 U	13	0.97
	ATR-MW59(29)-G121316R	12/13/2016	NA	NA	NA	NA	NA	NA	390 X	390 X	150	130	0.041	14	13	0.96
	ATR-PM2-G110512	11/5/2012	6.98	0.617	15.69	5.4	0.61	-49.8	230	230	9.7	50	0.02 U	1.7	5.4	0.58
	ATR-PM2	12/27/2012	6.56	0.519	13.20	50.8	0.40	34.5	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM2-G010713	1/7/2013	6.64	0.571	13.70	4.3	0.41	0.8	400	400	9.8	31	0.02 U	1.4	5.1	0.64
	ATR-PM2-G020413	2/4/2013	6.86	0.518	14.02	7.0	0.27	-133.9	250	260	9.9	33	0.02 U	1.3	5.0	0.71
	ATR-PM2-G030613	3/6/2013	6.78	0.530	13.15	4.8	0.12	-118.9	300	300	10	28	0.02 U	2.7	6.0	0.94
	ATR-PM2-G050313	5/3/2013	6.80	0.512	12.87	8.6	0.11	-125.5	300	300	16	26	0.02 U	7.3	5.5	0.84
	ATR-PM2-G082715	8/27/2015	6.48	0.706	15.01	2.9	0.51	-86.6	330	330	41	26	0.11	1.0 U	5.1	0.95
	ATR-PM2-G022316	2/23/2016	6.66	0.848	10.02	59.1	0.39	-56.4	390	390	73	56	0.082	1 U	11	1.5
	ATR-PM2-G061616	6/16/2016	6.01	0.843	16.11	30.9	0.56	-54.2	NA	NA	44	NA	NA	NA	NA	NA
	ATR-PM2-G092916	9/29/2016	6.53	0.677	18.74	20.9	0.35	-104.2	NA	NA	12	NA	NA	NA	NA	NA
	ATR-PM2-G121316	12/13/2016	6.80	0.658	6.75	79.1	1.89	-56.5	410 X	410 X	14	28	0.036	1.1	9.6	1.4

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Source - Behind	ATR-PM3-G110512	11/5/2012	6.51	0.645	13.98	8.6	0.06	-31.8	260	260	14	47	0.056	3.9	3.2	0.63
	ATR-PM3	12/28/2012	6.55	0.461	12.12	1.8	0.29	-37.6	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM3-G010713	1/7/2013	6.47	0.573	12.07	4.6	0.41	35.7	240	240	15	50	0.02 U	4.7	1.9	0.61
	ATR-PM3-G020413	2/4/2013	6.59	0.494	13.70	9.8	0.22	-92.9	230	230	14	48	0.02 U	3.9	1.6	0.56
	ATR-PM3-G030513	3/5/2013	6.45	0.468	12.99	5.4	0.11	-83.7	NA	NA	14	NA	NA	NA	NA	NA
	ATR-PM3-G050213	5/2/2013	6.61	0.499	14.60	6.0	0.21	-62.1	240	240	15	49	0.02 U	3.5	3.7	0.53
	ATR-PM3-G082715	8/27/2015	5.82	2.011	17.48	517.6	0.81	-79.0	310	310	38,000	53	2.7	13	6.8	0.67
	ATR-PM3-G022316	2/23/2016	5.53	1.149	12.29	1,828.5	0.21	42.6	180	180	2,400	64	1.3	1.0 U	32	1.5
	ATR-PM3-G061716	6/17/2016	4.56	0.878	15.22	571.1	0.56	-49.6	NA	NA	760	NA	NA	NA	NA	NA
	ATR-PM3-G092916	9/29/2016	5.68	0.948	16.45	391.6	0.25	40.0	NA	NA	800	NA	NA	NA	NA	NA
	ATR-PM3-G121316	12/13/2016	4.78	2.067	7.18	1,140	0.67	5.9	210 X	210 X	12,000	39	6.3	23	66	2.6
Source - Inside	ATR-MW67(30)-G092612	9/26/2012	7.04	0.784	16.95	1,341.0	3.04	164.7	370	380	8.2	16	2.2	20	170	2.7
	ATR-MW67(30)-G050613	5/6/2013	7.03	0.633	NM	1,241.6	4.01	78.5	NA	NA	7.8	NA	NA	NA	NA	NA
	ATR-MW67-G031516	3/15/2016	7.00	1.002	17.02	1040.4	-58.09*	14.6	370	370	8.2	67	2.6	24	4.6	0.97
	ATR-MW67-G062016	6/20/2016	6.36	1.439	17.77	2192	3.69	-81.3	NA	NA	50	NA	NA	NA	NA	NA
	ATR-MW67-G092916	9/29/2016	6.64	0.925	17.12	983.5	4.65	-89.6	NA	NA	68	NA	NA	NA	NA	NA
	ATR-MW67-G121216	12/12/2016	6.81	0.899	16.30	1211	6.02	-58.7	420 X	420 X	100	58	0.036	3.3	64	2.2
	ATR-MW68-G031516	3/15/2016	6.12	1.308	16.98	47.0	-82.06*	-39.0	490	490	1,100	34	0.27	12	9.1	1.1
	ATR-MW68-G061716	6/17/2016	5.08	0.903	17.68	565.4	4.10	-36.4	NA	NA	350	NA	NA	NA	NA	NA
	ATR-MW68-G092916	9/29/2016	6.73	1.160	16.97	390.2	3.56	-55.6	NA	NA	160	NA	NA	NA	NA	NA
	ATR-MW68-G121316	12/13/2016	6.44	1.071	16.05	847.1	4.14	-33.5	510 X	510 X	160	44	0.065	5.6	34	1.6
	ATR-MW71-G031516	3/15/2016	6.34	1.091	16.74	187.7	-85.10*	-59.5	350	350	95	93	0.055	5.4	16	1.4
	ATR-MW71-G062016	6/20/2016	5.87	3.470	19.39	294.8	3.95	-30.0	NA	NA	590	NA	NA	NA	NA	NA
	ATR-MW71-G092916	9/29/2016	6.12	1.964	16.37	279.1	5.60	-13.7	NA	NA	660	NA	NA	NA	NA	NA
	ATR-MW71-G121216	12/12/2016	5.68	2.054	15.89	347.7	5.38	-19.3	850 X	850 X	1,300	100	0.02 U	15	110	5.9
	ATR-MW72(32)-G030613	3/6/2013	6.98	0.600	16.20	753.8	2.83	-56.1	280	280	NA	58	0.036	6.5	NA	NA
	ATR-MW72(32)-G050613	5/6/2013	6.99	0.570	16.95	721.0	3.04	-93.9	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW72-G031516	3/15/2016	5.96	1.629	16.86	93.6	-86.04*	-29.0	490	490	410	120	0.079	1.6	23	2.0
	ATR-MW72-G062016	6/20/2016	5.61	2.838	17.54	273.0	3.06	-62.3	NA	NA	630	NA	NA	NA	NA	NA
	ATR-MW72-G092916	9/29/2016	6.70	1.535	17.32	133.0	6.25	-78.8	NA	NA	380	NA	NA	NA	NA	NA
	ATR-MW72-G121316	12/13/2016	6.30	1.296	16.16	1321.2	4.82	-52.2	640 X	640 X	320	93	0.055	3.5	63	3.1
	ATR-MW76-G031516	3/15/2016	6.31	0.960	17.20	525.6	NM	-92.0	380	380	110	52	0.19	6.1	8.0	0.44
	ATR-MW76(30)-G062016	6/20/2016	5.80	1.912	17.48	11.7	0.54	-55.2	NA	NA	140	NA	NA	NA	NA	NA
	ATR-MW76-G092916	9/29/2016	6.15	0.972	19.00	135.1	2.95	-57.9	NA	NA	170	NA	NA	NA	NA	NA
	ATR-MW76-G121416	12/14/2016	5.81	1.148	16.93	126.6	0.65	-362.2	370 X	370 X	670	81	0.30	2 U	24	0.73
	ATR-MW77-G031516	3/15/2016	7.42	0.339	15.66	74.3	NM	-83.8	150	150	2.5	9.9	0.02 U	2.1	0.48	0.16
	ATR-MW77-G062016	6/20/2016	7.01	0.598	16.06	3.3	0.57	-79.0	NA	NA	6.0	NA	NA	NA	NA	NA
	ATR-MW77-G092916	9/29/2016	7.47	0.295	19.61	4.8	4.29	-76.6	NA	NA	3.5	NA	NA	NA	NA	NA
	ATR-MW77-G121416	12/14/2016	7.21	0.380	15.05	1.2	2.23	-84.2	160 X	160 X	37	12	0.02 U	1.9	1.6	0.27
	ATR-MW78-G031516	3/15/2016	6.60	0.840	16.83	165.5	345.58*	-73.5	350	350	150	10	0.074	1.2	1.3	1.0
	ATR-MW78-G062016	6/20/2016	5.89	1.633	23.21	318.0	0.66	-23.0	NA	NA	340	NA	NA	NA	NA	NA
	ATR-MW78-G092916	9/29/2016	6.31	1.067	18.80	9.2	2.70	-36.5	NA	NA	240	NA	NA	NA	NA	NA
	ATR-MW78-G121416	12/14/2016	6.38	0.837	15.35	5.2	0.60	-23.2	520 X	520 X	180	43	0.044	5 U	6.9	1.7

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone A	ATR-MW6C-G092612	9/26/2012	7.16	0.439	15.26	0.0	0.31	-26.0	250	250	4.2	15	0.02 U	9.1	0.51	0.21
	ATR-MW6C-G030513	3/5/2013	7.11	0.446	15.03	0.0	0.22	-26.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW6C-G050713	5/7/2013	7.24	0.425	15.54	0.0	0.22	-62.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW6C-G050713R	5/7/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW6C-G082615	8/26/2015	7.25	14.17	16.30	4.8	0.27	-20.2	230	230	8.2	21	0.22	7.6	0.32	0.22
	ATR-MW6C-G022316	2/23/2016	7.51	0.651	14.34	15.0	0.47	-54.0	260	260	3.2	24	0.02 U	8	1.3	0.24
	ATR-MW6C-G061616	6/16/2016	6.74	0.497	18.14	10.2	0.57	-107.2	NA	NA	7.3	NA	NA	NA	NA	NA
	ATR-MW6C-G092816	9/28/2016	7.59	0.644	15.95	4.0	0.18	-125.5	NA	NA	3.3	NA	NA	NA	NA	NA
	ATR-MW6C-G020117	2/1/2017	6.99	0.775	12.09	1.4	1.20	-96.7	400 X	400 X	10	32	0.02 U	5.0	2.5	0.38
	ATR-MW12-G050613	5/6/2013	7.37	0.458	14.60	433.9	2.91	-77.1	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW12-G082615	8/26/2015	6.91	17.28	15.45	188.6	1.86	-44.2	250	250	69	23	0.022	1.7	5.4	0.44
	ATR-MW12-G022416	2/24/2016	6.97	0.708	13.07	22.0	3.00	182.1	260	260	59	35	0.051	1.0 U	7.8	0.69
	ATR-MW12-G061616	6/16/2016	6.63	0.623	15.98	9.8	2.00	-101.2	NA	NA	64	NA	NA	NA	NA	NA
	ATR-MW12-G092816	9/28/2016	6.73	0.644	14.94	20.4	4.54	-107.4	NA	NA	37	NA	NA	NA	NA	NA
	ATR-MW12-G020117	2/1/2017	7.19	0.896	13.68	75.6	7.60	-31.5	400 X	400 X	100	28	0.02 U	2.1	22	1.2
	ATR-MW13-G092712	9/27/2012	7.26	0.382	14.80	337.4	1.70	-13.4	200	200	5.5	24	0.78	8.4	75	1.3
	ATR-MW13	2/5/2013	7.49	0.396	12.36	NM	2.07	-16.1	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW13-G050613	5/6/2013	7.25	0.397	13.91	344.1	3.24	-13.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW13-G082615	8/26/2015	7.06	21.18	14.20	570.1	4.92	-53.7	310	310	120	36	0.02 U	18	15	0.73
	ATR-MW13-G030216	3/2/2016	7.38	0.749	10.73	91.3	3.86	153.1	290	290	68	20	0.12	5.9	13	0.57
	ATR-MW13-G061616	6/16/2016	6.77	0.639	17.11	35.8	1.51	-114.1	NA	NA	11	NA	NA	NA	NA	NA
	ATR-MW13-G092816	9/28/2016	6.90	0.608	14.08	120.7	4.26	-103.6	NA	NA	11	NA	NA	NA	NA	NA
	ATR-MW13-G020117	2/1/2017	7.22	0.786	13.60	208.9	6.46	-29.2	340 X	340 X	7.6	40	0.02 U	35	30	0.60
	ATR-MW62(36)-G050213	5/2/2013	7.23	0.449	15.64	4.7	0.20	-81.4	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW62-G082715	8/27/2015	6.62	0.700	16.21	4.8	0.30	-87.4	300	300	39	40	0.1	1.1	3.9	2.9
	ATR-MW62-G022316	2/23/2016	7.14	0.872	14.14	29.13	0.39	-86.5	260	260	100	35	0.12	1 U	17	2.5
	ATR-MW62-G061616	6/16/2016	6.44	0.624	19.61	52.6	0.56	-120.6	NA	NA	47	NA	NA	NA	NA	NA
	ATR-MW62-G092916	9/29/2016	7.40	0.535	15.72	1.3	0.17	-157.5	NA	NA	35	NA	NA	NA	NA	NA
	ATR-MW62-G020117	2/1/2017	6.87	1.140	13.03	6.8	0.15	-123.6	440 X	440 X	190	50	0.02 U	1 U	49	4.5
	ATR-MW20(35)-G050713	5/7/2013	7.27	0.451	15.85	0.0	0.15	-107.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(35)-G082715	8/27/2015	7.00	0.639	16.43	2.1	0.33	-95.4	320	320	84	18	0.02 U	3.1	2.6	0.37
	ATR-MW20(35)-G082715R	8/27/2015	NA	NA	NA	NA	NA	NA	320	320	88	18	0.02 U	3.3	2.6	0.37
	ATR-MW20(35)-G022316	2/23/2016	7.18	0.853	14.82	5.3	0.18	-76.8	320	320	110	21	0.081	1 U	9.6	0.86
	ATR-MW20(35)-G022316R	2/23/2016	NA	NA	NA	NA	NA	NA	320	320	110	22	0.079	1 U	10	0.85
	ATR-MW20(35)-G061616	6/16/2016	6.93	0.717	19.64	48.5	0.64	-135.6	NA	NA	67	NA	NA	NA	NA	NA
	ATR-MW20(35)-G092816	9/28/2016	7.07	0.486	17.47	13.2	3.10	-103.4	NA	NA	15	NA	NA	NA	NA	NA
	ATR-MW20(35)-G092816R	9/28/2016	NA	NA	NA	N	N	NA	NA	NA	16	NA	NA	NA	NA	NA
	ATR-MW20(35)-G020117	2/1/2017	6.91	0.821	12.49	9.6	0.38	-141.1	410 X	410 X	53	25	0.02 U	1 U	15	0.45
	ATR-MW20(35)-G020117R	2/1/2017	NA	NA	NA	N	N	NA	410 X	410 X	54	25	0.02 U	1 U	15	0.48

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone A	ATR-MW20(51)-G050713	5/7/2013	7.51	0.340	15.22	0.0	0.26	-133.8	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(51)-G082715	8/27/2015	6.01	1.861	17.32	3.2	0.27	-62.0	740	740	740	6.5	0.08	1.0 U	46	3.5
	ATR-MW20(51)-G022316	2/23/2016	6.85	1.151	12.89	33.9	0.70	-79.0	360	360	220	14	0.18	1 U	98	1.6
	ATR-MW20(51)-G061616	6/16/2016	6.44	1.014	21.10	10.5	0.52	-125.3	NA	NA	83	NA	NA	NA	NA	NA
	ATR-MW20(51)-G092816	9/28/2016	6.80	0.837	17.66	8.2	0.42	-136.4	NA	NA	21	NA	NA	NA	NA	NA
	ATR-MW20(51)-G020117	2/1/2017	6.74	0.903	11.09	39.8	0.62	-135.1	500 X	500 X	18	9.8	0.02 U	1 U	31	0.61
	ATR-MW82(58)-G030513	3/5/2013	7.34	0.515	13.84	0.0	0.09	-83.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW82(58)-G050713	5/7/2013	7.40	0.411	14.93	0.0	0.21	-79.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW82-G082615	8/26/2015	6.19	62.61	15.24	4.2	0.15	-10.2	990	990	1600	5.4	0.021	3.0	5.8	7.4
	ATR-MW82-G022316	2/23/2016	7.46	1.381	12.70	28.3	0.28	-113.5	370	370	310	7.7	0.1	1 U	23	1.7
	ATR-MW82-G061616	6/16/2016	6.38	0.991	15.98	19.5	0.57	-124.5	NA	NA	280	NA	NA	NA	NA	NA
	ATR-MW82-G092816	9/28/2016	7.36	0.791	16.26	9.2	0.23	-154.6	NA	NA	35	NA	NA	NA	NA	NA
	ATR-MW82-G020117	2/1/2017	6.89	1.123	11.42	3.8	0.63	-139.9	610 X	610 X	220	14	0.02 U	1 U	46	0.57
	ATR-OW1(28)-G121714	12/17/2014	7.27	0.718	12.04	90.6	0.42	-63.4	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW1(S)-G082715	8/27/2015	7.48	1.440	13.60	5.4	0.04	-154	220	220	4.9	65	0.02 U	7.4	3.7	0.86
	ATR-OW1(28)-G022316	2/23/2016	7.03	0.654	11.68	34.9	1.03	-133.2	270	270	3.3	38	0.036	7.9	5.3	0.98
	ATR-OW1(28)-G061616	6/16/2016	7.05	0.789	15.18	11.0	0.58	-159.3	NA	NA	20	NA	NA	NA	NA	NA
	ATR-OW1(28)-G092816	9/28/2016	7.88	0.828	14.11	3.7	0.19	-160.1	NA	NA	12	NA	NA	NA	NA	NA
	ATR-OW1(28)-G013117	1/31/2017	7.37	0.848	12.90	0.1	0.83	-152.4	340 X	340 X	6.0	55	0.02 U	1.7	14	1.1
	ATR-OW1(39)-G121714	12/17/2014	7.67	0.498	13.68	8.3	0.42	-139.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW1(D)-G082715	8/27/2015	6.67	1.338	15.21	3.8	0.22	-84.0	600	600	410	12	0.02 U	1.0 U	13	0.86
	ATR-OW1(39)-G022916	2/29/2016	6.68	0.843	13.24	57.4	0.36	-117.8	370	370	25	25	0.096	1.0 U	16	0.51
	ATR-OW1(39)-G061616	6/16/2016	6.88	0.639	15.97	9.3	0.55	-141.1	NA	NA	7.7	NA	NA	NA	NA	NA
	ATR-OW1(39)-G092816	9/28/2016	7.80	0.565	14.06	2.0	0.20	-142.9	NA	NA	5.9	NA	NA	NA	NA	NA
	ATR-OW1(39)-G020117	2/1/2017	6.97	0.872	12.49	2.7	0.10	-108.0	400 X	400 X	6.8	45	0.02 U	1 U	12	0.47
Zone B	ATR-MW14-G092712	9/27/2012	7.07	0.407	13.87	0.0	0.43	30.3	250	260	2.4	7.1	0.02 U	14	0.08 U	0.44
	ATR-MW14	2/5/2013	7.50	0.390	12.86	67.0	0.92	-17.5	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW14-G030513	3/5/2013	7.22	0.393	12.95	0.0	0.17	13.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW14-G050213	5/2/2013	7.21	0.419	13.74	1.0	0.22	62.9	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW14-G100815	10/8/2015	7.14	0.635	13.20	0.5	0.14	-108.3	270	270	35	5.5	0.02 U	15	0.91	0.97
	ATR-MW14-G022916	2/29/2016	7.37	0.933	13.10	25.6	0.20	-154.4	390	390	160	9.9	0.056	5.7	7.5	0.57
	ATR-MW14-G061516	6/15/2016	6.82	1.173	16.72	3.4	0.52	-152.5	NA	NA	240	NA	NA	NA	NA	NA
	ATR-MW14-G092816	9/28/2016	7.36	0.801	14.86	1.3	0.31	-187.0	NA	NA	120	NA	NA	NA	NA	NA
	ATR-MW14-G020117	2/1/2017	6.95	0.527	9.31	6.4	0.59	-141.1	410 X	410 X	130	13	0.02 U	3.4	9.0	0.42
	MTR-MW24(24.9)-6082213	7/22/2013	7.29	0.628	13.40	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24 (24.9)-G100815	10/8/2015	6.95	0.693	14.00	4.2	0.92	7.9	290	290	1.4	39	0.19	12	0.13	0.26
	ATR-MW24(24.9)-G022916	2/29/2016	7.31	0.729	12.29	9.2	1.25	50.9	300	300	1.6	27	0.34	39	0.08 U	0.12
	ATR-MW24(24.8)-G061516	6/15/2016	6.72	0.680	13.77	4.8	0.54	-110.0	NA	NA	4.8	NA	NA	NA	NA	NA
	ATR-MW24(24.9)-G092816	9/28/2016	7.06	0.670	14.30	4.1	1.71	-9.3	NA	NA	2.8	NA	NA	NA	NA	NA
	ATR-MW24(24.9)-G013117	1/31/2017	7.35	0.635	11.47	2.5	1.03	-94.1	290 X	290 X	3.1	35	0.02 U	6.3	2.1	0.66

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone B	ATR-MW24(55.4)-G030513	3/5/2013	7.00	0.977	12.27	0.0	0.22	-46.1	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24(55.4)-G050213	5/2/2013	7.04	0.703	13.00	0.7	0.20	-37.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24(55.4)-G050213R	5/2/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24 (55.9)-G100815	10/8/2015	6.81	0.876	13.21	0.0	0.36	-28.6	390	390	2	26	0.02 U	24	0.44	0.52
	ATR-MW24(55.9)-G022916	2/29/2016	7.29	0.802	12.28	6.3	0.30	-28.4	400	400	1.8	18	0.02 U	22	0.41	0.57
	ATR-MW24(55.4)-G061516	6/15/2016	6.65	0.803	14.81	1.1	0.57	-79.5	NA	NA	5.7	NA	NA	NA	NA	NA
	ATR-MW24(55.4)-G092816	9/28/2016	7.10	0.740	13.07	0.0	0.33	-49.9	NA	NA	3.1	NA	NA	NA	NA	NA
	ATR-MW24(55.4)-G013117	1/31/2017	7.31	0.767	9.80	1.2	1.11	-33.3	510 X	510 X	160	13	0.02 U	3.4	21	1.1
	ATR-OW2(33)-G121814	12/18/2014	7.37	0.490	13.37	0.2	0.46	-91.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW2 (33)-G100815	10/8/2015	7.10	0.551	17.22	67.1	2.47	-101.8	270	270	42	16	0.02 U	3.5	3.6	0.48
	ATR-OW2(33)-G022916	2/29/2016	7.27	1.039	12.87	150.0	5.52	-0.8	440	440	160	21	0.14	8.6	31	1.5
	ATR-OW2(33)-G061516	6/15/2016	7.37	0.632	23.12	176.6	0.68	-143.6	NA	NA	6.4	NA	NA	NA	NA	NA
	ATR-OW2(33)-G092716	9/27/2016	7.83	0.637	15.91	9.4	0.11	-139.8	NA	NA	6.5	NA	NA	NA	NA	NA
	ATR-OW2(33)-G013117	1/31/2017	7.20	0.797	12.12	9.0	0.15	-127.1	400 X	400 X	16	30	0.02 U	1.2	5.9	0.53
	ATR-OW2(53)-G121814	12/18/2014	7.60	0.510	13.36	2.7	0.48	-123.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW2 (53)-G100815	10/8/2015	6.75	1.517	15.33	1.0	0.33	-112.4	650	650	440	2.6	0.02 U	1.0 U	8.6	1.6
	ATR-OW2(53)-G022916	2/29/2016	7.45	1.500	12.50	0.5	4.05	-14.5	540	540	370	7.1	0.17	7.2	37	0.89
	ATR-OW2(53)-G061616	6/16/2016	6.79	1.143	17.24	28.4	0.54	-163.5	NA	NA	320	NA	NA	NA	NA	NA
	ATR-OW2(53)-G092716	9/27/2016	8.14	0.776	16.34	19.7	0.14	-176.6	NA	NA	81	NA	NA	NA	NA	NA
	ATR-OW2(53)-G013117	1/31/2017	7.38	0.890	11.81	1.9	0.05	-166.8	460 X	460 X	110	9.3	0.02 U	1 U	15	0.36
	ATR-OW3(35)-G121614	12/16/2014	7.50	0.652	13.53	7.5	4.24	-62.8	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW3 (35)-G100715	10/7/2015	7.12	0.953	14.73	0.0	0.25	-136.7	390	390	130	16	0.02 U	1.0 U	23	1.6
	ATR-OW3(35)-G022916	2/29/2016	7.95	0.733	12.05	13.9	4.22	-36.5	310	310	16	22	0.098	1 U	12	0.72
	ATR-OW3(35)-G061516	6/15/2016	7.35	0.628	17.09	45.3	0.81	-179.9	NA	NA	5.3	NA	NA	NA	NA	NA
	ATR-OW3(35)-G092716	9/27/2016	7.23	0.644	20.01	17.6	0.82	-161.1	NA	NA	3.9	NA	NA	NA	NA	NA
	ATR-OW3(35)-G013117	1/31/2017	7.49	0.742	11.61	0.0	0.06	-180.0	350 X	350 X	6.4	28	0.02 U	14	11	0.48
	ATR-OW3(55)-G121614	12/16/2014	7.04	0.756	13.04	1.0	0.40	-26.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW3 (55)-G100715	10/7/2015	6.55	1.594	15.15	3.8	0.20	-155.2	660	660	1600	24	0.02 U	12	11	2
	ATR-OW3 (55)-G100715 R	10/7/2015	NA	NA	NA	NA	NA	NA	690	690	1600	28	0.02 U	12	11	2.2
	ATR-OW3(55)-G022916	2/29/2016	6.97	2.009	12.16	2.9	4.68	12.5	910	910	560	10	0.15	1.0 U	29	3.5
	ATR-OW3(55)-G022916 R	2/29/2016	NA	NA	NA	NA	NA	NA	900	900	700	10	0.15	1.0 U	29	3.3
	ATR-OW3(55)-G061516	6/15/2016	6.53	1.685	16.80	21.0	0.60	-113.0	NA	NA	410	NA	NA	NA	NA	NA
	ATR-OW3(55)-G092716	9/27/2016	6.68	1.500	17.05	5.1	0.32	-120.2	NA	NA	310	NA	NA	NA	NA	NA
	ATR-OW3(55)-G013117	1/31/2017	NM	NM	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA
Zone C	ATR-MW15-G041312	4/13/2012	7.18	0.388	13.46	2.3	0.23	-59.1	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G041312R	4/13/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G030613	3/6/2013	7.26	0.483	12.85	0.0	0.24	-35.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G050213	5/2/2013	7.35	0.366	13.43	1.1	0.19	-44.6	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G050213R	5/2/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-6082213	7/22/2013	7.36	0.466	14.10	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G101315	10/13/2015	6.65	1.168	12.99	9.1	0.16	-92.1	440 x	440 x	540	16	0.02 U	5.0	1.5	1.1
	ATR-MW15-G030116	3/1/2016	6.49	3.095	11.64	8.3	3.42	46.5	1100	1100	1000	11	0.086	1.0 U	64	3.5
	ATR-MW15-G061516	6/15/2016	6.27	2.839	16.58	1.3	0.63	-91.4	NA	NA	1000	NA	NA	NA	NA	NA
	ATR-MW15-G092716	9/27/2016	7.57	2.322	16.36	3.0	0.23	-123.5	NA	NA	760	NA	NA	NA	NA	NA
	ATR-MW15-G013117	1/31/2017	6.98	1.742	11.00	9.7	0.36	-132.3	920 X	920 X	730	26	0.02 U	1.3	88	0.74

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone C	ATR-MW25(16.4)-G092712	9/27/2012	7.21	0.410	15.24	0.6	0.30	-71.6	230	240	3.2	20	0.02 U	11	0.97	0.34
	ATR-MW25(16.4)	2/5/2013	7.51	0.412	11.36	0.0	0.78	-63.7	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G030613	3/6/2013	7.27	0.398	10.79	0.0	0.17	-12.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G050213	5/2/2013	7.33	0.383	11.64	0.0	0.18	-58.7	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G101315	10/13/2015	7.28	0.691	14.04	0.0	2.56	-65.0	250 x	250 x	3.4	28	0.02 U	19	0.4	0.33
	ATR-MW25(16.4)-G030116	3/1/2016	6.82	0.798	10.45	20.8	5.47	-93.9	370	370	33	35	0.067	3.5	4.9	0.51
	ATR-MW25(16.4)-G061516	6/15/2016	6.84	0.580	14.17	1.8	0.56	-114.1	NA	NA	56	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G092716	9/27/2016	7.20	0.848	17.68	5.6	0.38	-142.9	NA	NA	49	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G013117	1/31/2017	7.34	0.914	11.75	0.1	0.01	-150.4	440 X	440 X	39	27	0.02 U	5.9	8.5	0.45
	ATR-MW25(32.6)-G041612	4/16/2012	7.36	0.349	13.46	7.9	0.20	-83.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G030613	3/6/2013	7.40	0.466	12.25	0.0	0.25	-45.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G050213	5/2/2013	7.44	0.335	12.88	1.0	0.19	-79.7	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G061914	6/19/2014	6.92	0.451	13.92	4.4	0.32	-77.7	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G101315	10/13/2015	7.43	0.561	13.20	0.0	0.16	-88.9	220 x	220 x	5.4	14	0.02 U	5.5	0.4	0.29
	ATR-MW25(32.6)-G030116	3/1/2016	6.55	2.101	12.01	14.5	0.55	-57.4	850	850	630	13	0.12	1 U	24	2.8
	ATR-MW25(32.6)-G061516	6/15/2016	6.49	1.340	14.69	6.3	0.51	-80.5	NA	NA	320	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G092716	9/27/2016	6.73	0.911	15.32	3.0	0.25	-99.8	NA	NA	150	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G013117	1/31/2017	7.03	0.840	12.02	0.4	0.04	-112.2	410 X	410 X	76	17	0.02 U	1 U	13	0.54
	MTR-MW25(45.2)-6082213	7/22/2013	7.04	0.463	14.10	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(45.2)-G101315	10/13/2015	7.38	0.562	13.09	0.0	0.26	-37.5	230 x	230 x	2.1	8.9	0.02 U	13	0.16	0.27
	ATR-MW25(45.2)-G030116	3/1/2016	6.68	1.519	10.56	22.5	0.28	-68.5	620	620	430	7.6	0.12	1 U	20	1.5
	ATR-MW25(45.2)-G061516	6/15/2016	6.18	2.025	17.09	1.3	0.55	-75.9	NA	NA	710	NA	NA	NA	NA	NA
	ATR-MW25(45.2)-G092716	9/27/2016	7.03	2.479	15.70	19.1	0.17	-91.0	NA	NA	920	NA	NA	NA	NA	NA
	ATR-MW25(45.2)-G013117	1/31/2017	6.76	2.098	11.91	2.0	0.05	-108.1	960 X	960 X	740	14	0.02 U	1.7	62	0.71
	ATR-OW4(35)-G121614	12/16/2014	7.60	0.461	12.99	-0.1	0.42	-123.8	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW4(35)-G101315	10/13/2015	6.11	2.210	13.46	54.6	0.09	-109.9	670 x	670 x	1900	14	0.057	5.3	18	2.1
	ATR-OW4(35)-G030116	3/1/2016	6.36	2.405	9.38	18.4	3.52	41.6	840	840	900	9	0.14	1 U	31	3.6
	ATR-OW4(35)-G061516	6/15/2016	6.40	2.433	23.40	27.7	0.61	-101.7	NA	NA	730	NA	NA	NA	NA	NA
	ATR-OW4(35)-G092716	9/27/2016	6.72	1.835	16.08	8.8	0.55	-115.2	NA	NA	430	NA	NA	NA	NA	NA
	ATR-OW4(35)-G013117	1/31/2017	5.92	3.339	10.80	38.2	0.54	-25.1	1,400 X	1,400 X	2,100	1 U	0.02 U	2.1	210	3.3
	ATR-OW4(54)-G121614	12/16/2014	7.57	0.558	12.87	0.5	0.43	-142.8	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW4(54)-G101315	10/13/2015	7.45	0.596	13.29	0.0	0.17	-140.2	240 x	240 x	2.1	6.2	0.02 U	17	0.92	0.044
	ATR-OW4(54)-G030116	3/1/2016	7.82	0.569	9.93	9.5	3.58	-45.2	250	250	8.3	5.5	0.02 U	13	1.5	0.072
	ATR-OW4(54)-G061516	6/15/2016	7.35	0.509	24.52	109.9	1.32	-134.3	NA	NA	4.2	NA	NA	NA	NA	NA
	ATR-OW4(54)-G092716	9/27/2016	7.30	0.583	14.87	2.0	0.32	-197.7	NA	NA	39	NA	NA	NA	NA	NA
	ATR-OW4(54)-G013117	1/31/2017	7.28	0.771	11.09	0.6	0.34	-124.5	450 X	450 X	320	3.3	0.02 U	1 U	3.6	0.13

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone D	ATR-MW16-G092612	9/26/2012	7.23	0.383	13.31	0.0	0.24	-21.7	230	230	1.7	11	0.02 U	12	0.15	0.080
	ATR-MW16-G030613	3/6/2013	6.76	0.870	13.16	0.0	0.11	-113.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW16-G030613R	3/6/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW16-G040313	4/3/2013	6.12	0.992	13.09	0.0	0.20	-126.5	510	510	43	14	0.02 U	9.5	27	1.2
	ATR-MW16-G050213	5/2/2013	6.90	0.927	13.24	1.0	0.18	-124.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW16-G100715	10/7/2015	7.10	0.716	13.29	0.0	0.28	-98.1	320	320	2.8	12	0.02 U	8.8	3.5	0.13
	ATR-MW16-G030116	3/1/2016	7.75	0.722	11.12	1.7	3.62	0.0	320	320	3.4	13	0.020 U	4.1	2.5	0.14
	ATR-MW16-G061416	6/14/2016	6.85	1.023	15.26	15.2	0.55	-123.5	NA	NA	220	NA	NA	NA	NA	NA
	ATR-MW16-G092616	9/26/2016	7.37	1.653	14.98	1.0	0.15	-171.3	NA	NA	190	NA	NA	NA	NA	NA
	ATR-MW16-G013017	1/30/2017	7.76	1.529	11.04	5.9	0.43	-169.3	840 X	840 X	110	16	0.02 U	11	13	0.26
	ATR-MW17-G092612	9/26/2012	7.00	0.663	12.60	0.0	0.23	1.2	380	380	1.5	37	0.79	25	0.08 U	0.31
	ATR-MW17	12/18/2012	7.12	0.563	11.94	NM	0.24	74.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW17-G030613	3/6/2013	7.11	0.552	11.36	1.8	0.14	-69.8	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW17-G030613R	3/6/2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW17-G040313	4/3/2013	7.10	0.572	12.12	0.3	0.26	4.7	360	360	3.4	26	0.44	22	0.08 U	0.32
	ATR-MW17-G050213	5/2/2013	7.16	0.563	12.67	2.9	0.19	-22.1	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW17-G100715	10/7/2015	7.11	0.846	13.20	51.2	0.31	213.1	360	360	1.7	24	1.2	23	1.8	0.62
	ATR-MW17-G030116	3/1/2016	7.74	0.787	9.19	16.4	3.81	59.7	330	330	1.6	20	0.9	20	0.3	0.53
	ATR-MW17-G061416	6/14/2016	6.71	0.734	13.17	9.7	0.60	226.9	NA	NA	6.2	NA	NA	NA	NA	NA
	ATR-MW17-G092616	9/26/2016	7.00	0.910	14.64	8.7	0.24	182.1	NA	NA	2.2	NA	NA	NA	NA	NA
	ATR-MW17-G013017	1/30/2017	7.24	0.677	8.64	0.0	0.06	-1.1	350 X	350 X	15	23	0.46	19	0.49	1.7
	ATR-MW26(17.5)-G092712	9/27/2012	7.18	0.427	14.78	0.0	0.28	-32.4	250	250	2.3	19	0.02 U	13	2.9	0.24
	ATR-MW26(17.5)-G010813	1/8/2013	7.00	0.599	12.46	1.5	0.38	-34.8	290	290	7.6	16	0.02 U	3.6	NA	NA
	ATR-MW26(17.5)	2/5/2013	7.55	0.419	12.55	0.0	0.90	-118.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(17.5)-G030613	3/6/2013	7.33	0.407	12.42	0.0	0.18	-106.7	260	260	2.8	18	0.02 U	3.2	2.3	0.42
	ATR-MW26(17.5)-G040313	4/3/2013	6.07	0.406	12.39	0.0	0.16	-12.8	260	260	2.7	17	0.02 U	3.8	2.2	0.42
	ATR-MW26(17.5)-G050313	5/3/2013	7.28	0.408	12.54	4.7	0.22	-108.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26 (17.5)-G100715	10/7/2015	6.98	0.694	14.18	3.1	0.32	-115.3	290	290	47	15	0.15	1.4	14	0.99
	ATR-MW26(17.5)-G030116	3/1/2016	7.37	0.698	12.04	29.8	0.88	-144.6	350	350	22	19	0.1	1 U	14	1.0
	ATR-MW26(17.5)-G061416	6/14/2016	6.97	0.816	13.03	9.5	0.90	-133.4	NA	NA	46	NA	NA	NA	NA	NA
	ATR-MW26(17.5)-G092616	9/26/2016	7.39	0.902	15.58	0.0	0.28	-179.5	NA	NA	13	NA	NA	NA	NA	NA
	ATR-MW26(17.5)-G013017	1/30/2017	7.35	0.722	12.03	0.0	0.03	-147.0	410 X	410 X	5.4	20	0.02 U	1 U	11	0.39

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	ATR-MW26(28.8)-G092712	9/27/2012	7.23	0.416	13.02	0.4	0.20	204.5	250	250	1.1	11	0.02 U	21	0.15	0.093
	ATR-MW26(28.8)-G092712R	9/27/2012	NA	NA	NA	NA	NA	NA	240	240	1.1	11	0.02 U	21	0.08 U	0.091
	ATR-MW26(28.8)	12/18/2012	6.70	0.900	13.40	NM	0.19	-96.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(28.8)-G010813	1/8/2013	6.39	1.037	12.33	5.0	0.29	-71.4	520	520	240	15	0.02 U	1 U	NA	NA
	ATR-MW26(28.8)	2/5/2013	6.88	0.737	13.15	NM	0.25	-94.9	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(28.8)-G030613	3/6/2013	6.79	0.725	12.99	0.0	0.14	-82.1	420	420	150	18	0.02 U	5.0	5.4	2.0
	ATR-MW26(28.8)-G040313	4/3/2013	6.77	0.741	13.05	0.0	0.13	-77.2	410	410	140	20	0.02 U	5.1	6.7	1.6
	ATR-MW26(28.8)-G050313	5/3/2013	6.98	0.581	13.19	0.0	0.22	-84.5	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26 (28.8)-G100715	10/7/2015	7.20	0.653	13.93	0.0	0.27	-114.3	300	300	3.6	9.3	0.02 U	2.2	4.2	0.17
	ATR-MW26(28.8)-G030116	3/1/2016	7.40	0.791	11.31	14.2	0.29	-129.0	450	450	9.3	11	0.1	1 U	13	0.25
	ATR-MW26(28.8)-G061416	6/14/2016	7.29	1.113	15.09	10.9	0.57	-103.7	NA	NA	7.9	NA	NA	NA	NA	NA
	ATR-MW26(28.8)-G092616	9/26/2016	6.79	1.257	14.78	7.5	0.30	-128.4	NA	NA	3.5	NA	NA	NA	NA	NA
	ATR-MW26(28.8)-G013017	1/30/2017	6.74	1.087	10.85	0.0	0.03	-103.5	580 X	580 X	110	14	0.02 U	1 U	43	0.34
	ATR-MW26(58.2)-G041612	4/16/2012	7.25	0.418	12.28	0.0	0.26	-232.8	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(58.2)-G060413	6/4/2013	6.93	0.417	12.97	NM	0.55	105.4	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26 (58.8)-G100715	10/7/2015	6.84	0.496	15.39	0.0	0.40	-45.6	220	220	1.4	6.9	0.02 U	15	0.083	0.059
	ATR-MW26(58.8)-G030116	3/1/2016	7.81	0.615	11.69	8.1	0.06	-191.2	310	310	57	4.3	0.048	1.9	5.5	0.29
	ATR-MW26(58.8)-G061416	6/14/2016	7.52	0.937	14.11	4.8	0.57	-119.4	NA	NA	130	NA	NA	NA	NA	NA
	ATR-MW26(58.8)-G092616	9/26/2016	7.30	1.055	14.46	0.0	0.32	-188.4	NA	NA	98	NA	NA	NA	NA	NA
	ATR-MW26(58.8)-G013017	1/30/2017	7.33	0.803	11.24	0.0	0.04	-156.6	420 X	420 X	94	5.8	0.02 U	1 U	18	0.24
	ATR-MW26(58.8)-G013017R	1/30/2017	NA	NA	NA	NA	NA	NA	420 X	420 X	95	5.7	0.02 U	1 U	18	0.24
Zone D	ATR-ZVI-2(17.5)-G121812	12/18/2012	7.12	0.592	13.04	4.9	0.31	19.2	330	330	33	19	0.02 U	5.7	3.0	1.2
	ATR-ZVI-2(17.5)-G010813	1/8/2013	7.14	0.440	12.96	4.8	0.24	-116.7	300	300	12	18	0.02 U	5.0	4.2	1.0
	ATR-ZVI-2(17.5)-G030613	3/6/2013	7.35	0.404	11.91	4.1	0.21	-117.3	250	250	2.2	19	0.02 U	4.8	9.0	0.60
	ATR-ZVI-2(17.5)-G040313	4/3/2013	7.28	0.422	11.85	3.4	0.21	-128.9	260	260	2.1	18	0.02 U	7.3	4.0	0.56
	ATR-ZVI-2(17.5)-G050313	5/3/2013	7.34	0.428	11.95	3.6	0.19	-134.2	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2 (17.5)-G100715	10/7/2015	7.38	0.661	14.38	3.6	0.62	-136.6	280	280	25	16	0.02 U	1.0 U	12	0.79
	ATR-ZVI2(17.5)-G030216	3/2/2016	6.61	0.642	11.03	49.0	0.57	-135.9	290	290	3.1	19	0.081	1 U	10	0.45
	ATR-ZVI2(17.5)-G061416	6/14/2016	7.65	0.783	14.34	31.1	0.48	-169.2	NA	NA	17	NA	NA	NA	NA	NA
	ATR-ZVI2(17.5)-G092616	9/26/2016	7.41	0.841	15.98	3.5	0.31	-189.6	NA	NA	8.2	NA	NA	NA	NA	NA
	ATR-ZVI2(17.5)-G013117	1/31/2017	7.53	0.627	9.73	9.6	0.26	-175.9	290 X	290 X	17	20	0.02 U	1 U	13	0.34
	ATR-ZVI-2(32.5)-G121812	12/18/2012	6.80	0.887	13.13	3.8	0.29	26.1	540	540	270	12	0.02 U	3.6	4.7	0.66
	ATR-ZVI-2(32.5)-G010813	1/8/2013	6.88	0.535	13.43	2.7	0.20	-75.9	350	350	87	11	0.02 U	1 U	2.5	0.42
	ATR-ZVI-2(32.5)-G030613	3/6/2013	7.18	0.426	12.91	4.3	0.13	-109.5	270	280	26	11	0.02 U	2.0	2.2	0.33
	ATR-ZVI-2(32.5)-G030613R	3/6/2013	NA	NA	NA	NA	NA	NA	280	280	26	11	0.02 U	2.0	2.2	0.32
	ATR-ZVI-2(32.5)-G040313	4/3/2013	6.90	0.427	13.11	0.4	0.21	-93.8	270	270	20	11	0.02 U	2.9	2.1	0.29
	ATR-ZVI-2(32.5)-G040313R	4/3/2013	NA	NA	NA	NA	NA	NA	270	270	23	11	0.02 U	3.0	1.9	0.28
	ATR-ZVI-2(32.5)-G050313	5/3/2013	7.23	0.508	13.10	0.5	0.19	-125.6	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2 (32.5)-G100715	10/7/2015	7.26	0.547	13.90	4.2	0.24	-83.8	250	250	5.2	10	0.02 U	9.9	1.7	0.15
	ATR-ZVI2(32.5)-G030116	3/1/2016	7.54	0.592	11.37	9.6	0.25	-122.3	320	320	7.5	11	0.026	5.1	2.5	0.15
	ATR-ZVI2(32.5)-G061416	6/14/2016	7.58	0.208	14.48	5.5	0.55	-133.7	NA	NA	9.7	NA	NA	NA	NA	NA
	ATR-ZVI2(32.5)-G092616	9/26/2016	7.30	0.814	14.08	0.0	0.33	-151.2	NA	NA	18	NA	NA	NA	NA	NA
	ATR-ZVI2(32.5)-G013117	1/31/2017	7.15	1.098	11.52	0.0	0.38	-137.7	530 X	530 X	120	12	0.02 U	1 U	8.0	0.14

Table 12 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from Perfomance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

			Field Measured Parameters						Geochemistry						Metals	
Treatment Area	Sample ID	Sample Date	pH	Conductivity	Temperature	Turbidity	DO	ORP	Alkalinity, Bicarbonate (as CaCO3)	Alkalinity, Total (as CaCO3)	TOC	Chloride	Nitrogen, Nitrate	Sulfate	Iron	Manganese
			S.U.	mS/cm	°C	NTU	mg/L	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone D	ATR-OW5(16)-G121714	12/17/2014	7.31	0.629	12.96	6.4	0.51	53.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5 (16)-G100715	10/7/2015	6.96	1.215	16.34	9.3	3.02	-80.3	510	510	140	20	0.02 U	1.0 U	9.9	1.1
	ATR-OW5(16)-G030116	3/1/2016	7.86	0.830	9.19	8.0	4.98	26.4	380	380	18	19	0.066	1 U	6.8	0.47
	ATR-OW5(16)-G061416	6/14/2016	7.09	0.679	14.47	45.6	1.55	-128.3	NA	NA	12	NA	NA	NA	NA	NA
	ATR-OW5(16)-G092716	9/27/2016	7.79	0.643	16.18	9.3	0.31	-143.6	NA	NA	11	NA	NA	NA	NA	NA
	ATR-OW5(16)-G013017	1/30/2017	7.19	0.694	10.74	7.2	1.66	-139.2	340 X	340 X	18	25	0.02 U	2.5	7.4	0.38
	ATR-OW5(35)-G121714	12/17/2014	7.51	0.534	12.78	1.1	0.44	-76.0	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5 (35)-G100715	10/7/2015	7.18	1.160	13.72	0.0	0.17	-125.0	520	520	190	9.5	0.02 U	1.0 U	7	0.45
	ATR-OW5(35)-G030116	3/1/2016	7.57	1.109	10.99	0.0	3.69	-2.3	450	450	180	8.4	0.098	1 U	12	0.58
	ATR-OW5(35)-G061416	6/14/2016	7.01	1.026	15.24	5.2	0.56	-149.2	NA	NA	110	NA	NA	NA	NA	NA
	ATR-OW5(35)-G092616	9/26/2016	7.35	1.481	16.35	8.2	0.16	-172.2	NA	NA	130	NA	NA	NA	NA	NA
	ATR-OW5(35)-G013017	1/30/2017	7.00	1.216	11.41	2.1	0.24	-159.6	630 X	630 X	140	12	0.02 U	1 U	43	1.2
	ATR-OW5(44)-G121714	12/17/2014	7.67	0.495	12.53	1.0	0.43	-120.3	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5 (54)-G100715	10/7/2015	7.37	0.540	13.70	0.0	0.11	-116.6	230	230	2.3	11	0.02 U	10	1.4	0.16
	ATR-OW5(54)-G030116	3/1/2016	7.09	2.142	6.05	38.8	4.17	-17.7	880	880	560	11	2.3	1 U	17	0.85
	ATR-OW5(45)-G061416	6/14/2016	6.61	1.280	16.08	26.5	0.60	-106.3	NA	NA	280	NA	NA	NA	NA	NA
	ATR-OW5(45)-G092616	9/26/2016	7.03	1.528	16.00	8.1	0.18	-158.1	NA	NA	220	NA	NA	NA	NA	NA
	ATR-OW5(45)-G013017	1/30/2017	6.74	1.959	10.55	1.8	0.55	-126.3	970 X	970 X	540	14	0.02 U	1 U	46	1.6

Notes:
Blue text is performance monitoring data
NA - Not Analyzed/Not Applicable
NM - Not Measured
J - Estimated concentration, analyte detected below quantitation limit
U - Analyzed but not detected above the MDL
mS/cm - milli Siemen/centimeter
µg/L - micro grams per liter
x - Identified in Blank

TOC - Total Organic Carbon
NTU - Nephelometric Turbidity Units
mg/L - milligram per liter
mV - millivolt
°C - degrees Celcius
S.U. - Standard Unit
ORP - Oxidation-Reduction Potential
* - Instrument reading suspect

Prepared by: RED
Checked by: PJS

Table 13

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Source - Behind	ATR-MW81(27)-G110512	11/5/12	**270**	*2.8*	**40,000**	*413*	**280**	*2.9*	100 U		**13,000**	*99*	**3,700**	*59*	***576***
	ATR-MW81(27)-G010713	1/7/13	**250**	*2.6*	**50,000**	*516*	**320**	*3.3*	100 U		**8,800**	*67*	**7,400**	*118*	***707***
	ATR-MW81(27)-G020513	2/5/13	**410**	*4.2*	**47,000**	*485*	**370**	*3.8*	200 U		**10,000**	*76*	**7,300**	*117*	***686***
	ATR-MW81(27)-G030613	3/6/13	**420**	*4.3*	**53,000**	*547*	**420**	*4.3*	100 U		**11,000**	*84*	**6,600**	*106*	***745***
	ATR-MW81(27)-G050313	5/3/13	**440**	*4.5*	**46,000**	*475*	**370**	*3.8*	200 U		**11,000**	*84*	**6,900**	*110*	***677***
	ATR-MW81(27)-G082715	8/27/15	**290**	*3.0*	**53,000**	*547*	**260**	*2.7*	200 U		**4,700**	*36*	**7,500**	*120*	***708***
	ATR-MW81(27)-G022316	2/23/16	250 U		**74,000**	*763*	**360**	*3.7*	250 U		250 U		**21,000**	*336*	***1,103***
	ATR-MW81(27)-G061616	6/16/16	100 U		**57,000**	*588*	**320**	*3.3*	100 U		100 U		**43,000 J**	*688*	***1,279***
	ATR-MW81(27)-G092916	9/29/16	50 U		**13,000**	*134*	**81**	*0.84*	50 U		50 U		**20,000**	*320*	***455***
	ATR-MW81(27)-G121316	12/13/16	50 U		**9,700 J**	*100*	**68**	*0.70*	50 U		50 U		**17,000 J**	*272*	***373***
Source - Behind	ATR-MW59(29)-G092712	9/27/12	**220**	*2.3*	**42,000**	*433*	**290**	*3.0*	100 U		50 U		**10,000**	*160*	***599***
	ATR-MW59(29)-G010713	1/7/13	**150**	*1.5*	**31,000**	*320*	**190**	*2.0*	100 U		50 U		**13,000**	*208*	***531***
	ATR-MW59(29)-G020413	2/4/13	**160**	*1.7*	**29,000**	*299*	**190**	*2.0*	10 U		5 U		**18,000**	*288*	***591***
	ATR-MW59(29)-G030613	3/6/13	**69**	*0.71*	**18,000**	*186*	**140**	*1.4*	40 U		20 U		**23,000**	*368*	***556***
	ATR-MW59(29)-G050313	5/3/13	100 U		**26,000**	*268*	100 U		200 U		100 U		**21,000**	*336*	***604***
	ATR-MW59(29)-G082715	8/27/15	**130**	*1.3*	**30,000**	*309*	**130**	*1.3*	100 U		100 U		**23,000**	*368*	***680***
	ATR-MW59(29)-G022316	2/23/16	25 U		**110**	*1.1*	25 U		25 U		25 U		**9,200**	*147*	***148***
	ATR-MW59(29)-G061716	6/17/16	25 U		25 U		25 U		25 U		25 U		**11,000**	*176*	***176***
	ATR-MW59(29)-G061716R	6/17/16	25 U		25 U		25 U		25 U		25 U		**11,000**	*176*	***176***
	ATR-MW59(29)-G093016	9/30/16	1 U		**11**	*0.11*	1 U		1 U		1 U		**340**	*5.4*	***5.6***
	ATR-MW59(29)-G093016R	9/30/16	1 U		**13**	*0.13*	1 U		1 U		1 U		**320**	*5.1*	***5.3***
	ATR-MW59(29)-G121316	12/13/16	1 U		**6.3**	*0.06*	1 U		1 U		1 U		**15**	*0.24*	***0.30***
	ATR-MW59(29)-G121316R	12/13/16	1 U		**5.7**	*0.06*	1 U		1 U		1 U		**14**	*0.22*	***0.28***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Source - Behind	ATR-PM2-G110512	11/5/12	**94**	*0.97*	**13,000**	*134*	**94**	*1.0*	40 U		**2,000**	*15*	**4,700**	*75*	***226***
	ATR-PM2-G010713	1/7/13	**70**	*0.72*	**9,200**	*95*	**67**	*0.7*	20 U		**660**	*5.0*	**4,400**	*70*	***172***
	ATR-PM2-G020413	2/4/13	**64**	*0.66*	**8,500**	*88*	**61**	*0.6*	40 U		**400**	*3.0*	**3,400**	*54*	***146***
	ATR-PM2-G030613	3/6/13	**79**	*0.81*	**8,300**	*86*	**59**	*0.6*	20 U		**300**	*2.3*	**3,100**	*50*	***139***
	ATR-PM2-G050313	5/3/13	**85**	*0.88*	**8,600**	*89*	**67**	*0.7*	40 U		**610**	*4.6*	**3,100**	*50*	***145***
	ATR-PM2-G082715	8/27/15	5 U		**380**	*3.9*	5 U		5 U		5 U		**1,200**	*19*	***23***
	ATR-PM2-G022316	2/23/16	20 U		**69**	*0.7*	20 U		20 U		20 U		**5,600**	*90*	***90***
	ATR-PM2-G061616	6/16/16	10 U		**20**	*0.2*	10 U		10 U		10 U		**5,300**	*85*	***85***
	ATR-PM2-G092916	9/29/16	1 U		**9.8**	*0.10*	1 U		1 U		1 U		**180**	*2.9*	***3.0***
	ATR-PM2-G121316	12/13/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Source - Behind	ATR-PM3-G110512	11/5/12	**200**	*2.1*	**43,000**	*444*	**280**	*2.9*	100 U		**74**	*0.56*	**7,600**	*122*	***571***
	ATR-PM3-G010713	1/7/13	**270**	*2.8*	**44,000**	*454*	**370**	*3.8*	100 U		50 U		**9,700**	*155*	***616***
	ATR-PM3-G020413	2/4/13	**340**	*3.5*	**46,000**	*475*	**410**	*4.2*	200 U		100 U		**9,900**	*158*	***641***
	ATR-PM3-G030513	3/5/13	**390**	*4.0*	**44,000**	*454*	**450**	*4.6*	100 U		50 U		**7,100**	*114*	***576***
	ATR-PM3-G050213	5/2/13	**340**	*3.5*	**37,000**	*382*	**390**	*4.0*	200 U		100 U		**8,300**	*133*	***522***
	ATR-PM3-G082715	8/27/15	100 U		**200**	*2.1*	100 U		100 U		100 U		**200**	*3.2*	***5.3***
	ATR-PM3-G022316	2/23/16	100 U		**15,000**	*155*	**110**	*1.1*	100 U		100 U		**15,000**	*240*	***396***
	ATR-PM3-G061716	6/17/16	**88**	*0.9*	**13,000**	*134*	**180**	*1.9*	50 U		50 U		**25,000**	*400*	***537***
	ATR-PM3-G092916	9/29/16	100 U		**9,200**	*95*	**110**	*1.1*	100 U		100 U		**34,000**	*544*	***640***
	ATR-PM3-G121316	12/13/16	500 U		**4,100**	*42*	500 U		500 U		500 U		**6,600**	*106*	***148***
Source - Inside	ATR-MW67(30)-G092612	9/26/12	20 U		**7,900**	*81*	**69**	*0.71*	40 U		20 U		**870**	*14*	***96***
	ATR-MW67(30)-G050613	5/6/13	50 U		**21,000**	*217*	**170**	*1.8*	100 U		50 U		**1,800**	*29*	***247***
	ATR-MW67-G031516	3/15/16	**1.4**	*0.01*	**240**	*2.5*	**4.2**	*0.04*	**1.0**	*0.01*	**1.8**	*0.01*	**130**	*2.1*	***4.6***
	ATR-MW67-G062016	6/20/16	1 UJ		**160 J**	*1.7*	**2.1 J**	*0.02*	1 UJ		1 UJ		**64 J**	*1.0*	***2.7***
	ATR-MW67-G092916	9/29/16	1 UJ		**66 J**	*0.68*	1 U		1 UJ		1 UJ		**35 J**	*0.56*	***1.2***
	ATR-MW67-G121216	12/12/16	1 U		**18**	*0.19*	1 U		1 U		1 U		**10**	*0.16*	***0.35***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Source - Inside	ATR-MW68(32)-G050613	5/6/13	50 U		**28,000**	*289*	**170**	*1.8*	100 U		50 U		**3,000**	*48*	***339***
	ATR-MW68-G031516	3/15/16	**9.5**	*0.10*	**660 J**	*6.8*	**14**	*0.14*	1 U		1 U		**100**	*1.6*	***8.7***
	ATR-MW68-G061716	6/17/16	**2.1**	*0.02*	**190**	*2.0*	**5.0**	*0.05*	1 U		1 U		**89**	*1.4*	***3.5***
	ATR-MW68-G092916	9/29/16	**1.1**	*0.01*	**200**	*2.1*	**2.1**	*0.02*	1 U		1 U		**420**	*6.7*	***8.8***
	ATR-MW68-G121316	12/13/16	5 U		**130**	*1.3*	5 U		5 U		5 U		**2,400**	*38.4*	***40***
Source - Inside	ATR-MW71(33)-G050613	5/6/13	100 U		**38,000**	*392*	**240**	*2.5*	200 U		100 U		**7,500**	*120*	***514***
	ATR-MW71-G031516	3/15/16	5 U		**110**	*1.1*	5 U		5 U		5 U		**1,000**	*16*	***17***
	ATR-MW71-G062016	6/20/16	1 U		**26**	*0.3*	1 U		1 U		1 U		**300**	*4.8*	***5.1***
	ATR-MW71-G092916	9/29/16	1 U		**8.8**	*0.09*	1 U		1 U		1 U		**140**	*2.2*	***2.3***
	ATR-MW71-G121216	12/12/16	1 U		**8.7**	*0.09*	1 U		1 U		1 U		**270**	*4.3*	***4.4***
Source - Inside	ATR-MW72(32)-G030613	3/6/13	**390**	*4.0*	**87,000**	*897*	**620**	*6.4*	200 U		100 U		**8,300**	*133*	***1,041***
	ATR-MW72(32)-G050613	5/6/13	**460**	*4.7*	**97,000**	*1,001*	**720**	*7.4*	500 U		250 U		**11,000**	*176*	***1,189***
	ATR-MW72-G031516	3/15/16	1 U		**48**	*0.5*	1 U		1 U		1 U		**88**	*1.4*	***1.9***
	ATR-MW72-G062016	6/20/16	1 U		**16**	*0.2*	1 U		1 U		1 U		**31**	*0.50*	***0.66***
	ATR-MW72-G092916	9/29/16	1 U		**11**	*0.11*	1 U		1 U		1 U		**40**	*0.64*	***0.75***
	ATR-MW72-G121316	12/13/16	1 U		**10**	*0.10*	1 U		1 U		1 U		**31**	*0.50*	***0.60***
Source - Inside	ATR-MW76(30)-G030513	3/5/13	**92**	*0.9*	**19,000**	*196*	**210**	*2.2*	40 U		20 U		**4,100**	*66*	***265***
	ATR-MW76(30)-G050613	5/6/13	20 U		**7,100**	*73*	**49**	*0.5*	40 U		20 U		**650**	*10*	***84***
	ATR-MW76-G031516	3/15/16	**21**	*0.2*	**5,500**	*57*	**50**	*0.5*	20 U		20 U		**6,000**	*96*	***153***
	ATR-MW76-G062016	6/20/16	**31**	*0.3*	**8,700**	*90*	**82**	*0.8*	1 U		1 U		**22,000**	*352*	***443***
	ATR-MW76-G092916	9/29/16	50 U		**9,000**	*93*	**64**	*0.7*	50 U		50 U		**18,000**	*288*	***382***
	ATR-MW76-G121416	12/14/16	50 U		**4,900**	*51*	50 U		50 U		50 U		**13,000**	*208*	***259***
Source - Inside	ATR-MW77(41)-G030513	3/5/13	**3**	*0.03*	**550**	*5.7*	**4.4**	*0.05*	2 U		1 U		**84**	*1.3*	***7.1***
	ATR-MW77(41)-G050613	5/6/13	1 U		**48**	*0.50*	1 U		2 U		1 U		**11**	*0.18*	***0.67***
	ATR-MW77-G031516	3/15/16	1 U		**1.8**	*0.02*	1 U		1 U		1 U		**6.7**	*0.11*	***0.13***
	ATR-MW77-G062016	6/20/16	1 U		1 U		1 U		1 U		1 U		**2.7**	*0.04*	***0.04***
	ATR-MW77-G092916	9/29/16	1 U		**1.2**	*0.01*	1 U		1 U		1 U		1 U		***0.01***
	ATR-MW77-G121416	12/14/16	1 U		**4.5**	*0.05*	1 U		1 U		1 U		**17**	*0.27*	***0.32***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Source - Inside	ATR-MW78(35)-G030513	3/5/13	**8.2**	*0.08*	**2,700**	*28*	**16**	*0.2*	10 U		5 U		**77**	*1.2*	***29***
	ATR-MW78(35)-G050613	5/6/13	5 U		**360**	*3.7*	5 U		10 U		5 U		**540**	*8.6*	***12***
	ATR-MW78-G031516	3/15/16	1 U		**1.6**	*0.02*	1 U		1 U		1 U		**8.8**	*0.14*	***0.16***
	ATR-MW78-G062016	6/20/16	1 U		**2.9**	*0.03*	1 U		1 U		1 U		1 U		***0.03***
	ATR-MW78-G092916	9/29/16	1 U		**1.5**	*0.02*	1 U		1 U		1 U		1 U		***0.02***
	ATR-MW78-G121416	12/14/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone A	ATR-MW6C-G092612	9/26/12	10 U		**3,600**	*37*	10 U		20 U		10 U		**1,200**	*19*	***56***
	ATR-MW6C-G030513	3/5/13	5 U		**2,400**	*25*	**13**	*0.13*	10 U		5 U		**740**	*12*	***37***
	ATR-MW6C-G050713	5/7/13	5 U		**1,800**	*19*	**10**	*0.10*	10 U		5 U		**1,200**	*19*	***38***
	ATR-MW6C-G050713R	5/7/13	5 U		**1,800**	*19*	**12**	*0.12*	10 U		5 U		**1,500**	*24*	***43***
	ATR-MW6C-G082815	8/26/15	2 U		**410**	*4.2*	2 U		2 U		2 U		**66**	*1.1*	***5.3***
	ATR-MW6C-G022316	2/23/16	1 U		**120**	*1.2*	1 U		1 U		1 U		**170**	*2.7*	***4.0***
	ATR-MW6C-G061616	6/16/16	1 U		**50**	*0.5*	1 U		1 U		1 U		**170**	*2.7*	***3.2***
	ATR-MW6C-G092816	9/28/16	1 U		**280**	*2.9*	**1.8**	*0.02*	1 U		**1.8**	*0.01*	**360**	*5.8*	***8.7***
	ATR-MW6C-G020117	2/1/17	**3.1**	*0.03*	**890**	*9.2*	**5.2**	*0.05*	2 U		2 U		**1,500**	*24*	***33***
Zone A	ATR-MW12-G050613	5/6/13	25 U		**11,000**	*113*	25 U		50 U		25 U		**700**	*11*	***125***
	ATR-MW12-G082615	8/26/15	10 U		**2,900**	*30*	**14**	*0.14*	10 U		10 U		**560**	*9.0*	***39***
	ATR-MW12-G022416	2/24/16	10 U		**1,800**	*19*	10 U		10 U		10 U		**2,600**	*42*	***60***
	ATR-MW12-G061616	6/16/16	5 U		**630**	*6.5*	5 U		5 U		5 U		**1,300**	*21*	***27***
	ATR-MW12-G092816	9/28/16	1 U		**260**	*2.7*	**1.6**	*0.02*	1 U		1 U		**270**	*4.3*	***7.0***
	ATR-MW12-G020117	2/1/17	1 U		**230**	*2.4*	**1.6**	*0.02*	1 U		1 U		**190**	*3.0*	***5.4***
Zone A	ATR-MW13-G092712	9/27/12	10 U		**4,900**	*51*	**31**	*0.32*	20 U		10 U		**440**	*7.0*	***58***
	ATR-MW13-G050613	5/6/13	10 U		**3,000**	*31*	10 U		20 U		10 U		**1,600**	*26*	***57***
	ATR-MW13-G082615	8/26/15	10 U		**3,400**	*35*	**16**	*0.17*	10 U		10 U		**870**	*14*	***49***
	ATR-MW13-G030216	3/2/16	**4.0**	*0.04*	**880**	*9.1*	**7.2**	*0.07*	2 U		2 U		**610**	*10*	***19***
	ATR-MW13-G061616	6/16/16	1 U		**190**	*2.0*	**1.0**	*0.01*	1 U		1 U		**96**	*1.5*	***3.5***
	ATR-MW13-G092816	9/28/16	1 U		**150**	*1.5*	1 U		1 U		1 U		**29**	*0.46*	***2.0***
	ATR-MW13-G020117	2/1/17	1 U		**70**	*0.72*	1 U		1 U		1 U		**47**	*0.75*	***1.5***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone A	ATR-MW62(36)-G050213	5/2/13	10 U		**2,400**	*25*	10 U		20 U		10 U		**2,000**	*32*	***57***
	ATR-MW62-G082715	8/27/15	20 U		**5,600**	*58*	**21**	*0.22*	20 U		20 U		**1,600**	*26*	***84***
	ATR-MW62-G022316	2/23/16	1 U		**37**	*0.4*	1 U		1 U		1 U		**180**	*2.9*	***3.3***
	ATR-MW62-G061616	6/16/16	1 U		**4.8**	*0.05*	1 U		1 U		1 U		**39**	*0.6*	***0.67***
	ATR-MW62-G092916	9/29/16	1 U		**1.7**	*0.02*	1 U		1 U		1 U		**7.1**	*0.11*	***0.13***
	ATR-MW62-G020117	2/1/17	1 UJ		**2.5 J**	*0.03*	1 UJ		1 UJ		1 UJ		**73 J**	*1.2*	***1.2***
Zone A	ATR-MW20(35)-G050713	5/7/13	5 U		**360**	*3.7*	5 U		10 U		5 U		**510**	*8.2*	***11.9***
	ATR-MW20(35)-G082715	8/27/15	1 U		**180**	*1.9*	**1.4**	*0.01*	**1.8**	*0.01*	**3.5**	*0.03*	**200**	*3.2*	***5.1***
	ATR-MW20(35)-G082715R	8/27/15	1 U		**180**	*1.9*	**1.2**	*0.01*	**1.8**	*0.01*	**3.5**	*0.03*	**250**	*4.0*	***5.9***
	ATR-MW20(35)-G022316	2/23/16	1 U		**27**	*0.3*	1 U		1 U		1 U		**99**	*1.6*	***1.9***
	ATR-MW20(35)-G022316R	2/23/16	1 U		**29**	*0.3*	1 U		1 U		1 U		**96**	*1.5*	***1.8***
	ATR-MW20(35)-G061616	6/16/16	1 U		**1.7**	*0.02*	1 U		1 U		1 U		**12**	*0.19*	***0.21***
	ATR-MW20(35)-G061616R	6/16/16	1 U		**2.1**	*0.02*	1 U		1 U		1 U		**12**	*0.19*	***0.21***
	ATR-MW20(35)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW20(35)-G092816R	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW20(35)-G020117	2/1/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW20(35)-G020117R	2/1/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone A	ATR-MW20(51)-G050713	5/7/13	**3.4**	*0.04*	**670**	*6.9*	**3.3**	*0.03*	2 U		1 U		**270**	*4.3*	***11.3***
	ATR-MW20(51)-G050713R	5/7/13	**3.2**	*0.03*	**570**	*5.9*	**3.4**	*0.04*	2 U		1 U		**230**	*3.7*	***9.6***
	ATR-MW20(51)-G082715	8/27/15	1 U		**350**	*3.6*	**1.7**	*0.02*	1 U		1 U		**210**	*3.4*	***7.0***
	ATR-MW20(51)-G022316	2/23/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW20(51)-G061616	6/16/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW20(51)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW20(51)-G020117	2/1/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone A	ATR-MW82(58)-G030513	3/5/13	1 U		**13**	*0.13*	**1.7**	*0.02*	2 U		**8.4**	*0.06*	**9.9**	*0.16*	***0.37***
	ATR-MW82(58)-G050613	5/7/13	1 U		**12**	*0.12*	1 U		2 U		**7.6**	*0.06*	**17**	*0.27*	***0.45***
	ATR-MW82-G082615	8/26/15	1 U		**21**	*0.22*	**1.8**	*0.02*	1 U		**8.3**	*0.06*	**15**	*0.24*	***0.54***
	ATR-MW82-G022316	2/23/16	1 U		**4.8**	*0.05*	**1.5**	*0.02*	1 U		1 U		**9.8**	*0.16*	***0.22***
	ATR-MW82-G061616	6/16/16	1 U		1 U		**1.1**	*0.01*	1 U		1 U		1 U		***0.01***
	ATR-MW82-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW82-G020117	2/1/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone A	ATR-OW1(28)-G121714	12/17/14	**7.2**	*0.07*	**1,300**	*13*	**11**	*0.11*	1 U		1 U		**500**	*8.0*	***21.6***
	ATR-OW1(S)-G082715	8/27/15	2 U		**270**	*2.8*	2 U		2 U		2 U		**240**	*3.8*	***6.6***
	ATR-OW1(28)-G02216	2/24/16	5 UJ		**530 J**	*5.5*	5 UJ		5 UJ		5 UJ		**850 J**	*13.6*	***19.1***
	ATR-OW1(28)-G061616	6/16/16	1 U		**18**	*0.2*	1 U		1 U		1 U		**26**	*0.4*	***0.60***
	ATR-OW1(28)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW1(28)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		**2.3**	*0.04*	***0.04***
Zone A	ATR-OW1(39)-G121714	12/17/14	**2.1**	*0.02*	**540**	*5.6*	1 U		1 U		1 U		**650**	*10*	***16***
	ATR-OW1(D)-G082715	8/27/15	1 U		**180**	*1.9*	1 U		1 U		1 U		**370**	*5.9*	***7.8***
	ATR-OW1(39)-G022916	2/29/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW1(39)-G061616	6/16/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW1(39)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW1(39)-G020117	2/1/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone B	ATR-MW14-G092712	9/27/12	1 U		**53**	*0.55*	**2.3**	*0.02*	2 U		**390**	*3.0*	**30**	*0.48*	***4.0***
	ATR-MW14-G030513	3/5/13	**1.2**	*0.01*	**60**	*0.62*	**2.7**	*0.03*	2 U		**380**	*2.9*	**6.1**	*0.10*	***3.6***
	ATR-MW14-G050213	5/2/13	1 U		**55**	*0.57*	**2.3**	*0.02*	2 U		**320**	*2.4*	**4.2**	*0.07*	***3.1***
	ATR-MW14-G100815	10/8/15	2 U		**110**	*1.1*	**3.0**	*0.03*	2 U		**570 J**	*4.3*	**3.6**	*0.06*	***5.6***
	ATR-MW14-G022916	2/29/16	2 U		**700**	*7.2*	**6.4**	*0.07*	2 U		**5.1**	*0.04*	**340**	*5.4*	***12.8***
	ATR-MW14-G061516	6/15/16	1 U		**20**	*0.2*	**1.5**	*0.02*	1 U		**2.2**	*0.02*	**23**	*0.4*	***0.61***
	ATR-MW14-G092816	9/28/16	1 U		**2.0**	*0.02*	1 U		1 U		1 U		**2.3**	*0.04*	***0.06***
	ATR-MW14-G020117	2/1/17	1 U		**1.6**	*0.02*	1 U		1 U		1 U		**1.9**	*0.03*	***0.05***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone B	MTR-MW24(24.9)-6082213	7/22/13	1 U		1 U		1 U		2 U		1 U		1 U		***0.00***
	ATR-MW24 (24.9)-G100815	10/8/15	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW24(24.9)-G022916	2/29/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW24(24.8)-G061516	6/15/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW24(24.9)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW24(24.9)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone B	ATR-MW24(55.4)-G030513	3/5/13	1 U		**61**	*0.63*	**5.9**	*0.06*	2 U		**130**	*1.0*	**1.6**	*0.03*	***1.7***
	ATR-MW24(55.4)-G050213	5/2/13	1 U		**57**	*0.59*	**4.5**	*0.05*	2 U		**110**	*0.84*	1 U		***1.5***
	ATR-MW24(55.4)-G050213R	5/2/13	1 U		**64**	*0.66*	**5.5**	*0.06*	2 U		**110**	*0.84*	1 U		***1.6***
	ATR-MW24 (55.9)-G100815	10/8/15	1 U		**49**	*0.51*	**2.5**	*0.03*	1 U		**110**	*0.84*	**1.0**	*0.02*	***1.4***
	ATR-MW24(55.9)-G022916	2/29/16	1 U		**56**	*0.58*	**2.8**	*0.03*	1 U		**130**	*0.99*	**1.1**	*0.02*	***1.6***
	ATR-MW24(55.4)-G061516	6/15/16	1 U		**47**	*0.48*	**2.2**	*0.02*	1 U		**110**	*0.84*	1 U		***1.3***
	ATR-MW24(55.4)-G092816	9/28/16	1 U		**46**	*0.47*	**2.1**	*0.02*	1 U		**72**	*0.55*	1 U		***1.0***
	ATR-MW24(55.4)-G013117	1/31/17	1 U		**130**	*1.3*	**2.7**	*0.03*	1 U		**1.4**	*0.01*	**2.3**	*0.04*	***1.4***
Zone B	ATR-OW2(33)-G121814	12/18/14	1 U		**180**	*1.9*	1 U		1 U		1 U		**140**	*2.2*	***4.1***
	ATR-OW2 (33)-G100815	10/8/15	**5.3**	*0.05*	**2,000**	*21*	**9.2**	*0.09*	5 U		5 U		**1,600**	*26*	***46***
	ATR-OW2(33)-G022916	2/29/16	1 U		**320**	*3.3*	**1.9**	*0.02*	1 U		1 U		**520**	*8.3*	***11.6***
	ATR-OW2(33)-G061516	6/15/16	**7.1**	0.07	**2,300**	*24*	**11**	*0.11*	5 U		5 U		**1,600**	*25.6*	***50***
	ATR-OW2(33)-G092716	9/27/16	1 U		**54**	*0.56*	1 U		1 U		1 U		**120**	*1.9*	***2.5***
	ATR-OW2(33)-G013117	1/31/17	1 U		**5.2**	*0.05*	1 U		1 U		1 U		**18**	*0.29*	***0.34***
Zone B	ATR-OW2(53)-G121814	12/18/14	1 U		**1,100**	*11*	**7.3**	*0.08*	1 U		1 U		**1,500**	*24*	***35***
	ATR-OW2 (53)-G100815	10/8/15	1 U		**30**	*0.31*	1 U		1 U		1 U		**19**	*0.30*	***0.61***
	ATR-OW2(53)-G022916	2/29/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW2(53)-G061616	6/16/16	5 U		5 U		5 U		5 U		5 U		5 U		***0.00***
	ATR-OW2(53)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW2(53)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone B	ATR-OW3(35)-G121614	12/16/14	1 U		300	*3.1*	1.7	*0.02*	1 U		8	*0.06*	94	*1.5*	***4.7***
	ATR-OW3 (35)-G100715	10/7/15	1 U		150	*1.5*	1.3	*0.01*	1 U		1 U		84	*1.3*	***2.9***
	ATR-OW3(35)-G022916	2/29/16	1 U		24	*0.2*	1 U		1 U		1 U		29	*0.5*	***0.71***
	ATR-OW3(35)-G061516	6/15/16	1 U		1 U		1 U		1 U		1 U		3.0	*0.05*	***0.05***
	ATR-OW3(35)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW3(35)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone B	ATR-OW3(55)-G121614	12/16/14	1 U		110	*1.1*	45	*0.46*	1 U		680	*5.2*	3.3	*0.05*	***6.8***
	ATR-OW3 (55)-G100715	10/7/15	1 UJ		55 J	*0.57*	9.1 J	*0.09*	1 U		430	*3.3*	1.0 J	*0.02*	***3.9***
	ATR-OW3 (55)-G100715 R	10/7/15	1.1 J	*0.01*	89 J	*0.92*	21 J	*0.22*	1 U		430	*3.3*	2.4 J	*0.04*	***4.5***
	ATR-OW3(55)-G022916	2/29/16	10 U		1,600 J	*16.5*	10 U		10 U		10 U		22	*0.35*	***16.9***
	ATR-OW3(55)-G022916 R	2/29/16	10 U		1,200 J	*12.4*	37	*0.38*	10 U		10 U		24	*0.38*	***13.1***
	ATR-OW3(55)-G061516	6/15/16	2 U		700	*7.2*	22	*0.23*	2 U		2 U		80	*1.3*	***8.7***
	ATR-OW3(55)-G092716	9/27/16	1 U		370	*3.8*	17	*0.18*	1 U		1 U		290	*4.6*	***8.6***
	ATR-OW3(55)-G013117	1/31/17	NA		NA		NA		NA		NA		NA		
Zone C	ATR-MW15-G041312	4/13/12	5 U		1,800	*19*	57	*0.59*	10 U		28	*0.21*	350	*5.6*	***25***
	ATR-MW15-G041312R	4/13/12	5 U		1,300	*13*	40	*0.41*	10 U		27	*0.21*	220	*3.5*	***18***
	ATR-MW15-G030613	3/6/13	15	*0.15*	2,800	*29*	71	*0.73*	10 U		200	*1.5*	380	*6.1*	***37***
	ATR-MW15-G050213	5/2/13	10 U		2,900	*30*	62	*0.64*	20 U		240	*1.8*	300	*4.8*	***37***
	ATR-MW15-G050213R	5/2/13	14	*0.14*	2,800	*29*	67	*0.69*	10 U		220	*1.7*	300	*4.8*	***36***
	ATR-MW15-6082213	7/22/13	11	*0.11*	2,100	*22*	58	*0.60*	10 U		160	*1.2*	190	*3.0*	***27***
	ATR-MW15-G101315	10/13/15	55	*0.57*	4,600	*47*	350	*3.6*	10 U		690	*5.3*	460	*7.4*	***64***
	ATR-MW15-G030116	3/1/16	24	*0.25*	4,500	*46*	130	*1.3*	20 U		20 U		360	*5.8*	***54***
	ATR-MW15-G061516	6/15/16	22 J	*0.23*	4,300 J	*44*	140 J	*1.4*	10 UJ		10 UJ		340 J	*5.4*	***51***
	ATR-MW15-G092716	9/27/16	15	0.15	3,700	*38.2*	140	*1.44*	5 U		5 U		1,200	*19.2*	***59***
	ATR-MW15-G013117	1/31/17	1 U		65	*0.67*	56	*0.58*	1 U		1 U		32	*0.51*	***1.8***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone C	ATR-MW25(16.4)-G092712	9/27/12	5 U		**1,800**	*19*	5 U		10 U		5 U		**630**	*10*	***29***
	ATR-MW25(16.4)-G030613	3/6/13	5 U		**2,600**	*27*	**15**	*0.15*	10 U		5 U		**560**	*9.0*	***36***
	ATR-MW25(16.4)-G050213	5/2/13	10 U		**2,500**	*26*	10 U		20 U		10 U		**520**	*8.3*	***34***
	ATR-MW25(16.4)-G101315	10/13/15	**14**	*0.14*	**3,600**	*37*	**38**	*0.39*	10 U		10 U		**670**	*11*	***48***
	ATR-MW25(16.4)-G030116	3/1/16	2 U		**480**	*5.0*	2 U		2 U		2 U		**320**	*5.1*	***10***
	ATR-MW25(16.4)-G061516	6/15/16	1 U		**49**	*0.51*	1 U		1 U		1 U		**16**	*0.26*	***0.76***
	ATR-MW25(16.4)-G092716	9/27/16	1 U		**6.4**	*0.1*	1 U		1 U		1 U		**6.0**	*0.1*	***0.16***
	ATR-MW25(16.4)-G013117	1/31/17	1 U		**25**	*0.26*	1 U		1 U		1 U		**11**	*0.18*	***0.43***
Zone C	ATR-MW25(32.6)-G041612	4/16/12	**1.8**	*0.02*	**590**	*6.09*	**2.0**	*0.02*	2 U		1 U		**270**	*4.3*	***10***
	ATR-MW25(32.6)-G030613	3/6/13	10 U		**1,300**	*13*	10.0 U		20 U		10 U		**440**	*7.0*	***20***
	ATR-MW25(32.6)-G050213	5/2/13	5 U		**1,500**	*15*	5.0 U		10 U		5 U		**360**	*5.8*	***21***
	ATR-MW25(32.6)-G061914	6/19/14	5 U		**1,200**	*12*	5.0 U		5 U		**14 J**	*0.11*	**300 J**	*4.8*	***17***
	ATR-MW25(32.6)-G101315	10/13/15	5 U		**1,600**	*17*	**7.4**	*0.08*	5 U		**78**	*0.59*	**980**	*16*	***33***
	ATR-MW25(32.6)-G030116	3/1/16	2 U		**420**	*4.3*	**2.6**	*0.03*	2 U		2 U		**500**	*8.0*	***12***
	ATR-MW25(32.6)-G061516	6/15/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW25(32.6)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW25(32.6)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone C	MTR-MW25(45.2)-6082213	7/22/13	**3.1**	*0.03*	**750**	*7.7*	**71**	*0.73*	4 UJ		**7.1**	*0.05*	**92**	*1.5*	***10***
	ATR-MW25(45.2)-G101315	10/13/15	10 U		**1,800**	*19*	**200**	*2.1*	10 U		**15**	*0.11*	**220**	*3.5*	***24***
	ATR-MW25(45.2)-G030116	3/1/16	**7.5**	*0.08*	**2,400**	*24.8*	**180**	*1.9*	2 U		2 U		**370**	*5.9*	***33***
	ATR-MW25(45.2)-G061516	6/15/16	**6.6**	*0.07*	**1,700**	*17.5*	**65**	*0.7*	5 U		5 U		**870**	*13.9*	***32***
	ATR-MW25(45.2)-G092716	9/27/16	10 U		**190**	*2.0*	10 U		10 U		10 U		**480**	*7.7*	***9.6***
	ATR-MW25(45.2)-G013117	1/31/17	2 U		2 U		2 U		2 U		2 U		2 U		***0.00***
Zone C	ATR-OW4(35)-G121614	12/16/14	1 U		**210**	*2.2*	1 U		1 U		**2.4**	*0.02*	**540**	*8.6*	***11***
	ATR-OW4(35)-G101315	10/13/15	5 U		**170**	*1.8*	5 U		5 U		5 U		**230**	*3.7*	***5.4***
	ATR-OW4(35)-G030116	3/1/16	5 U		**760 J**	*7.8*	**7.6**	*0.08*	5 U		5 U		**480**	*7.7*	***16***
	ATR-OW4(35)-G061516	6/15/16	5 U		**290**	*3.0*	5 U		5 U		5 U		**930**	*14.9*	***18***
	ATR-OW4(35)-G092716	9/27/16	1 U		**53**	*0.5*	**3.0**	*0.03*	1 U		1 U		**240**	*3.8*	***4.4***
	ATR-OW4(35)-G013117	1/31/17	1 U		**17**	*0.2*	**3.2**	*0.03*	1 U		1 U		**66**	*1.1*	***1.3***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone C	ATR-OW4(54)-G121614	12/16/14	1 U		**2.5**	*0.03*	1 U		1 U		1 U		1 U		***0.03***
	ATR-OW4(54)-G101315	10/13/15	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW4(54)-G030116	3/1/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW4(54)-G061516	6/15/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW4(54)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW4(54)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone D	ATR-MW16-G092612	9/26/12	1 U		**360**	*3.7*	**11**	*0.11*	2 U		**42**	*0.32*	**130**	*2.1*	***6.2***
	ATR-MW16-G030613	3/6/13	1 U		**370**	*3.8*	**12**	*0.12*	2 U		**27**	*0.21*	**260**	*4.2*	***8.3***
	ATR-MW16-G030613R	3/6/13	1 U		**340**	*3.5*	**12**	*0.12*	2 U		**27**	*0.21*	**210**	*3.4*	***7.2***
	ATR-MW16-G040313	4/3/13	1 U		**390**	*4.0*	**12**	*0.12*	2 U		**18**	*0.14*	**290**	*4.6*	***8.9***
	ATR-MW16-G050213	5/2/13	1 U		**410**	*4.2*	**13**	*0.13*	2 U		**19**	*0.14*	**200**	*3.2*	***7.7***
	ATR-MW16-G100715	10/7/15	**1.7**	*0.02*	**480**	*5.0*	**10**	*0.10*	1 U		**2.2**	*0.02*	**170**	*2.7*	***7.8***
	ATR-MW16-G030116	3/1/16	2 U		**630**	*6.5*	**10**	*0.10*	2 U		2 U		**250**	*4.0*	***11***
	ATR-MW16-G061416	6/14/16	1 U		**320**	*3.3*	**2.4**	*0.02*	1 U		1 U		**270**	*4.3*	***7.6***
	ATR-MW16-G092616	9/26/16	1 U		**100**	*1.0*	1 U		1 U		1 U		**200**	*3.2*	***4.2***
	ATR-MW16-G013017	1/30/17	1 U		**15**	*0.2*	1 U		1 U		1 U		**95**	*1.5*	***1.7***
Zone D	ATR-MW17-G092612	9/26/12	1 U		**67**	*0.69*	**2.4**	*0.02*	2 U		**270**	*2.1*	1 U		***2.8***
	ATR-MW17-G030613	3/6/13	1 U		**56**	*0.58*	**1.9**	*0.02*	2 U		**200**	*1.5*	1 U		***2.1***
	ATR-MW17-G030613R	3/6/13	1 U		**58**	*0.60*	**1.9**	*0.02*	2 U		**220**	*1.7*	**1.7**	*0.03*	***2.3***
	ATR-MW17-G040313	4/3/13	1 U		**46**	*0.47*	**1.5**	*0.02*	2 U		**210**	*1.6*	1 U		***2.1***
	ATR-MW17-G050213	5/2/13	1 U		**51**	*0.53*	**1.8**	*0.02*	2 U		**190**	*1.4*	1 U		***2.0***
	ATR-MW17-G100715	10/7/15	1 U		**41**	*0.42*	**1.6**	*0.02*	1 U		**190 J**	*1.4*	1 U		***1.9***
	ATR-MW17-G030116	3/1/16	1 U		**44**	*0.45*	**1.7**	*0.02*	1 U		**190**	*1.4*	1 U		***1.9***
	ATR-MW17-G061416	6/14/16	1 U		**41**	*0.42*	**1.8**	*0.02*	1 U		**220**	*1.7*	1 U		***2.1***
	ATR-MW17-G092616	9/26/16	1 U		**36**	*0.37*	**1.5**	*0.02*	1 U		**170**	*1.3*	1 U		***1.7***
	ATR-MW17-G013017	1/30/17	1 U		**13**	*0.13*	1 U		1 U		**76**	*0.58*	1 U		***0.71***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone D	ATR-MW26(17.5)-G092712	9/27/12	**2.8**	*0.03*	**770**	*7.9*	**12**	*0.12*	2 U		**4.1**	*0.03*	**380**	*6.1*	***14***
	ATR-MW26(17.5)-G010813	1/8/13	5 U		**1,200**	*12*	**15**	*0.15*	10 U		5 U		**500**	*8.0*	***21***
	ATR-MW26(17.5)-G030613	3/6/13	5 U		**1,200**	*12*	**14**	*0.14*	10 U		5 U		**430**	*6.9*	***19***
	ATR-MW26(17.5)-G040313	4/3/13	5 U		**1,200**	*12*	**12**	*0.12*	10 U		5 U		**650**	*10*	***23***
	ATR-MW26(17.5)-G050313	5/3/13	5 U		**880**	*9.1*	**11**	*0.11*	10 U		5 U		**530**	*8.5*	***18***
	ATR-MW26 (17.5)-G100715	10/7/15	1 U		**510**	*5.3*	**3.2**	*0.03*	1 U		1 U		**170**	*2.7*	***8.0***
	ATR-MW26(17.5)-G030116	3/1/16	1 U		**170**	*1.8*	1 U		1 U		1 U		**110**	*1.8*	***3.5***
	ATR-MW26(17.5)-G061416	6/14/16	1 U		**13**	*0.1*	1 U		1 U		1 U		**11**	*0.2*	***0.31***
	ATR-MW26(17.5)-G092616	9/26/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW26(17.5)-G013017	1/30/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone D	ATR-MW26(28.8)-G092712	9/27/12	1 U		**45**	*0.46*	**2.2**	*0.02*	2 U		**22**	*0.17*	**13**	*0.21*	***0.86***
	ATR-MW26(28.8)-G092712R	9/27/12	1 U		**47**	*0.48*	**2.3**	*0.02*	2 U		**24**	*0.18*	**14**	*0.22*	***0.92***
	ATR-MW26(28.8)-G010813	1/8/13	**1.4**	*0.01*	**480**	*5.0*	**9.9**	*0.10*	2 U		1 U		**130**	*2.1*	***7.1***
	ATR-MW26(28.8)-G030613	3/6/13	**1.2**	*0.01*	**330**	*3.4*	**10**	*0.10*	2 U		1 U		**150**	*2.4*	***5.9***
	ATR-MW26(28.8)-G040313	4/3/13	**1.5**	*0.02*	**460**	*4.7*	**11**	*0.11*	2 U		**1.4**	*0.01*	**240**	*3.8*	***8.7***
	ATR-MW26(28.8)-G050313	5/3/13	**2.3**	*0.02*	**490**	*5.1*	**14**	*0.14*	2 U		**1.9**	*0.01*	**200**	*3.2*	***8.4***
	ATR-MW26 (28.8)-G100715	10/7/15	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW26(28.8)-G030116	3/1/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW26(28.8)-G061416	6/14/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW26(28.8)-G092616	9/26/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-MW26(28.8)-G013017	1/30/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone D	ATR-MW26(58.2)-G041612	4/16/12	1 U		**2.2**	*0.02*	1 U		2 U		**1.8**	*0.01*	1 U		***0.04***
	ATR-MW26(58.2)-G060413	6/4/13	1 U		**2.4**	*0.02*	1 U		2 U		1 U		1 U		***0.02***
	ATR-MW26 (58.8)-G100715	10/7/15	1 U		**8.3**	*0.09*	1 U		1 U		1 U		**3.1**	*0.05*	***0.14***
	ATR-MW26(58.8)-G030116	3/1/16	1 U		**20**	*0.21*	**1.1**	*0.01*	1 U		1 U		**13**	*0.21*	***0.43***
	ATR-MW26(58.2)-G061416	6/14/16	1 U		**10**	*0.10*	**1.1**	*0.01*	1 U		1 U		**26**	*0.42*	***0.53***
	ATR-MW26(58.2)-G092616	9/26/16	1 U		**14**	*0.14*	**2.3**	*0.02*	1 U		1 U		**43**	*0.69*	***0.86***
	ATR-MW26(58.8)-G013017	1/30/17	1 U		**3.0**	*0.03*	**2.3**	*0.02*	1 U		1 U		**5.1**	*0.08*	***0.14***
	ATR-MW26(58.8)-G013017R	1/30/17	1 U		**3.0**	*0.03*	**2.3**	*0.02*	1 U		1 U		**5.3**	*0.08*	***0.14***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone D	ATR-ZVI-2(17.5)-G121812	12/18/12	**2.3**	*0.02*	**1,300**	*13.4*	**12**	*0.12*	2 U		**5.1**	*0.04*	**400**	*6.4*	***20***
	ATR-ZVI-2(17.5)-G010813	1/8/13	5 U		**1,200**	*12.4*	**12**	*0.12*	10 U		5 U		**480**	*7.7*	***20***
	ATR-ZVI-2(17.5)-G030613	3/6/13	5 U		**1,500**	*15.5*	**13**	*0.13*	10 U		5 U		**460**	*7.4*	***23***
	ATR-ZVI-2(17.5)-G040313	4/3/13	5 U		**1,500**	*15.5*	**11**	*0.11*	10 U		5 U		**450**	*7.2*	***23***
	ATR-ZVI-2(17.5)-G050313	5/3/13	5 U		**1,500**	*15.5*	**10**	*0.10*	10 U		5 U		**350**	*5.6*	***21***
	ATR-ZVI2 (17.5)-G100715	10/7/15	1 U		**320**	*3.3*	**2.9**	*0.03*	1 U		1 U		**250**	*4.0*	***7.3***
	ATR-ZVI2(17.5)-G030216	3/2/16	1 U		**1.6**	*0.02*	1 U		1 U		1 U		**9.1**	*0.15*	***0.16***
	ATR-ZVI2(17.5)-G061416	6/14/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-ZVI2(17.5)-G092616	9/26/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-ZVI2(17.5)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone D	ATR-ZVI-2(32.5)-G121812	12/18/12	**3.9**	*0.04*	**580**	*6.0*	**10**	*0.10*	2 U		**16**	*0.12*	**210**	*3.4*	***10***
	ATR-ZVI-2(32.5)-G010813	1/8/13	**4.2**	*0.04*	**670**	*6.9*	**13**	*0.13*	2 U		**3.2**	*0.02*	**280**	*4.5*	***12***
	ATR-ZVI-2(32.5)-G030613	3/6/13	**4.6**	*0.05*	**650**	*6.7*	**16**	*0.17*	2 U		1 U		**280**	*4.5*	***11***
	ATR-ZVI-2(32.5)-G030613R	3/6/13	**4.5**	*0.05*	**650**	*6.7*	**16**	*0.17*	2 U		1 U		**280**	*4.5*	***11***
	ATR-ZVI-2(32.5)-G040313	4/3/13	**3.6**	*0.04*	**710**	*7.3*	**14**	*0.14*	2 U		1 U		**410**	*6.6*	***14***
	ATR-ZVI-2(32.5)-G040313R	4/3/13	**3.5**	*0.04*	**710**	*7.3*	**14**	*0.14*	2 U		1 U		**410**	*6.6*	***14***
	ATR-ZVI-2(32.5)-G050313	5/3/13	**3.9**	*0.04*	**600**	*6.2*	**15**	*0.15*	2 U		1 U		**340**	*5.4*	***12***
	ATR-ZVI2 (32.5)-G100715	10/7/15	**2.2**	*0.02*	**320**	*3.3*	**2.8**	*0.03*	1 U		1 U		**130**	*2.1*	***5.4***
	ATR-ZVI2(32.5)-G030116	3/1/16	1 U		**160**	*1.7*	1 U		1 U		1 U		**140**	*2.2*	***3.9***
	ATR-ZVI2(32.5)-G061416	6/14/16	1 U		**30**	*0.3*	1 U		1 U		1 U		**65**	*1.0*	***1.3***
	ATR-ZVI2(32.5)-G092616	9/26/16	1 U		**5.9**	*0.06*	1 U		1 U		1 U		**51**	*0.82*	***0.88***
	ATR-ZVI2(32.5)-G013117	1/31/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone D	ATR-OW5(16)-G121714	12/17/14	1 U		**780**	*8.0*	**5.6**	*0.06*	1 U		**9.4**	*0.07*	**230**	*3.7*	***12***
	ATR-OW5 (16)-G100715	10/7/15	2 U		**720**	*7.4*	**6.1**	*0.06*	2 U		2 U		**190**	*3.0*	***11***
	ATR-OW5(16)-G030116	3/1/16	1 U		**350**	*3.6*	**3.1**	*0.03*	1 U		1 U		**250**	*4.0*	***7.6***
	ATR-OW5(16)-G061416	6/14/16	1 U		**230**	*2.4*	**1.2**	*0.01*	1 U		1 U		**47**	*0.75*	***3.1***
	ATR-OW5(16)-G092716	9/27/16	1 U		**48**	*0.5*	1 U		1 U		1 U		**49**	*0.78*	***1.3***
	ATR-OW5(16)-G013017	1/30/17	1 U		1 U		1 U		1 U		1 U		**2.2**	*0.04*	***0.04***

Table 13 (continued)

Summary of Target VOC Concentrations and Molecular Mass
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	VOCs												
			1,1-DCE (96.94)		cis-1,2-DCE (96.94)		trans-1,2-DCE (96.94)		PCE (165.83)		TCE (131.39)		Vinyl Chloride (62.5)		Total Molar Mass
			µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	µg/L	*m/L**	*m/L**
Zone D	ATR-OW5(35)-G121714	12/17/14	1 U		**1,200**	*12.4*	**15**	*0.15*	1 U		**330**	*2.5*	**43**	*0.69*	***16***
	ATR-OW5 (35)-G100715	10/7/15	**5.0**	*0.05*	**1,100**	*11.3*	**5.4**	*0.06*	5 U		5 U		**170**	*2.7*	***14***
	ATR-OW5(35)-G030116	3/1/16	5 U		**980**	*10.1*	**6.5**	*0.07*	5 U		5 U		**260**	*4.2*	***14***
	ATR-OW5(35)-G061416	6/14/16	1 U		**32**	*0.3*	**2.1**	*0.02*	1 U		1 U		**170 J**	*2.7*	***3.1***
	ATR-OW5(35)-G092616	9/26/16	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
	ATR-OW5(35)-G013017	1/30/17	1 U		1 U		1 U		1 U		1 U		1 U		***0.00***
Zone D	ATR-OW5(44)-G121714	12/17/14	1 U		**220**	*2.3*	**6.1**	*0.06*	1 U		**5.5**	*0.04*	**580**	*9.3*	***12***
	ATR-OW5 (54)-G100715	10/7/15	**7.0**	*0.07*	**2,000**	*20.6*	**14**	*0.14*	5 U		5 U		**300**	*4.8*	***26***
	ATR-OW5(54)-G030116	3/1/16	**6.6**	*0.07*	**1,900**	*19.6*	**8.2**	*0.08*	5 U		5 U		**700**	*11*	***31***
	ATR-OW5(45)-G061416	6/14/16	5 U		**1,000**	*10.3*	5 U		5 U		5 U		**670**	*11*	***21***
	ATR-OW5(45)-G092616	9/26/16	1 U		**180**	*1.9*	**1.1**	*0.01*	1 U		1 U		**140**	*2.2*	***4.1***
	ATR-OW5(45)-G013017	1/30/17	1 U		**2.3**	*0.02*	1 U		1 U		1 U		**3.3**	*0.05*	***0.08***

Notes:
J - Estimated concentration, analyte detected below quantitation limit
U - Analyzed but not detected above the MDL
(96.94) - Compound molecular weight in grams per mole
*m/L** - micromole per liter
µg/L - micrograms per liter

Green text is baseline data
Blue text is performance monitoring data
NA - Not Analyzed

Prepared by: RED
Checked by: PJS

Table 14
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentanoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Source - Behind	ATR-MW81(27)-G110512	11/5/12	**2.10E+00 J**	< 1.70E+00	**6.00E-01 J**	< 1.70E+00	**11,000**	**170**	**550**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW81(27)-G020413	2/4/13	NA	NA	NA	NA	NA	NA	NA	0.10 U	**2.4**	**6.9**	**0.44**	**4.9**	**0.16**	**0.071 J**	**0.24**	0.050 U	0.10 U
	ATR-MW81(27)-G030613	3/6/13	**7.17E+03***	< 4.30E+00*	**5.14E+03***	**8.98E+01***	**11,000**	**220**	**640**	**0.20**	**0.80**	**1.2**	**0.12**	**0.89**	**0.066 J**	**0.027 J**	**0.12**	0.050 U	0.10 U
	ATR-MW81(27)-G050313	5/3/13	NA	NA	NA	NA	**11,000**	**230**	**760**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW81(27)-G082715	8/27/15	**2.54E+05**	< 1.00E+00	**9.78E+04**	**4.74E+03**	**8,500**	**150**	**520**	**0.38 J**	**270**	**93**	**3.1 J**	**150**	**0.59 J**	**0.58 J**	**3.5**	**0.29**	**1.4**
	ATR-MW81(27)-G022316	2/23/16	**2.53E+04**	< 1.2E+00	**8.03E+03**	**6.98E+02**	**19,000**	**850**	**1,300**	2.0 U	**410**	**64**	**0.44 J**	**38**	**17**	**1.8**	**13**	**0.067 J**	**6.0**
	ATR-MW81(27)-G061616	6/16/16	NA	NA	NA	NA	**20,000**	**310**	**1,700**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW81(27)-G092916	9/29/16	NA	NA	NA	NA	**21,000**	**280**	**1,500**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW81(27)-G121316	12/13/16	**1.10E+05**	< 5.00E-01	**2.76E+04**	**7.68E+03**	**26,000**	**350**	**1,100**	20 U	**200**	**3.9**	**3.3**	**28**	**1.3**	**0.60 J**	**0.58 J**	**0.17 J**	**7.8**
	MTR-MW59(29)-G092712	9/27/12	**3.18E+04**	< 5.00E-01	**2.17E+02**	**3.07E+04**	**11,000**	**240**	**1,600**	**0.022 J**	**0.021 J**	0.050 U	**0.083 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	MTR-MW59(29)-G092712R	9/27/12	**1.52E+05***	**2.30E+00 J***	**1.66E+03***	**1.48E+05***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MTR-MW59(29)-G020413	2/4/13	NA	NA	NA	NA	NA	NA	NA	**2.8**	**160**	**190**	**6.7 J**	**240**	**6.0**	**3.0**	**6.4**	0.05 U	**4.9**
	MTR-MW59(29)-G030613	3/6/13	**2.28E+05***	< 3.60E+00*	**1.68E+05***	**1.20E+03***	**14,000**	**280**	**9,600**	1.0 U	**86**	**97**	**2.5 J**	**120**	**3.9**	**2.2**	**3.9**	0.05 U	**2.5**
	MTR-MW59(29)-G050313	5/3/13	NA	NA	NA	NA	**13,000**	**250**	**4,900**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW59(29)-G082715	8/27/15	**2.46E+05**	< 5.00E-01	**1.15E+05**	**7.08E+04**	**18,000**	**400**	**4,300**	**0.26 J**	**98**	**110**	**0.53 J**	**24**	**0.31 J**	**0.085 J**	**0.5**	0.2 U	0.5 U
	ATR-MW59(29)-G022316	2/23/16	**7.49E+05**	< 5.00E-01	**1.33E+05**	**2.51E+05**	**21,000**	**420**	**13,000**	20 U	**400**	**72**	**0.15 J**	**37**	**14**	**1.4**	**14**	**0.16 J**	**7.5**
	ATR-MW59(29)-G061716	6/17/16	NA	NA	NA	NA	**24,000**	**170**	**13,000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW59(29)-G061716R	6/17/16	NA	NA	NA	NA	**19,000**	**140**	**10,000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW59(29)-G093016	9/30/16	NA	NA	NA	NA	**16,000**	**130**	**7,400**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW59(29)-G093016R	9/30/16	NA	NA	NA	NA	**18,000**	**140**	**8,000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW59(29)-G121316	12/13/16	**6.20E+04**	< 5.00E-01	**4.34E+03**	**8.82E+03**	**24,000**	**240**	**6,200**	20 U	**260**	**9.5 J**	**4.1**	**32**	**0.95 J**	**0.45 J**	**1.6**	**0.11 J**	**5.0**
	ATR-MW59(29)-G121316R	12/13/16	**8.48E+04**	< 5.00E-01	**7.16E+03**	**1.39E+04**	**24,000**	**230**	**6,200**	20 U	**260**	**9.6 J**	**4.1**	**33**	**0.88 J**	**0.42 J**	**1.7**	**0.11 J**	**5.1**
	ATR-PM2-G110512	11/5/12	**4.66E+01**	< 2.50E+00	**5.50E+00**	**2.90E+00**	**10,000**	**180**	**1,700**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM2-G020413	2/4/13	NA	NA	NA	NA	NA	NA	NA	0.10 U	**0.58**	**0.56**	**0.032 J**	**0.21**	0.15 U	0.15 U	0.070 U	0.050 U	0.10 U
	ATR-PM2-G030613	3/6/13	**4.12E+03***	< 4.00E-01*	**2.71E+03***	**1.18E+02***	**10,000**	**160**	**840**	**0.050 J**	**0.15**	**0.10**	**0.035 J**	**0.059**	0.15 U	0.15 U	0.070 U	0.050 U	0.10 U
	ATR-PM2-G050313	5/3/13	NA	NA	NA	NA	**7,800**	**120**	**620**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM2-G082715	8/27/15	**8.92E+05**	< 5.00E-01	**5.71E+05**	**2.84E+05**	**15,000**	**300**	**2,900**	**0.11**	**39**	**19**	**0.25**	**1.3**	**0.2**	**0.056 J**	**0.15**	0.2 U	0.5 U
	ATR-PM2-G022316	2/23/16	**5.82E+05**	< 5.00E-01	**3.60E+04**	**1.93E+05**	**21,000**	**350**	**8,200**	2.0 U	**77**	**28**	**0.15**	**3.6**	**2.6**	**0.37**	**1.9**	**0.028 J**	**0.26**
	ATR-PM2-G061616	6/16/16	NA	NA	NA	NA	**22,000**	**280**	**10,000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM2-G092916	9/29/16	NA	NA	NA	NA	**21,000**	**360**	**7,800**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM2-G121316	12/13/16	**1.71E+04**	< 5.00E-01	**1.22E+02**	**3.33E+03**	**21,000**	**460**	**6,500**	**0.0087 J**	**2.3**	**0.017 J**	**0.050 J**	**0.0075 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-PM3-G110512	11/5/12	**3.60E+00**	< 1.40E+00	**1.00E+00 J**	< 1.40E+00	**11,000**	**260**	**700**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM3-G020413	2/4/13	NA	NA	NA	NA	NA	NA	NA	**0.056 J**	**0.12**	**0.13**	**0.070 J**	**0.042 J**	0.15 U	0.15 U	0.070 U	` U	0.10 U
	ATR-PM3-G030513	3/5/13	**3.58E+03***	< 9.00E-01*	**1.95E+03***	**7.81E+02***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM3-G050313	5/3/13	NA	NA	NA	NA	**10,000**	**260**	**680**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM3-G082715	8/27/15	**1.06E+04**	< 1.85E+01	**5.91E+03**	**7.24E+02**	**4,000**	**23**	**800**	**360**	**260**	**53**	**31**	**180**	**23**	1.5 U	**0.72**	0.2 U	**0.75**
	ATR-PM3-G022316	2/23/16	**9.44E+02**	**9.00E-01 J**	**1.63E+02**	**5.05E+01**	**13,000**	**270**	**5,100**	20 U	**550**	**33**	**0.84 J**	**78 J**	**4.1 J**	10 U	**6.8 J**	**0.31**	**21**
	ATR-PM3-G061716	6/17/16	NA	NA	NA	NA	**17,000**	**170**	**4,600**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM3-G092916	9/29/16	NA	NA	NA	NA	**17,000**	**180**	**4,400**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-PM3-G121316	12/13/16	**1.42E+02**	< 2.94E+01	**5.82E+01**	< 2.94E+01	**730**	**34**	**190**	**27 J**	**640**	**35 J**	**38 J**	**2,300**	100 U	100 U	**5.8 J**	20 U	**21**

Table 14 (continued)
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentianoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Source - Inside	ATR-MW67(30)-G110712	11/7/12	< 1.43E+01	< 1.43E+01	< 1.43E+01	< 1.43E+01	1,700	75	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW67-G031516	3/15/16	6.10E+01	< 1.70E+00	1.87E+01	1.1E+00 J	1,700	140	1,100	0.017 J	1.1	0.15	0.024 J	0.015 J	0.032 J	0.1 U	0.1 U	0.2 J	0.2 U
	ATR-MW67-G062016	6/20/16	NA	NA	NA	NA	3,000	130	3,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW67-G092916	9/29/16	NA	NA	NA	NA	3,800	170	4,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW67-G121216	12/12/16	1.94E+02	< 1.90E+00	2.81E+01	1.35E+01	6,100	180	3,900	2 U	180	2.3	1.3	4.1	0.25 J	0.26 J	0.12 J	2 U	0.31 J
	ATR-MW68-G031516	3/15/16	3.72E+05	< 1.00E+00	4.38E+04	1.68E+05	2,200	110	3,700	59	120	80	0.085 J	210	1.6	0.1 U	0.93	0.061 J	0.2 J
	ATR-MW68-G061716	6/17/16	NA	NA	NA	NA	5,000	96	6,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW68-G092916	9/29/16	NA	NA	NA	NA	11,000	80	6,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW68-G121316	12/13/16	9.10E+04	< 9.40E+00	1.19E+03	6.29E+03	11,000	52	9,900	20 U	210	28	3.1	19	6.5	0.70 J	5.3	0.075 J	3.1
	ATR-MW71-G031516	3/15/16	7.34E+05	1.30E+00	1.68E+05	2.47E+05	18,000	180	13,000	13 J	92	44	2.2	12	8.5	1.0 U	6.8	0.18 J	1.9
	ATR-MW71-G062016	6/20/16	NA	NA	NA	NA	9,100	66	6,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW71-G092916	9/29/16	NA	NA	NA	NA	9,400	70	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW71-G121216	12/12/16	5.19E+05	< 1.90E+00	7.58E+04	8.92E+04	3,300	33	1,700	200 U	740	430	58	410	63	3.8 J	120	0.66 J	160
	ATR-MW72(32)-G030613	3/6/13	3.29E+01*	< 6.30E+00*	2.17E+01*	< 6.30E+00*	6,100	130	770	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW72-G031516	3/15/16	2.92E+05	2.00E-01 J	5.49E+04	1.61E+05	9,100	140	26,000	54	160	77	1.0 U	100	7.5	0.76 J	5.1	0.38	1.8
	ATR-MW72-G062016	6/20/16	NA	NA	NA	NA	6,600	81	790	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW72-G092916	9/29/16	NA	NA	NA	NA	7,900	60	8,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW72-G121316	12/13/16	4.12E+03	< 2.38E+01	3.52E+01	8.91E+01	6,500	42	4,700	20 U	380	150	5.0	69	8.5	0.97 J	26	0.090 J	18
	ATR-MW76-G031516	3/15/16	5.40E+01	1.28E+01	3.40E+00	1.5E+00 J	1,700	41	150	1 J	38	12	0.088 J	1.3	0.064 J	0.1 J	0.02 J	0.2 U	0.024 J
	ATR-MW76-G062016	6/20/16	NA	NA	NA	NA	2,700	87	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW76-G092916	9/29/16	NA	NA	NA	NA	6,000	110	2,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW76-G121416	12/14/16	5.68E+02	< 1.90E+00	1.29E+02	2.03E+01	4,300	56	2,500	20 U	310	40	18	140	1.7	0.46 J	1.8	0.063 J	3.9
	ATR-MW77-G031516	3/15/16	1.88E+03	8.00E-01	1.34E+02	3.75E+02	2,100	13	33	0.027 J	0.078 J	0.1 U	0.016 J	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW77-G062016	6/20/16	NA	NA	NA	NA	6,900	18	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW77-G092916	9/29/16	NA	NA	NA	NA	4,200	19	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW77-G121416	12/14/16	4.38E+03	5.00E-01 J	1.54E+02	4.92E+02	7,400	21	310	2 U	18	19	1.2	5.2	0.28 J	1 U	3.2	2 U	3.5
	ATR-MW78-G031516	3/15/16	6.18E+02	5.30E+00	8.80E+00	7.99E+01	5,400	30	850	45.000	150	12	0.11 J	0.84	0.17	0.48	0.1	0.2 U	0.067 J
	ATR-MW78-G062016	6/20/16	NA	NA	NA	NA	18,000	170	28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW78-G092916	9/29/16	NA	NA	NA	NA	22,000	38	0.85	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW78-G121416	12/14/16	3.64E+02	< 1.30E+00	5.80E+00	2.29E+01	26,000	9.1	0.11	20 U	380	1.9 J	1.4	11	0.16 J	0.30 J	1 U	2 U	0.78 J
Zone A	MTR-MW6C-G030513	3/5/13	2.40E+01*	< 5.00E-01*	2.36E+01*	< 5.00E-01*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW6C-G082615	8/26/15	5.67E+04	2.66E+01	2.47E+04	9.77E+03	1,500	18	39	0.1 U	3.2	3.5	0.049 J	0.043 J	0.015 J	0.015 J	0.07 U	0.2 U	0.5 U
	ATR-MW6C-G022316	2/23/16	2.52E+05	5.17E+01	1.21E+04	1.02E+05	4,800	30	39	0.017 J	0.57	0.0041 J	0.028 J	0.006 J	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW6C-G061616	6/16/16	NA	NA	NA	NA	11,000	81	68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW6C-G092816	9/28/16	NA	NA	NA	NA	17,000	270	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW6C-G020117	2/1/17	5.12E+04	1.24E+02	4.23E+03	1.39E+04	20,000	220	250	0.0069 J	4.9	0.056 J	0.12	0.13	0.1 U	0.0098 J	0.1 U	0.2 U	0.0096 J
	ATR-MW12-G082615	8/26/15	5.42E+02	< 2.50E+00	1.62E+01	1.64E+01	1,400	19	520	0.35 J	48	27	0.35	4	0.28	0.19	0.094	0.2 U	0.5 U
	ATR-MW12-G022416	2/24/16	2.60E+06	< 6.00E-01	7.01E+05	4.93E+05	13,000	15	880	0.038 J	130	1.2	0.081 J	3.4	0.2	0.28	0.043 J	0.2 U	0.37
	ATR-MW12-G061616	6/16/16	NA	NA	NA	NA	18,000	37	1,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW12-G092816	9/28/16	NA	NA	NA	NA	19,000	110	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW12-G020117	2/1/17	1.09E+06	< 1.80E+00	1.00E+05	1.92E+05	15,000	66	230	2 U	210	1.2 J	1.2	8.2	0.22	0.32	0.072 J	0.013 J	0.67

Table 14 (continued)
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentianoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone A	MTR-MW13-G092712	9/27/12	**5.66E+02***	**< 6.80E+00***	8.30E+00*	2.46E+02*	**1,600**	**30**	**21**	**0.032 J**	**1.9**	0.050 U	**0.050 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	ATR-MW13-G082615	8/26/15	**1.32E+06**	**3.90E+00**	**4.41E+05**	**1.87E+05**	**850**	**28**	**220**	**1**	**46**	**49**	**0.18**	**0.32**	**0.39**	**0.054 J**	0.07 U	0.2 U	0.5 U
	ATR-MW13-G030216	3/2/16	**8.64E+05**	**< 1.10E+00**	**2.47E+05**	**1.61E+05**	**11,000**	**26**	**2,100**	**0.29 J**	**150**	**2.7**	**0.12 J**	**0.84 J**	**0.17 J**	**0.31 J**	1 U	2 U	2 U
	ATR-MW13-G061616	6/16/16	NA	NA	NA	NA	**18,000**	**130**	**1,000**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW13-G092816	9/28/16	NA	NA	NA	NA	**20,000**	**310**	**280**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW13-G020117	2/1/17	**9.15E+05**	< 1.70E+00	**4.61E+04**	**2.61E+05**	**16,000**	**180**	**360**	**0.030 J**	**0.39**	**0.014 J**	**0.11**	**0.0094 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW62-G082715	8/27/15	**4.93E+04**	**2.86E+02**	**1.82E+04**	**9.99E+03**	**2,000**	**60**	**420**	**0.51**	**21**	**3.8**	**0.2**	**2.4**	**0.042 J**	0.15 U	**0.047 J**	0.2 U	0.5 U
	ATR-MW62-G022316	2/23/16	**3.46E+05**	**6.18E+02**	**1.21E+04**	**8.65E+04**	**17,000**	**200**	**4,700**	2.0 U	**220**	**1.6**	**0.14 J**	**19**	**0.33**	**0.25**	**0.11**	**0.011 J**	**2.7**
	ATR-MW62(36)-G061616	6/16/16	NA	NA	NA	NA	**17,000**	**140**	**3,400**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW62-G092916	9/29/16	NA	NA	NA	NA	**17,000**	**250**	**2,100**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW62-G020117	2/1/17	**8.77E+04**	**1.63E+02**	**1.20E+03**	**1.86E+04**	**24,000**	**67**	**1,400**	2 U	**310**	**2.6 J**	**1.4**	**32**	**0.36**	**0.36**	**0.31**	**0.050 J**	**5.6**
	ATR-MW20(35)-G082715	8/27/15	**7.82E+03**	**2.08E+02**	**5.36E+03**	**6.76E+01**	**1,900**	**30**	**110**	**0.028 J**	**13**	**1.1**	**0.1**	**0.08**	**0.028 J**	**0.072 J**	**0.023 J**	0.2 U	0.5 U
	ATR-MW20(35)-G082715R	8/27/15	**9.06E+03**	**2.40E+02**	**6.69E+03**	**8.04E+01**	**2,000**	**31**	**120**	**0.053 J**	**12**	**0.86**	**0.11**	**0.056**	**0.029 J**	**0.073 J**	**0.022 J**	0.2 U	0.5 U
	ATR-MW20(35)-G022316	2/23/16	**5.13E+04**	**3.01E+02**	**1.67E+02**	**1.51E+04**	**22,000**	**50**	**210**	20 U	**270**	**2.2**	**0.077 J**	**0.85 J**	**0.19**	**0.22**	0.1 U	**0.022 J**	**0.011 J**
	ATR-MW20(35)-G022316R	2/23/16	**8.82E+04**	**3.80E+02**	**3.43E+02**	**2.85E+04**	**22,000**	**51**	**220**	0.03 J	**250**	**2**	**0.1 J**	**0.85 J**	**0.085 J**	**0.13**	0.1 U	**0.02 J**	**0.011 J**
	ATR-MW20(35)-G061616	6/16/16	NA	NA	NA	NA	**18,000**	**130**	**320**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(35)-G061616R	6/16/16	NA	NA	NA	NA	**18,000**	**130**	**300**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(35)-G092816	9/28/16	NA	NA	NA	NA	**16,000**	**500**	**400**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(35)-G092816R	9/28/16	NA	NA	NA	NA	**17,000**	**510**	**400**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(35)-G020117	2/1/17	**1.58E+04**	**9.49E+01**	**4.28E+02**	**1.42E+03**	**24,000**	**240**	**60**	**0.77**	**96**	**1.0**	**0.66**	**2.4**	**0.076 J**	**0.12**	**0.023 J**	**0.018 J**	**0.086 J**
	ATR-MW20(35)-G020117R	2/1/17	NA	NA	NA	NA	**22,000**	**220**	**54**	2 U	**96**	**0.99 J**	**0.63**	**2.3**	**0.074 J**	**0.12**	**0.020 J**	**0.018 J**	**0.076 J**
	ATR-MW20(51)-G082715	8/27/15	**1.05E+02**	< 1.90E+00	**1.78E+01**	**2.80E+00**	**1,500**	**44**	**270**	**4.3**	**600**	**470**	**3.2 J**	**64**	**2.6**	**1.5**	**0.39 J**	0.2 U	**0.48 J**
	ATR-MW20(51)-G022316	2/23/16	**1.82E+04**	3.00E-01 J	**3.27E+02**	**3.38E+03**	**31,000**	**21**	**0.54**	**20 U**	**460**	**12**	**0.23 J**	**25**	**1.5**	**0.92 J**	**2.4**	0.16 J	**4.1**
	ATR-MW20(51)-G061616	6/16/16	NA	NA	NA	NA	**23,000**	**7.5**	**0.078**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(51)-G092816	9/28/16	NA	NA	NA	NA	**23,000**	**19**	**0.022 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW20(51)-G020117	2/1/17	**1.16E+03**	< 5.00E-01	**2.98E+01**	**1.21E+02**	**28,000**	**41**	**0.032 J**	**0.011 J**	**2.0**	**5.4**	**0.097 J**	**0.018 J**	**0.023 J**	**0.030 J**	0.1 U	0.2 U	0.2 U
	ATR-MW82-G082615	8/26/15	**5.85E+03**	< 3.30E+00	**1.63E+02**	**8.77E+01**	**1,400**	**1.4**	**26**	**160**	**670**	**520**	**4.5 J**	**270**	**5.9**	**1.6**	**3.1**	**0.25**	0.5 U
	ATR-MW82-G022316	2/23/16	**1.12E+06**	2.00E-01 J	**2.89E+03**	**3.76E+05**	**24,000**	**22**	**140**	**20 U**	**590**	**47 J**	**0.5 J**	**20**	**4.0**	**1.7**	**4.1**	**0.11 J**	**1.4**
	ATR-MW82-G061616	6/16/16	NA	NA	NA	NA	**25,000**	**81**	**0.31**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW82-G092816	9/28/16	NA	NA	NA	NA	**27,000**	**34**	**0.024 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW82-G020117	2/1/17	**1.28E+03**	**2.00E-01 J**	**1.35E+01**	**1.08E+02**	**34,000**	**33**	**0.015 J**	2 U	**170**	**240**	**2.0**	**2.6**	**3.2**	**1.3**	**4.0**	**0.21**	**0.10 J**
	ATR-OW1S-G082715	8/27/15	**3.56E+05**	< 5.00E-01	**6.74E+03**	**1.48E+05**	**2,800**	**18**	**83**	0.1 U	**2.2**	**0.04 J**	**0.047 J**	**0.089**	0.15 U	0.15 U	0.07 U	0.2 U	0.5 U
	ATR-OW1(28)-G022416	2/24/16	**1.05E+05**	< 5.00E-01	**9.51E+03**	**3.72E+04**	**7,600**	**39**	**360**	**0.02 J**	**0.78**	**0.0096 J**	**0.024 J**	**0.014 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-OU1(28)-G061616	6/16/16	NA	NA	NA	NA	**14,000**	**58**	**320**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW1(28)-G092816	9/28/16	NA	NA	NA	NA	**12,000**	**67**	**170**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW1(28)-G013117	1/31/17	**1.22E+04**	< 8.00E-01	**1.53E+02**	**1.86E+03**	**12,000**	**230**	**220**	**0.011 J**	**3.2**	**0.64**	**0.078 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-OW1D-G082715	8/27/15	**1.22E+06**	< 5.00E-01	**6.04E+05**	**3.44E+05**	**1,400**	**5.1**	**150**	1 U	**280**	**460**	**2.1**	**26**	**1.6**	**0.5 J**	**0.85**	0.2 U	**0.21 J**
	ATR-OW1(39)-G022916	2/29/16	**2.28E+04**	**3.00E-01 J**	**4.22E+03**	**2.51E+03**	**23,000**	**95**	**1.8**	**0.05 J**	**10**	**28**	**0.17**	**0.49**	**0.55**	**0.13**	**0.57**	0.2 U	**0.035 J**
	ATR-OU1(39)-G061616	6/16/16	NA	NA	NA	NA	**20,000**	**160**	**0.012**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW1(39)-G092816	9/28/16	NA	NA	NA	NA	**10,000**	**210**	**17**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW1(39)-G020117	2/1/17	**2.34E+03**	< 8.00E-01	**4.89E+02**	**9.48E+01**	**25,000**	**120**	**0.0045 J**	**0.015 J**	**0.16**	**0.056 J**	**0.056 J**	**0.017 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U

Table 14 (continued)
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentianoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone B	MTR-MW14-G092712	9/27/12	1.08E+01	1.19E+01	< 5.00E-01	< 5.00E-01	62	0.31	0.18	0.10 U	0.070 U	0.050 U	0.10 U	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	ATR-MW14-G100815	10/8/15	4.18E+02	3.00E-1 J	< 5.00E-01	5.00E+00	43	0.2	0.09 J	1.8	9.4	14	0.79	0.18	0.26	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW14-G022916	2/29/16	1.98E+06	1.58E+04	1.80E+00	4.45E+05	440	0.94	120	2.0 U	130	210	1.4	4.9 J	1.7	0.39 J	1.7	0.013 J	0.049 J
	ATR-MW14-G061516	6/15/16	NA	NA	NA	NA	3,800	1.1	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW14-G092816	9/28/16	NA	NA	NA	NA	6,400	10	950	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW14-G020117	2/1/17	2.26E+05	2.39E+02	1.95E+02	3.37E+04	13,000	31	680	0.38 J	250	16	1.7	3.2	1.1	0.43	0.53	0.0043 J	0.052 J
	ATR-MW24 (24.9)-G100815	10/8/15	4.30E+02	< 5.00E-01	< 5.00E-01	< 5.00E-01	1.4	0.0039	0.0074	0.021 J	0.034 J	0.1 U	0.019 J	0.017 J	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW24 (24.9)-G022916	2/29/16	1.12E+02	3.00E-01 J	<5.00E-01	2.70E+00	7.0	0.0093 J	0.014 J	0.014 J	0.08 J	0.02 J	0.16	0.056 J	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW24(24.9)-G061516	6/15/16	NA	NA	NA	NA	13	0.0069	0.0083	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24(24.9)-G092816	9/28/16	NA	NA	NA	NA	180	0.0093 J	0.016 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24(24.9)-G013117	1/31/17	1.06E+02	4.00E-01 J	2.00E-01 J	4.00E-01 J	200	0.023 J	0.031 J	0.013 J	0.41	0.068 J	0.090 J	0.012 J	0.1 U	0.1 U	0.1 U	0.2 U	0.012 J
	ATR-MW24 (55.9)-G100815	10/8/15	7.20E+02	4.00E-01 J	1.87E+01	< 5.00E-01	27	0.19	0.1	0.025 J	0.03 J	0.1 U	0.031 J	0.014 J	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW24 (55.9)-G022916	2/29/16	9.32E+02	9.30E+00	5.10E+02	1.00E-01 J	25	0.19	0.076 J	0.013 J	0.025 J	0.0029 J	0.037 J	0.0074 J	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW24(55.4)-G061516	6/15/16	NA	NA	NA	NA	19	0.15	0.089	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24(55.4)-G092816	9/28/16	NA	NA	NA	NA	22	0.17	0.086 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW24(55.4)-G013117	1/31/17	1.27E+03	1.61E+01	1.00E+02	1.90E+00	83	2.1	1.0	0.14 J	160	150	0.62 J	2.4	0.37	0.091 J	0.074 J	0.2 U	0.2 U
	ATR-OW2 (33)-G100815	10/8/15	1.72E+06	< 5.00E-01	1.76E+05	1.60E+05	1,800	24	370	2 U	64	52	0.3	6	0.5	0.23	0.4	0.2 U	0.2 U
	ATR-OW2 (33)-G022916	2/29/16	6.20E+05	< 5.00E-01	1.75E+05	1.36E+05	16,000	360	650	2.0 U	330	100	0.39 J	5.6 J	3.5	2.0	4.7	0.05 J	0.22
	ATR-OW2(33)-G061516	6/15/16	NA	NA	NA	NA	11,000	51	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW2(33)-G92716	9/27/16	NA	NA	NA	NA	22,000	200	870	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW2(33)-G013117	1/31/17	4.41E+04	< 5.00E-01	1.99E+03	7.78E+03	24,000	180	960	0.015 J	8.3	0.97	0.11	0.22	0.025 J	0.040 J	0.0088 J	0.2 U	0.034 J
	ATR-OW2 (53)-G100815	10/8/15	1.00E+04	< 5.00E-01	1.20E+00	1.92E+03	770	1.3	16	1.3 J	250	650	2.5	15	5.2	0.44 J	1.4	0.2 U	0.2 U
	ATR-OW2 (53)-022916	2/29/16	7.80E+05	< 6.00E-01	2.48E+03	1.68E+05	6,500	16	1,000	20 U	480	390	1.3 J	2.1 J	4.9	4.2	1.5	0.023 J	0.043 J
	ATR-OU2(53)-G061616	6/16/16	NA	NA	NA	NA	24,000	110	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW2(53)-G092716	9/27/16	NA	NA	NA	NA	28,000	150	9.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW2(53)-G013117	1/31/17	6.42E+03	3.00E-01 J	4.01E+01	5.60E+02	27,000	57	0.0091 J	0.49	100	90	0.93	2.6	0.92	0.39	1.6	0.11 J	0.030 J
	ATR-OW3 (35)-G100715	10/7/15	7.91E+02	< 5.00E-01	3.00E-01 J	4.00E-01 J	1,500	1.8	6.2	2 U	110	170	0.5 J	1.2	1.2	0.56	0.55	0.2 U	0.43
	ATR-OW3 (35)-G022916	2/29/16	2.99E+05	2.75E+03	1.53E+04	5.27E+04	24,000	5.9	16	0.031 J	32	0.41 J	0.052 J	0.015 J	0.038 J	0.10 U	0.10 U	0.20 U	0.20 U
	ATR-OW3(35)-G061516	6/15/16	NA	NA	NA	NA	13,000	24	23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW3(35)-G092716	9/27/16	NA	NA	NA	NA	12,000	48	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW3(35)-G013117	1/31/17	5.93E+04	1.68E+02	1.68E+03	5.21E+03	17,000	42	14	0.0096 J	0.14	0.024 J	0.074 J	0.0091 J	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-OW3 (55)-G100715	10/7/15	1.90E+01	< 1.30E+00	< 1.30E+00	< 1.30E+00	44	2.7	0.54	80	330	34	120	8.7	24	0.38	0.1 U	0.2 U	0.29
	ATR-OW3 (55)-G100715R	10/7/15	2.71E+01	< 2.00E+00	< 2.00E+00	< 2.00E+00	57	2.6	0.53	83	340	36	120	8.6	24	0.38	0.1 U	0.2 U	0.28
	ATR-OW3(55)-G022916	2/29/16	9.68E+03	1.56E+01	8.95E+02	9.60E+02	14,000	3.2	6.5	2.5	490	790	3.7 J	5.0 J	4.7	2.2	2.7	0.2 U	0.49
	ATR-OW3(55)-G022916R	2/29/16	3.81E+03	7.30E+00	3.13E+02	2.89E+02	17,000	3.4	8.5	0.98 J	420	710	2.2 J	5.0 J	4.4	2.1	2.7	0.2 U	0.50
	ATR-OW3(55)-G061516	6/15/16	NA	NA	NA	NA	24,000	33	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW3(55)-G092716	9/27/16	NA	NA	NA	NA	24,000	66	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zone C	ATR-MW15-G101315	10/13/15	5.05E+02	2.00E-01 J	7.30E+00	1.50E+00	2,400	5.2	260	26	180	55	56	0.62 J	1.5	0.1	0.18	0.2 U	0.2 U
	ATR-MW15-030116	3/1/16	1.95E+04	1.50E+02	4.14E+02	2.54E+02	1,500	11	170	0.19 J	1,200	1,100	4 J	42.0	3.7 J	1.2 J	6.5 J	2 U	0.59 J
	ATR-MW15-G061516	6/15/16	NA	NA	NA	NA	4,200	9.2	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G092716	9/27/16	NA	NA	NA	NA	11,000	20	1,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW15-G013117	1/31/17	1.78E+05	1.04E+01	5.25E+02	1.85E+04	19,000	56	4,400	1.6 J	880	450	3.9 J	50	17	3.2	18	0.31	3.3

Table 14 (continued)
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentianoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone C	MTR-MW25(16.4)-G092712	9/27/12	**2.11E+02**	**7.00E+00**	**5.00E-01**	**7.90E+00**	**1,300**	**20**	**13**	**0.030 J**	**0.038 J**	0.050 U	**0.068 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	MTR-MW25(16.4)-101315	10/13/15	**8.42E+03**	**4.90E+00**	**2.83E+03**	**7.42E+02**	**1,200**	**13**	**40**	**0.027 J**	**0.035 J**	0.1 U	**0.036 J**	**0.02 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW25(16.4)-030116	3/1/16	**1.06E+06**	**1.16E+03**	**2.38E+04**	**5.28E+04**	**1,700**	**8.5**	**1,000**	**0.44 J**	**51**	**4.5 J**	**0.16 J**	**0.22 J**	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	ATR-MW25(16.4)-G061516	6/15/16	NA	NA	NA	NA	**12,000**	**140**	**920**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G092716	9/27/16	NA	NA	NA	NA	**18,000**	**370**	**180**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(16.4)-G013117	1/31/17	**2.90E+04**	**5.43E+02**	**8.43E+02**	**2.07E+03**	**25,000**	**280**	**18**	**0.80 J**	**48**	**9.2**	**0.29**	**0.44**	**0.16**	**0.14**	**0.068 J**	0.2 U	0.2 U
	ATR-MW25(32.6)-G101315	10/13/15	**3.26E+02**	**8.00E-01**	**1.34E+01**	**4.50E+00**	**3,100**	**18**	**370**	**0.02 J**	**1.4**	**0.15**	**1.5**	**0.023 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW25(32.6)-G030116	3/1/16	**6.51E+05**	**4.77E+02**	**1.73E+04**	**2.75E+04**	**10,000**	**45**	**1,400**	**0.15 J**	**780**	**730**	**2.6 J**	**33**	**5.6 J**	**1.9 J**	**35**	**0.18 J**	**4.2**
	ATR-MW25(32.6)-G061516	6/15/16	NA	NA	NA	NA	**18,000**	**70**	**1,200**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G092716	9/27/16	NA	NA	NA	NA	**24,000**	**450**	**130**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(32.6)-G013117	1/31/17	**1.31E+04**	**2.12E+01**	**1.56E+03**	**6.28E+02**	**31,000**	**330**	**0.77**	**0.63**	**150**	**2.0**	**0.65**	**0.22**	**0.046 J**	**0.30**	0.1 U	**0.094 J**	0.2 U
	ATR-MW25(45.2)-G101315	10/13/15	**1.70E+02**	< 5.00E-01	**6.00E-01**	<5.00E-01	**600**	**4.5**	**12**	**0.017 J**	**0.024 J**	0.1 U	**0.056 J**	**0.0091 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW25(45.2)-G030116	3/1/16	**3.08E+04**	**2.10E+00**	**6.35E+03**	**2.10E+00**	**1,100**	**10**	**84**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(45.2)-G061516	6/15/16	NA	NA	NA	NA	**3,000**	**8.6**	**96**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(45.2)-G092716	9/27/16	NA	NA	NA	NA	**9,800**	**12**	**1,900**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW25(45.2)-G013117	1/31/17	**3.34E+05**	**1.20E+00**	**3.15E+02**	**4.47E+04**	**21,000**	**65**	**1,600**	20 U	**970**	**390**	**3.6 J**	**32**	**14**	**3.0**	**20**	**0.22**	**2.4**
	ATR-OW4(35)-G101315	10/13/15	**5.00E+00**	< 2.30E+00	< 2.30E+00	< 2.30E+00	**380**	**22**	**6.5**	**55**	**400**	**94**	**350**	**6.1**	**11**	**0.064 J**	**1.6**	0.2 U	**0.66**
	ATR-OW4(35)-G030116	3/1/16	**3.71E+03**	**1.37E+01**	**4.01E+02**	**4.67E+01**	**6,600**	**65**	**29**	**0.18 J**	**900**	**610**	**1.8 J**	**36**	**4.6 J**	**2.6**	**17**	2.0 U	**2.5**
	ATR-OW4(35)-G061516	6/15/16	NA	NA	NA	NA	**30,000**	**7.5**	**730**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW4(35)-G092716	9/27/16	NA	NA	NA	NA	**20,000**	**8.4**	**760**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW4(35)-G013117	1/31/17	**3.10E+03**	**3.82E+01**	**1.07E+02**	**9.96E+01**	**16,000**	**48**	**610**	**66**	**1,500**	**750**	**8.3 J**	**370**	**17**	**4.6 J**	**20**	**1.7 J**	**14**
	ATR-OW4(54)-G101315	10/13/15	**1.62E+02**	< 5.00E-01	< 5.00E-01	< 5.00E-01	**120**	**0.22**	**0.052 J**	0.2 U	**1.3**	**0.36**	**0.034 J**	**0.031 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-OW4(54)-G030116	3/1/16	**4.52E+02**	**2.00E-01 J**	**7.00E-01**	**4.00E-01 J**	**260**	**0.31**	**0.094 J**	**0.52 J**	**8.0**	**5.2**	**0.15 J**	**0.14 J**	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	ATR-OW4(54)-G061516	6/15/16	NA	NA	NA	NA	**730**	**0.24**	**0.13**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW4(54)-G092716	9/27/16	NA	NA	NA	NA	**6,800**	**0.25**	**0.16**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW4(54)-G013117	1/31/17	**8.59E+02**	**5.00E-01 J**	**3.00E-01 J**	< 5.00E-01	**14,000**	**0.40**	**0.10**	2 U	**160**	**460**	**2.0**	**7.1**	**3.9**	**1.6**	**3.0**	**0.015 J**	**0.021 J**
Zone D	ATR-MW16-G100715	10/7/15	**4.06E+04**	**3.71E+01**	**9.62E+02**	**5.56E+03**	**8,400**	**45**	**18**	**0.026 J**	**0.21**	**0.012 J**	**0.042 J**	**0.02 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW16-G030116	3/1/16	**5.64E+04**	**5.01E+01**	**3.18E+03**	**2.05E+03**	**4.6**	**0.026 J**	**0.021 J**	**0.015 J**	**0.34**	**0.0056 J**	**0.025 J**	**0.0087 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW16-G061416	6/14/16	NA	NA	NA	NA	**12,000**	**100**	**88**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW16-G092616	9/26/16	NA	NA	NA	NA	**22,000**	**84**	**140**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW16-G013017	1/30/17	**1.18E+05**	**2.85E+02**	**8.94E+03**	**3.53E+04**	**30,000**	**170**	**180**	**0.26 J**	**140**	**79**	**1.3**	**4.2**	**1.9**	**0.53**	**2.4**	**0.052 J**	**0.14 J**
	ATR-MW17-G100715	10/7/15	**3.00E-01 J**	< 5.00E-01	< 5.00E-01	< 5.00E-01	**3.8**	**0.041**	**0.016**	**0.026 J**	**0.037 J**	0.1 U	**0.033 J**	**0.017 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW17-G030116	3/1/16	**9.00E-01**	<5.00E-01	<5.00E-01	<5.00E-01	**11,000**	**330**	**150**	**0.0085 J**	**0.028 J**	**0.0031 J**	**0.028 J**	**0.0085 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW17-G061416	6/14/16	NA	NA	NA	NA	**3.1**	**0.046**	**0.012**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW17-G092616	9/26/16	NA	NA	NA	NA	**2.2**	**0.023 J**	0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW17-G013017	1/30/17	**1.56E+02**	< 5.00E-01	< 5.00E-01	< 5.00E-01	**1.3**	**0.035 J**	**0.019 J**	**0.26 J**	**1.0**	**6.4**	**0.080 J**	**0.012 J**	**0.0096 J**	0.1 U	0.1 U	0.2 U	0.2 U
	MTR-MW26(17.5)-G092712	9/27/12	**2.70E+00**	< 5.00E-01	**2.00E-01 J**	< 5.00E-01	**790**	**25**	**3.2**	0.10 U	**0.0083 J**	0.050 U	**0.037 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	MTR-MW26(17.5)-G030613	3/6/13	NA	NA	NA	NA	NA	NA	NA	**0.036 J**	**0.91**	**0.15**	**0.047 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	**0.11**
	MTR-MW26(17.5)-G050313	5/3/13	**3.33E+04***	**7.19E+04***	**2.39E+03***	**4.05E+02***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26 (17.5)-G100715	10/7/15	**1.20E+06**	**2.30E+02**	**1.64E+05**	**2.45E+05**	**4,100**	**27**	**260**	2 U	**64**	**31**	**0.4**	**1.3**	**0.22**	**0.18**	**0.2**	0.2 U	**0.3**
	ATR-MW26(17.5)-G030116	3/1/16	**1.36E+05**	**5.92E+02**	**1.21E+04**	**2.00E+03**	**15,000**	**430**	**190**	**0.44 J**	**34**	**2.3**	**0.15 J**	**0.12 J**	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
	ATR-MW26(17.5)-G061416	6/14/16	NA	NA	NA	NA	**20,000**	**340**	**200**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(17.5)-G092616	9/26/16	NA	NA	NA	NA	**16,000**	**250**	**100**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(17.5)-G013017	1/30/17	**3.06E+03**	**1.51E+01**	**2.09E+02**	**2.45E+02**	**19,000**	**220**	**3.0**	**0.012 J**	**0.29**	**0.017 J**	**0.069 J**	**0.0072 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U

Table 14 (continued)
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentianoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone D	MTR-MW26(28.8)-G092712	9/27/12	**1.10E+00**	< 5.00E-01	< 5.00E-01	< 5.00E-01	**120**	**2.6**	**0.043**	**0.036 J**	0.070 U	0.050 U	**0.069 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	MTR-MW26(28.8)-G092712R	9/27/12	NA	NA	NA	NA	**110**	**2.5**	**0.037**	0.10 U	**0.012 J**	0.050 U	**0.055 J**	0.050 U	0.15 U	0.15 U	0.070 U	0.050 U	0.050 U
	ATR-MW26(28.8)-G030613	3/6/13	NA	NA	NA	NA	NA	NA	NA	1.0 U	**170**	**100**	**1.4**	**1.7**	**0.84**	**0.54**	**0.16**	0.050 U	0.10 U
	ATR-MW26(28.8)-G050313	5/3/13	**1.65E+04***	**2.73E+03***	**8.12E+03***	**5.73E+01***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26 (28.8)-G100715	10/7/15	**6.86E+04**	**1.05E+02**	**2.56E+03**	**7.06E+03**	**15,000**	**62**	**8.6**	2 U	**25**	**48**	**0.21**	**0.79**	**0.24**	**0.098 J**	**0.2**	0.2 U	0.2 U
	ATR-MW26(28.8)-030116	3/1/16	**5.40E+03**	**1.56E+01**	**2.85E+02**	**6.53E+01**	**31,000**	**36**	**0.0086 J**	**0.011 J**	**4.9**	**2.5**	**0.16**	**0.018 J**	**0.045 J**	0.1 U	**0.0097 J**	0.2 U	0.2 U
	ATR-MW26(28.8)-G061416	6/14/16	NA	NA	NA	NA	**28,000**	**57**	**0.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(28.8)-G092616	9/26/16	NA	NA	NA	NA	**22,000**	**90**	0.10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(28.8)-G013017	1/30/17	**2.92E+03**	**1.63E+01**	**6.18E+01**	**2.50E+02**	**27,000**	**49**	**0.31**	**0.16 J**	**200**	**13**	**0.87**	**5.0**	**0.51**	**0.50**	**0.42**	**0.033 J**	**0.46**
	ATR-MW26 (58.8)-G100715	10/7/15	**3.96E+02**	< 5.00E-01	**9.00E-01**	**3.00E-01 J**	**77**	**1.3**	**0.66**	**0.017 J**	**0.026 J**	0.1 U	**0.023 J**	**0.0074 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-MW26(58.8)-G030116	3/1/16	**3.63E+03**	**7.98E+01**	**1.40E+00**	**7.40E+00**	**240**	**1.8**	**0.58**	**0.47 J**	**54**	**62**	**0.46 J**	**0.46 J**	**0.27 J**	1.0 U	**0.14 J**	2.0 U	2.0 U
	ATR-MW26(58.2)-G061416	6/14/16	NA	NA	NA	NA	**810**	**2.2**	**1.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(58.2)-G092616	9/26/16	NA	NA	NA	NA	**9,500**	**3.1**	**10**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-MW26(58.8)-G013017	1/30/17	**4.72E+04**	**2.04E+02**	**1.90E+00**	**8.68E+03**	**25,000**	**15**	**50**	**0.28**	**140**	**49**	**0.98**	**3.3**	**0.99**	**0.38**	**1.5**	**0.028 J**	**0.23**
	ATR-MW26(58.8)-G013017R	1/30/17	**1.65E+05**	**8.34E+02**	**1.64E+01**	**2.69E+04**	**23,000**	**14**	**49**	**0.26**	**140**	**50**	**0.98**	**3.3**	**1.0**	**0.39**	**1.5**	**0.035 J**	**0.24**
	ZVI-2(17.5)-G121812	12/18/12	1.00E+00	1.00E+00	1.00E+00	1.00E+00	NA	NA	NA	1 U	**22**	**18**	**0.36**	**0.088**	**0.034 J**	0.15 U	0.07 U	0.05 U	0.1 U
	ZVI-2(17.5)-G030613	3/6/13	**1.15E+01***	**8.83E+00***	< 4.00E-01*	< 4.00E-01*	**930**	**16**	**4.6**	**0.067 J**	**0.23**	**0.0096 J**	**0.023 J**	**0.033 J**	0.15 U	0.15 U	0.070 U	0.050 U	0.10 U
	ZVI-2(17.5)-G050313	5/3/13	**1.34E+03***	**5.90E+03***	**1.70E+00***	**5.80E+00***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2 (17.5)-G100715	10/7/15	**8.61E+05**	**6.91E+02**	**3.74E+04**	**9.92E+04**	**3,200**	**38**	**320**	2 U	**34**	**15**	**0.22**	**0.36**	**0.086 J**	**0.11**	**0.09 J**	0.2 U	0.2 U
	ATR-ZVI2(17.5)-030216	3/2/16	**9.04E+04**	**4.41E+02**	**7.59E+03**	**2.09E+04**	**13,000**	**300**	**180**	**0.016 J**	**0.27**	**0.0035 J**	**0.047 J**	**0.0079 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-ZVI2(17.5)-G061416	6/14/16	NA	NA	NA	NA	**18,000**	**350**	**110**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2(17.5)-G092616	9/26/16	NA	NA	NA	NA	**19,000**	**380**	**19**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2(17.5)-G013117	1/31/17	**1.50E+04**	**1.11E+02**	**5.20E+02**	**7.70E+02**	**25,000**	**200**	**0.012 J**	2 U	**23**	**0.20 J**	**0.074 J**	**0.11**	**0.010 J**	**0.048 J**	0.1 U	0.2 U	0.2 U
	ZVI-2(32.5)-G121812	12/18/12	1.00E+00	1.00E+00	1.00E+00	1.00E+00	NA	NA	NA	**37**	**260**	**98**	**1.2**	**11**	**0.52 J**	0.15 U	**0.10**	0.05 U	0.1 U
	ZVI-2(32.5)-G030613	3/6/13	**2.00E+00***	**2.70E+00***	< 1.40E+00*	< 1.40E+00*	**650**	**15**	**10**	**0.044 J**	**31**	**19**	**0.32 J**	**0.27 J**	**0.15**	**0.20**	**0.040 J**	0.050 U	0.10 U
	ZVI-2(32.5)-G030613	5/3/13	**1.56E+04***	**7.94E+03***	**8.76E+01***	**7.90E+01***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2 (32.5)-G100715	10/7/15	**2.56E+05**	**2.70E+02**	**1.43E+01**	**3.23E+04**	**1,000**	**6**	**14**	**0.091 J**	**2.4**	**1.6**	**0.043 J**	**0.02 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-ZVI2(32.5)-G030116	3/1/16	**2.50E+05**	**6.84E+02**	**2.59E+01**	**8.44E+03**	**5,200**	**5.7**	**48**	**0.009 J**	**7.4**	**6.2**	**0.16**	**0.02 J**	**0.017 J**	0.1 U	**0.0068 J**	0.2 U	0.2 U
	ATR-ZVI2(32.5)-G061416	6/14/16	NA	NA	NA	NA	**8,300**	**44**	**54**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2(32.5)-G092616	9/26/16	NA	NA	NA	NA	**5,200**	**31**	**180**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-ZVI2(32.5)-G013117	1/31/17	**6.22E+04**	**3.33E+02**	**1.36E+02**	**4.21E+03**	**25,000**	**190**	**130**	2 U	**180**	**62**	**1.3**	**3.7**	**2.0**	**0.43**	**2.1**	**0.019 J**	**0.054 J**
	ATR-OW5 (16)-G100715	10/7/15	**2.06E+03**	**1.30E+00**	**6.00E+00**	**2.02E+01**	**350**	**4**	**9.8**	2 U	**120**	**180**	**0.9**	**2.3**	**1.0**	**0.75**	**0.066 J**	0.2 U	0.2 U
	ATR-OW5(16)-030116	3/1/16	**1.54E+06**	**6.45E+03**	**3.01E+03**	**6.32E+04**	**2,400**	**5.1**	**180**	**0.01 J**	**12**	**7**	**0.21**	**0.046 J**	**0.042 J**	0.1 U	**0.012 J**	0.2 U	0.2 U
	ATR-OW5(16)-G061416	6/14/16	NA	NA	NA	NA	**5,200**	**2.9**	**160**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5(16)-G092716	9/27/16	NA	NA	NA	NA	**17,000**	**60**	**74**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5(16)-G013017	1/30/17	**2.51E+05**	**2.37E+03**	**5.35E+03**	**4.31E+04**	**12,000**	**35**	**8.4**	**0.12 J**	**16**	**5.9**	**0.13**	**0.14**	**0.072 J**	**0.043 J**	**0.038 J**	0.2 U	0.2 U
	ATR-OW5 (35)-G100715	10/7/15	**4.80E+03**	**2.00E-01 J**	**1.30E+00**	**3.60E+00**	**1,200**	**3.4**	**56**	2 U	**85**	**330**	**0.83 J**	**1.2**	**0.72 J**	**0.081 J**	**0.075 J**	0.2 U	0.2 U
	ATR-OW5(35)-G030116	3/1/16	**2.48E+06**	**7.78E+03**	**3.34E+04**	**8.55E+04**	**6,700**	**11**	**130**	**0.3 J**	**280**	**120**	**0.45 J**	**1.8**	**2.1**	**0.75 J**	**0.8 J**	2.0 U	2 U
	ATR-OW5(35)-G061416	6/14/16	NA	NA	NA	NA	**22,000**	**71**	**170**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5(35)-G092616	9/26/16	NA	NA	NA	NA	**22,000**	**110**	**200**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5(35)-G013017	1/30/17	**3.10E+04**	**1.14E+02**	**6.60E+01**	**3.62E+03**	**31,000**	**21**	**0.69**	**0.18 J**	**260**	**24**	**0.82**	**5.6**	**0.78**	**0.99**	**0.42**	0.2 U	**0.45**

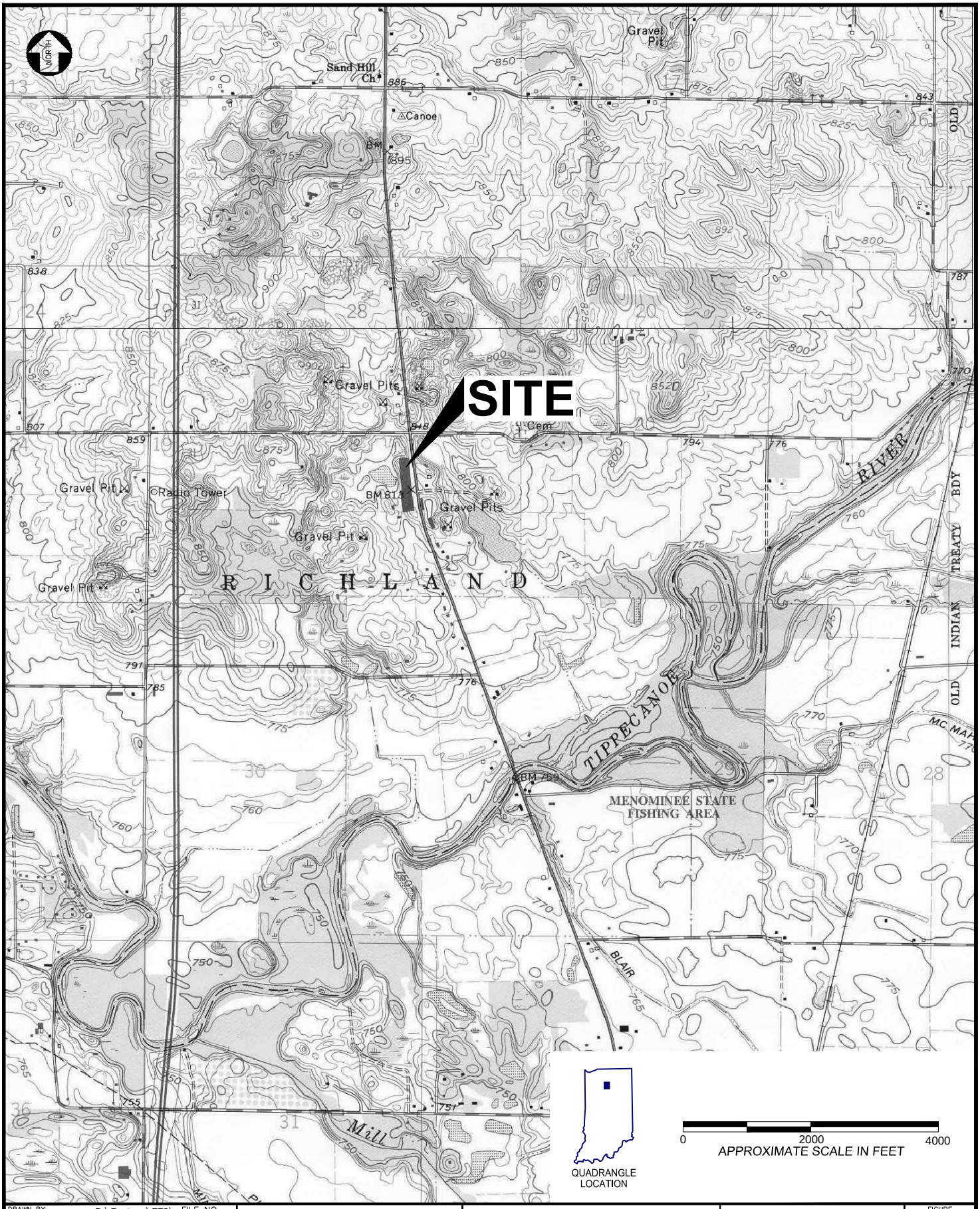
Table 14 (continued)
Summary of Dechlorinating Bacteria, Functional Genes, Dissolved Gases, and Volatile Fatty Acid Results
Performed on the Groundwater Samples Collected from Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Dechlorinating Bacteria & Functional Genes				Dissolved Gases			Volatile Fatty Acids									
			DHC	tceA Reductase	bvcA Reductase	VC Reductase	Methane	Ethane	Ethene	Lactic Acid	Acetic Acid	Propionic Acid	Formic Acid	Butyric Acid	Pyruvic Acid	i-Pentianoic Acid	Pentanoic Acid	i-Hexanoic Acid	Hexanoic Acid
			cells/mL	cells/mL	cells/mL	cells/mL	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Zone D	ATR-OW5 (54)-G100715	10/7/15	**1.94E+03**	< 5.00E-01	**4.00E-01 J**	**5.39E+01**	**610**	**2.7**	**11**	**0.031 J**	**0.056 J**	**0.047 J**	**0.028 J**	**0.012 J**	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U
	ATR-OW5(54)-G030116	3/1/16	**1.50E+06**	**7.07E+02**	**5.87E+02**	**2.42E+05**	**1,100**	**7.5**	**180**	**0.12 J**	**550**	**760**	**2.3 J**	**2.7 J**	**1.6 J**	**1.2**	**0.84 J**	2.0 U	2.0 U
	ATR-OW5(45)-G061416	6/14/16	NA	NA	NA	NA	**2,900**	**14**	**310**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5(45)-G092616	9/26/16	NA	NA	NA	NA	**16,000**	**19**	**860**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	ATR-OW5(45)-G013017	1/30/17	**3.24E+05**	**5.25E+01**	**5.36E+02**	**6.81E+04**	**34,000**	**200**	**940**	**4.1 J**	**570**	**470**	**4.7**	**35**	**3.1**	**1.8**	**3.8**	**0.42**	**0.25**

Notes:
Blue text is performance monitoring data
NA - Not Analyzed
NM - Not Measured
J - Estimated concentration, analyte detected below quantitation limit
U - Analyzed but not detected above the MDL
cells/mL - cells per milliliter
mg/L - milligram per liter
µg/L - micro grams per liter
Bold - Indicates measured or laboratory detection
DHC - Dehalococcoides Bacteria
*DHC Sample filtered by Microbial Insights at the laboratory

Prepared by: RED
Checked by: PJS

FIGURES



DRAWN BY: RLB	FILE NO.: P:\Textron\TFS\Drawings\TFS Topo.dwg	FORMER TORX FACILITY 4366 NORTH OLD US HIGHWAY 31 ROCHESTER, INDIANA	amec foster wheeler	SITE LOCATION MAP
APPROVED BY: PJS	DATE: 06/09/2017			FIGURE 1
SOURCE: USGS topographic quadrangles of Argos, IN, 1994 and Rochester, IN, 1992.				
PROJECT NO.: 3359 15 1040	SCALE: SEE ABOVE			SHEET 1 of 1

FIGURE 2

SHEET 1 of 1

TREATMENT ZONES, ARRAYS AND WELL LOCATIONS

amec foster wheeler

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

DRAWN BY	RLB
APPROVED BY	PJS
PROJECT NO.	3359 15 1040
FILE NO.	P:\Textron\TFS\Drawings\Temp-Perf Mon 2016.dwg
DATE	06/09/2017
SCALE	SEE ABOVE

SOURCE Wells surveyed by Territorial Engineering; Fulton County, IN GIS, 2005.

NORTH

AREA DEPICTED ON FIGURES 3, 4 & 5

IN-SITU CHEMICAL REDUCTION ZONE

SOURCE AREA TREATMENT ZONE

DOWNGRADIENT TREATMENT ZONE

TREATMENT ZONE A

TREATMENT ZONE B

TREATMENT ZONE C

TREATMENT ZONE D

WESTERN POND

EASTERN POND

N OLD US HIGHWAY 31

4403

4377

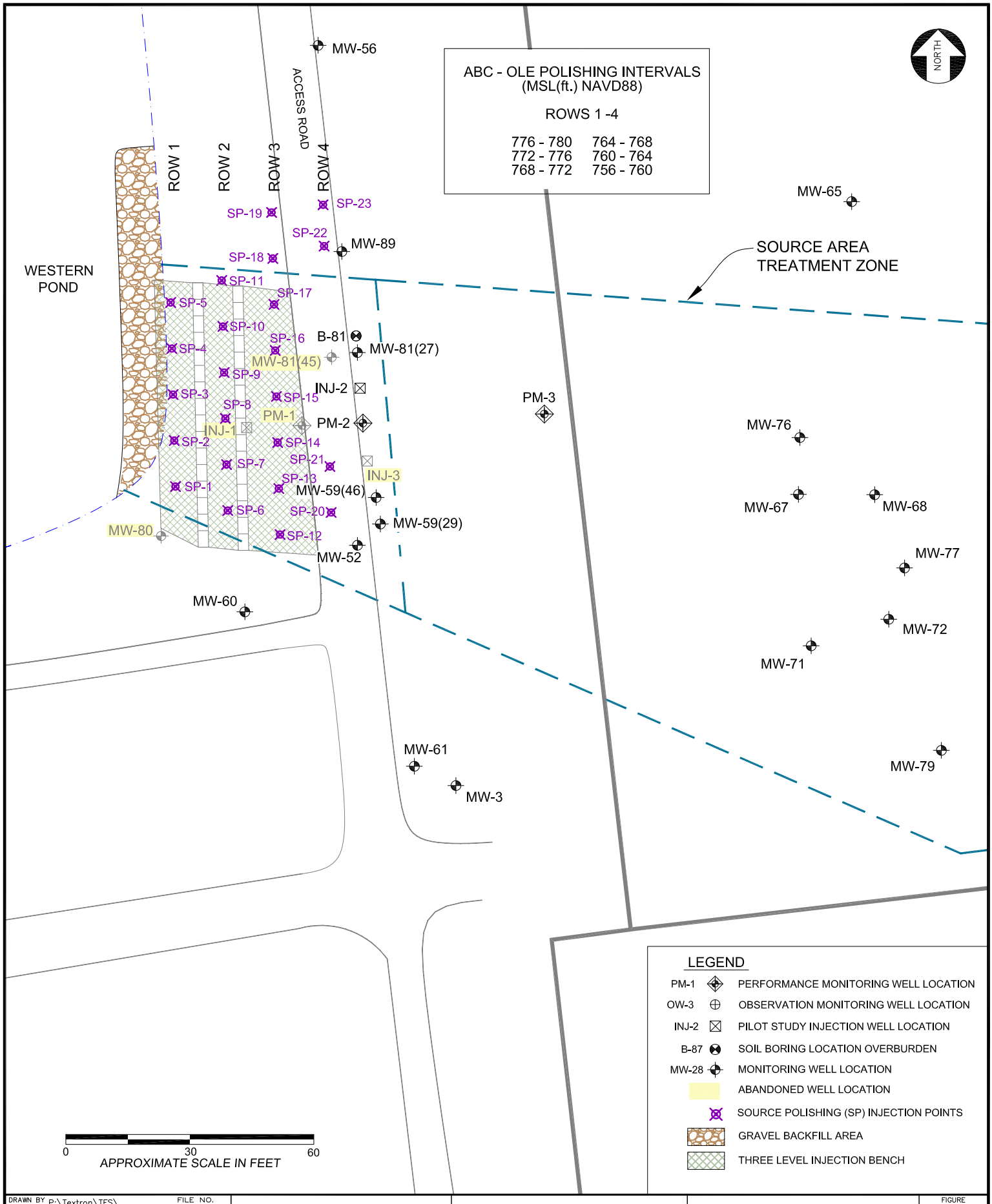
MW-8, MW-43, B-64, MW-19, MW-55, MW-56, MW-89(28), MW-81(27), MW-81(45), INJ-2, PM-2, PM-3, INJ-1, PM-1, INJ-3, MW-59(46), MW-59(29), MW-52, MW-80, MW-60, MW-61, MW-3, B-73, MW-79, MW-65, MW-76, B-66, MW-67, MW-68, MW-77, MW-72, MW-71, B-70, B-69, MW-78, Row 1, Row 2, Row 3, Row 4, Array A, Array B, Array C, Array D, Array E, Array F, Array G, Array H, Array I, Array J, Array K, Array L, Array M, Array N, Array O, Array P, Array Q, Array R, Array S, Array T, Array U, Array V, Array W, Array X, Array Y, Array Z, MW-20, MW-6C, MW-6B, MW-41, MW-62, MW-12, MW-82, MW-13, MW-11, MW-83, MW-84(65), MW-84(44), MW-9A, MW-9B, MW-9C, MW-45, MW-21, MW-75, B-74, B-63, B-9(35)/B-9(54), B-9(47), B-14(33)/B-14(55), B-14(45), B-4(48), B-4(36), B-8(35), B-8(48), B-13(46), B-13(33), B-3(46), B-3(36), B-7(35)/B-7(52), B-2(48), B-2(36), B-6(49), B-6(36), B-1(47), B-1(37), B-5(48), B-5(34), B-10(47), B-10(35), B-11(47), B-11(36), B-12(48), B-12(37), B-15(52)/B-15(51), B-15(45), B-16(36)/B-16(55), B-16(47), B-17(33)/B-17(55), B-17(45), MW-24, MW-14, MW-15, MW-25, MW-27, MW-16, MW-17, B-86, B-87, B-88, ZVI-1, ZVI-2, MW-26, OW-1, OW-2, OW-3, OW-4, OW-5, OW-6, C-1, C-2, C-3, C-5, C-6, C-7, C-8, C-9, C-10, D-1 … D-38

LEGEND

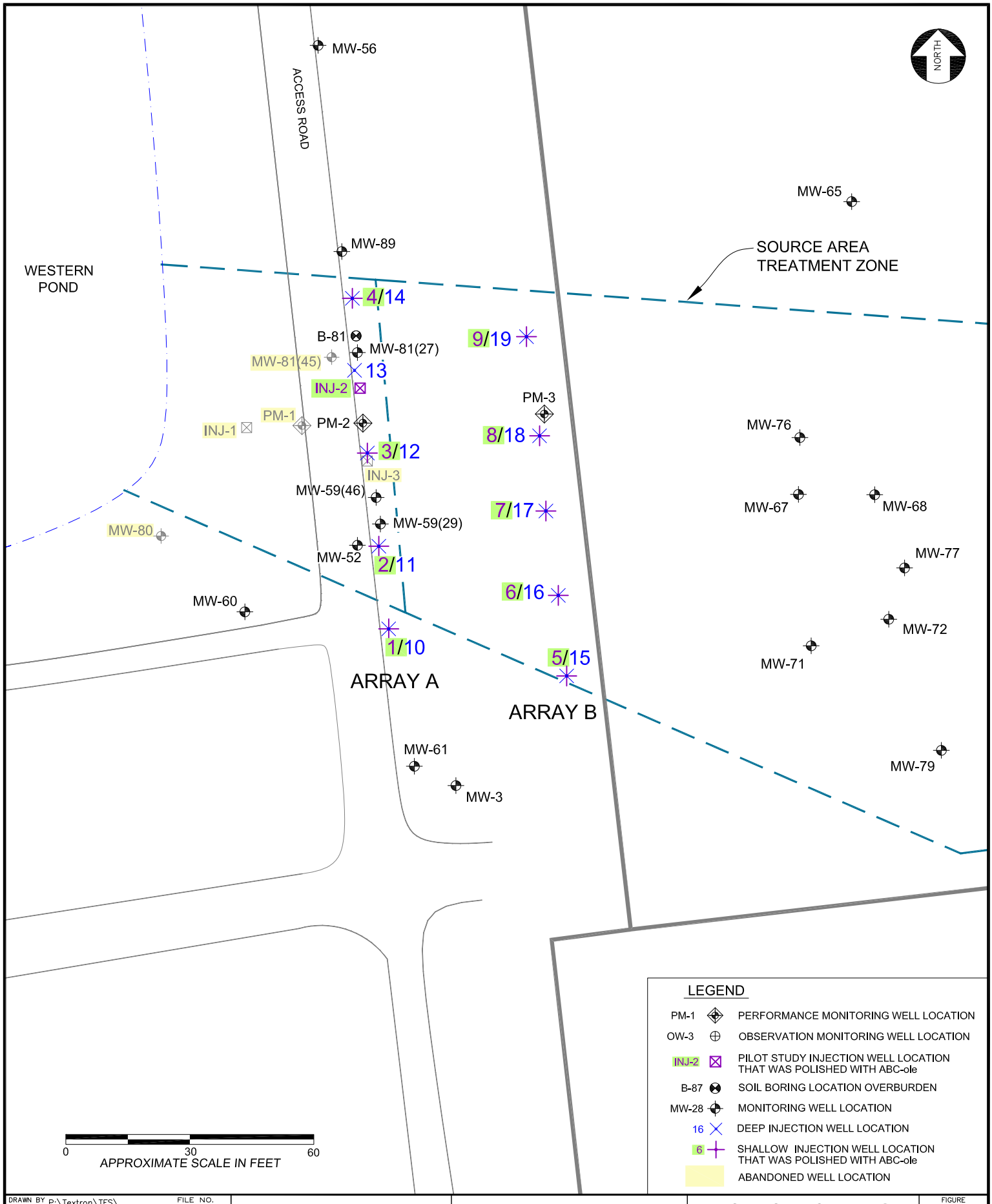
PM-1	Performance Monitoring Well Location
OW-5	Observation Monitoring Well Location
INJ-1	Biostimulation Injection Well Location
B-87	Soil Boring Location
MW-28	Overburden Monitoring Well Location
MW-40	Bedrock Monitoring Well Location
	Treatment Zone A Injection Wells
	Treatment Zone B Injection Wells
	Treatment Zone C Injection Wells
	Treatment Zone D Injection Wells
	ABC + Injection Points
	Array A & B Shallow/Deep Injection Wells
	Building Treatment Zone Injection Wells
Array N	Injection Array

Note:
Grayed well locations were abandoned in 2014.
(MW-80, MW-81(45), INJ-1, INJ-3, and PM-1)

0 80 160
APPROXIMATE SCALE IN FEET



DRAWN BY RLB	FILE NO. P:\Textron\TFS\Drawings\TFS SA Outside Bld Inj Pts.dwg	TORX FACILITY 4366 NORTH OLD US HIGHWAY 31 ROCHESTER, INDIANA	SOURCE AREA POLISHING ABC - OLE INJECTION POINTS
APPROVED BY PJS	DATE 08/03/2017	amec foster wheeler	FIGURE 3
SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005; historical maps from Textron			
PROJECT NO. 3359 15 1040	SCALE SEE ABOVE		SHEET 1 of 1



DRAWN BY RLB
FILE NO. P:\Textron\TFS\Drawings\TFS SA Outside Bld Inj Pts.dwg
APPROVED BY PJS
DATE 08/03/2017
SOURCE Wells surveyed by Territorial Engineering, 2009; Fulton County, IN GIS, 2005; historical maps from Textron
PROJECT NO. 3359 15 1040
SCALE SEE ABOVE

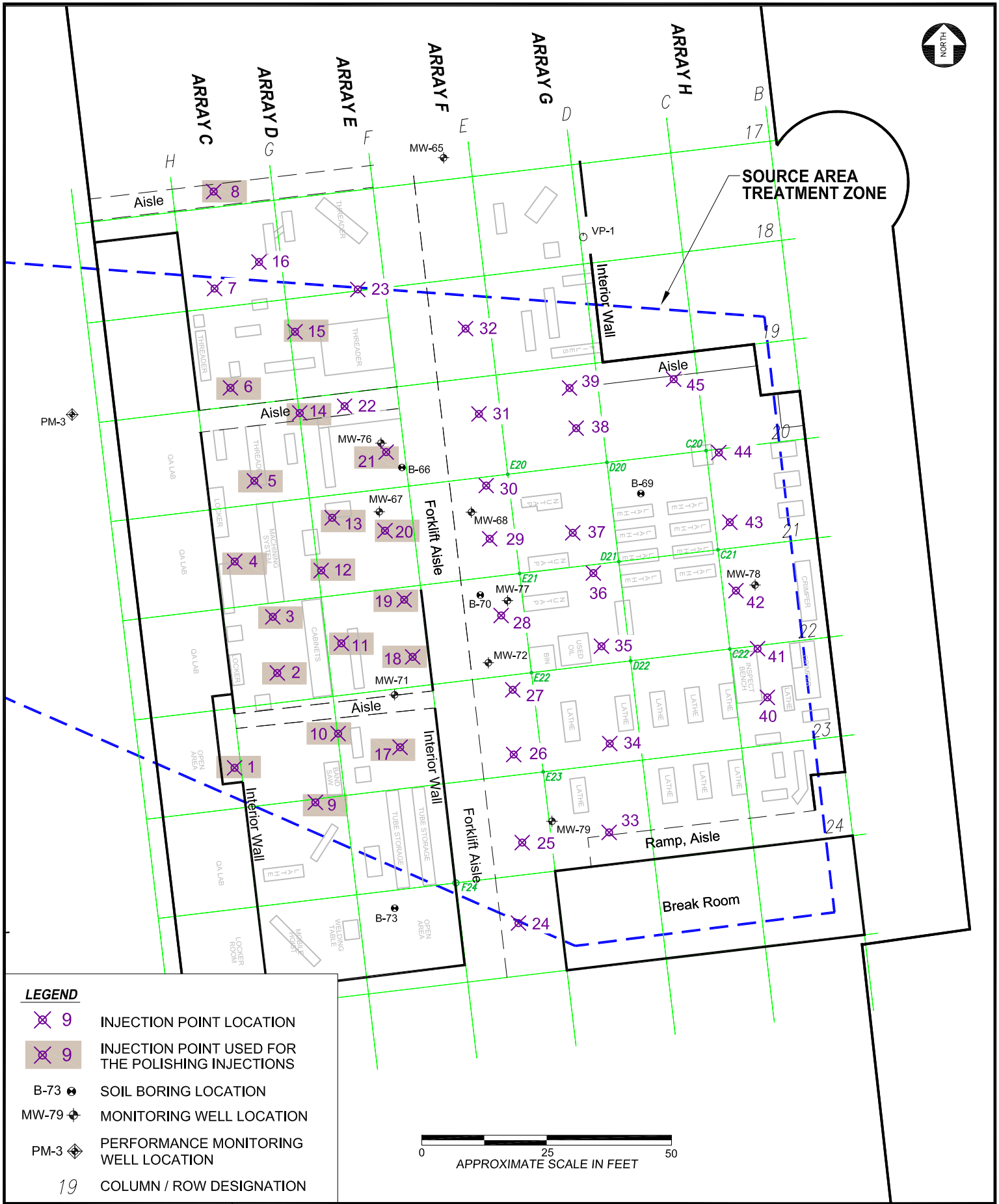
TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

amec foster wheeler

MONITORING WELLS AND INJECTION WELLS IN SOURCE AREA BEHIND BUILDING

FIGURE **4**

SHEET 1 of 1



DRAWN BY: RLB	FILE NO.: P:\Textron\TFS\Drawings\Inside Inj Pts 2016.dwg	TORX FACILITY 4366 NORTH OLD US HIGHWAY 31 ROCHESTER, INDIANA	MONITORING WELLS AND INJECTION WELLS IN SOURCE AREA INSIDE BUILDING
APPROVED BY: PJS	DATE: 06/09/2017	amec foster wheeler	FIGURE 5
SOURCE: Wells surveyed by Territorial Engineering; Fulton County, IN GIS, 2005; historical maps from Textron			SHEET 1 of 1
PROJECT NO.: 3359 15 1040	SCALE: SEE ABOVE		

TREATMENT ZONES A, B, C, & D
POLISHING INJECTION LOCATIONS

FIGURE 6

SHEET 1 of 1

NORTH

WESTERN POND

EASTERN POND

4403

4377

MW-8 MW-43 MW-19 MW-55 MW-56 MW-65 MW-89(28) MW-81(27) MW-59(46) MW-59(29) MW-52 MW-60 MW-61 MW-3 MW-20 MW-6C MW-6B MW-41 MW-62 MW-12 MW-82 MW-13 OW-1 OW-2 MW-11 MW-83 MW-75 MW-9A MW-9B MW-9C MW-84(65) MW-84(44) MW-45 MW-21 MW-14 MW-24 MW-15 MW-25 OW-4 OW-5 MW-27 MW-16 MW-26 ZVI-1 ZVI-2 MW-17 OW-6

Row 1 Row 2 Row 3 Row 4 Array A Array B Array C Array D Array E Array F Array G Array H Array I Array J Array K Array L Array M Array N Array O Array P Array Q Array R Array S Array T Array U Array V Array W Array X Array Y Array Z

TREATMENT ZONE A
(INJECTION UPPER INTERVAL ONLY. ARRAY I - M ONLY)

TREATMENT ZONE A

TREATMENT ZONE B
(INJECTIONS SHALLOW ZONE ARRAY O & P, DEEP ZONE R15 - R17, S4, S5, & DPT)

TREATMENT ZONE B

DOWNGRADIENT TREATMENT ZONE

TREATMENT ZONE C

TREATMENT ZONE C
(INJECTION ON SHALLOW S1, CP-01, & CP-02. INJECTION ARRAY T DEEP ZONE & DPT)

TREATMENT ZONE D

TREATMENT ZONE D
INJECT DEEP ZONE ARRAY U & DPT
INJECT ALL 3 DEPTHS ARRAY V & DP-05 - DP-13. INJECT DP-14 - DP-20, DP-21 - DP-24, DP-25 - DP-27)

SOURCE AREA TREATMENT ZONE

N OLD US HIGHWAY 31

DP-05 - DP-13, 30' UPGRADIENT OF OW-5

DP-14 - DP-20, 30' UPGRADIENT OF MW-16

DP-25 - DP-27, 10' UPGRADIENT OF MW-26

LEGEND

MW-28	⊕	Overburden Monitoring Well Location
MW-40	⊞	Bedrock Monitoring Well Location
OW-4	⊕	Observation Well Location
	×	Treatment Zone A Injection Wells
	×	Treatment Zone B Injection Wells
	×	Treatment Zone C Injection Wells
	×	Treatment Zone D Injection Wells
Array N		Injection Array
CP-04	■	DPT Polishing Injection Point Location
BP08	■	DPT Polishing ISCR Injection Point Location

0 80 160

APPROXIMATE SCALE IN FEET

amec foster wheeler

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

DRAWN BY	RLB	FILE NO.	P:\Textron\TFCS\Drawings\Polishing Zones A-D.dwg
APPROVED BY	PJS	DATE	08/04/2017
SOURCE Wells surveyed by Territorial Engineering, Fulton County, IN GIS, 2005.		SCALE	SEE ABOVE
PROJECT NO.	3359 15 1040		

PM-3 09/29/2016	
1,1-DCE	<100
c-1,2-DCE	9,200
t-1,2-DCE	110
TCE	<100
VC	34,000

PM-3 12/13/2016	
1,1-DCE	<500
c-1,2-DCE	4,100
t-1,2-DCE	<500
TCE	<500
VC	6,600

MW-81(27) 09/29/2016	
1,1-DCE	<50
c-1,2-DCE	13,000
t-1,2-DCE	81
TCE	<50
VC	20,000

MW-81(27) 12/13/2016	
1,1-DCE	<50
c-1,2-DCE	9,700 J
t-1,2-DCE	68
TCE	<50
VC	17,000 J

PM-2 09/29/2016	
1,1-DCE	<1.0
c-1,2-DCE	9.8
t-1,2-DCE	<1.0
TCE	<1.0
VC	180

PM-2 12/13/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-20(35) 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-20(51) 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-20(35) 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-20(51) 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-12 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	260
t-1,2-DCE	1.6
TCE	<1.0
VC	270

MW-12 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	230
t-1,2-DCE	1.6
TCE	<1.0
VC	190

MW-82 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-82 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-1(28) 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-1(39) 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-1(28) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	2.3

OW-1(39) 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-59(29) 09/30/2016	
1,1-DCE	<1.0
c-1,2-DCE	11
t-1,2-DCE	<1.0
TCE	<1.0
VC	340

MW-59(29) 12/13/2016	
1,1-DCE	<1.0
c-1,2-DCE	6.3
t-1,2-DCE	<1.0
TCE	<1.0
VC	15

MW-62 09/29/2016	
1,1-DCE	<1.0
c-1,2-DCE	1.7
t-1,2-DCE	<1.0
TCE	<1.0
VC	7.1

MW-62 02/01/2017	
1,1-DCE	<1.0 J
c-1,2-DCE	2.5 J
t-1,2-DCE	<1.0 J
TCE	<1.0 J
VC	73 J

MW-6C 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	280
t-1,2-DCE	1.8
TCE	1.8
VC	360

MW-6C 02/01/2017	
1,1-DCE	3.1
c-1,2-DCE	890
t-1,2-DCE	5.2
TCE	<2.0
VC	1,500

MW-13 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	150
t-1,2-DCE	<1.0
TCE	<1.0
VC	29

MW-13 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	70
t-1,2-DCE	<1.0
TCE	<1.0
VC	47

MW-8, MW-43, B-64, MW-19, MW-55, MW-56, MW-65, MW-89(28), MW-81(27), MW-59(46), MW-52, MW-60, MW-61, MW-3, MW-76, MW-67, MW-66, MW-68, MW-77, MW-72, MW-71, MW-79, MW-78, B-66, B-69, B-70, B-73, MW-20, MW-6C, MW-6B, MW-41, MW-62, MW-12, MW-82, MW-13, OW-1, OW-2, OW-4, OW-5, OW-6, MW-11, MW-83, MW-15, MW-25, MW-27, MW-24, MW-14, OW-3, MW-16, MW-17, MW-26, B-63, B-86, B-87, B-88, MW-75, MW-9A, MW-9B, MW-9C, MW-45, MW-21, MW-84(65), MW-84(44)

4403, 4377

WESTERN POND

EASTERN POND

OLD US HIGHWAY 31

Row 1, Row 2, Row 3, Row 4, Array A, Array B, Array C, Array D, Array E, Array F, Array G, Array H, Array I, Array J, Array K, Array L, Array M, Array N, Array O, Array P, Array Q, Array R, Array S, Array T, Array U, Array V, Array W, Array X, Array Y, Array Z

TREATMENT ZONE A

TREATMENT ZONE B

TREATMENT ZONE C

TREATMENT ZONE D

DOWNGRADIENT TREATMENT ZONE

SOURCE AREA TREATMENT ZONE

TIW Tracer Test Injection Well

OW-25N, OW-15N, OW-6N, OW-3N, OW-3E, OW-10E, OW-15E, OW-25E, OW-30E, OW-60N

ZVI-1, ZVI-2

TRW

LEGEND

- PM-1 — Performance Monitoring Well Location
- TIW — Tracer Injection Well Location
- OW-3E — Tracer Test Observation Well Location
- INJ-2 — Biostimulation Injection Well Location
- B-87 — Soil Boring Location
- MW-28 — Overburden Monitoring Well Location
- MW-40 — Bedrock Monitoring Well Location
- INJ-1 — Grayed Locations are Abandoned
- Treatment Zone A Injection Wells
- Treatment Zone B Injection Wells
- Treatment Zone C Injection Wells
- Treatment Zone D Injection Wells
- ABC + Injection Points
- Shallow Remedial ERD Injection Wells / Deep Remedial ERD Injection Wells
- Building Treatment Zone Injection Wells
- Array N — Injection Array

OW-3(55) 12/16/2014	
VC	23

SAMPLE IDENTIFICATION
DATE SAMPLE COLLECTED
COMPOUND NAME AND RESULT VALUE

NOTES:

Results reported in micrograms per liter (µg/L).

J - Value is estimated.
1,1-DCE - 1,1-Dichloroethene
c-1,2-DCE - cis-1,2-Dichloroethene
t-1,2-DCE - trans-1,2-Dichloroethene
TCE - Trichloroethene
VC - Vinyl Chloride

0 80 160
APPROXIMATE SCALE IN FEET

NORTH

FIGURE 7
SHEET 1 of 1

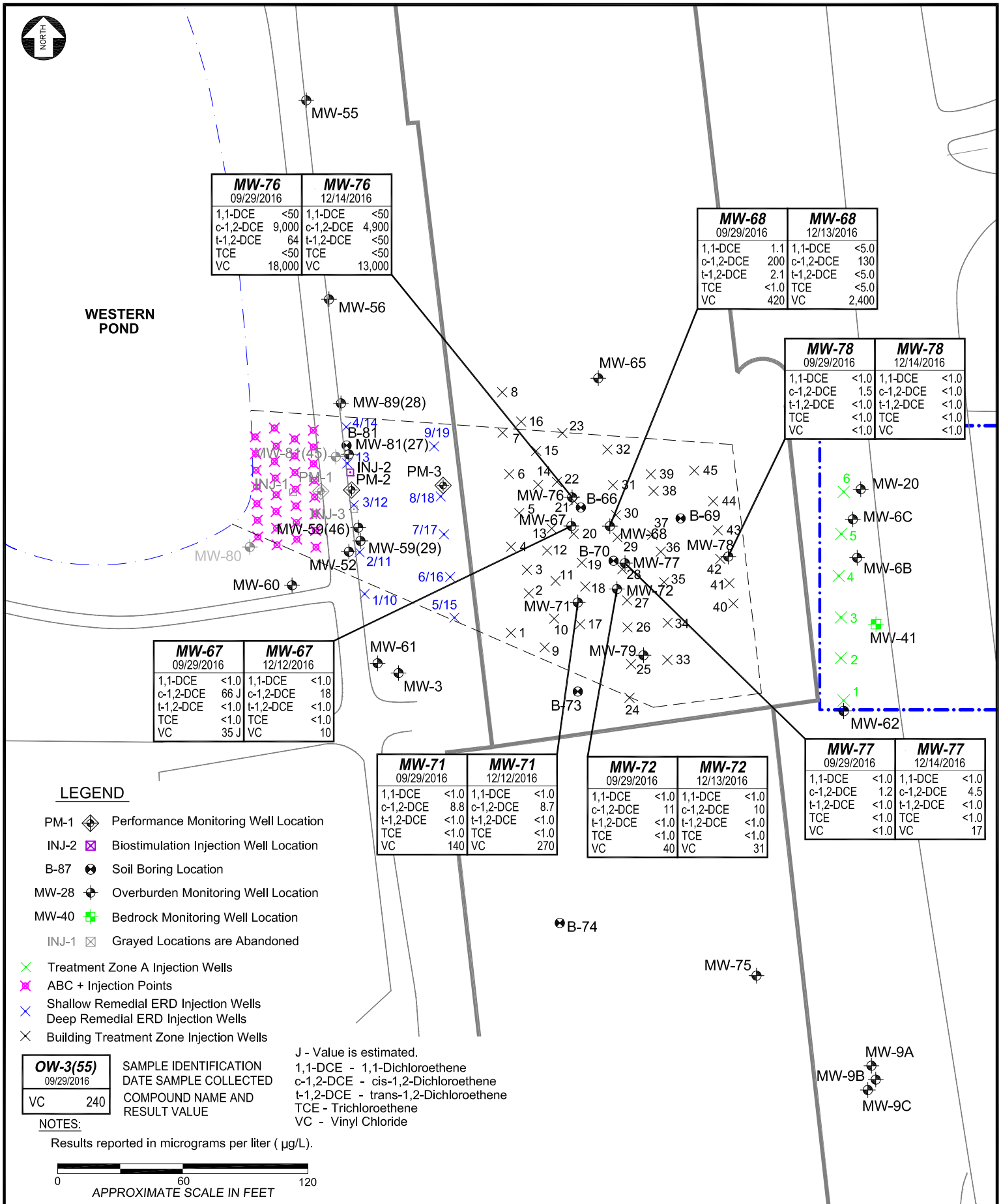
PERFORMANCE MONITORING
VOLATILE ORGANIC COMPOUNDS
SOURCE AREA BEHIND BUILDING &
TREATMENT ZONE A

amec foster wheeler

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

DRAWN BY: RLB
APPROVED BY: PJS
PROJECT NO.: 3,359 15 1040
FILE NO.: P:\Textron\TFS\Drawings\Perf Mon 2015.dwg
DATE: 06/09/2017
SCALE: SEE ABOVE

SOURCE: Wells surveyed by Territorial Engineering, Fulton County, IN GIS, 2005.



DRAWN BY	RLB
FILE NO.	P:\Textron\TFS\Drawings\Perf Mon 2015.dwg
APPROVED BY	PJS
DATE	08/04/2017
SOURCE	Wells surveyed by Territorial Engineering; Fulton County, IN GIS, 2005.
PROJECT NO.	3359 15 1040
SCALE	SEE ABOVE

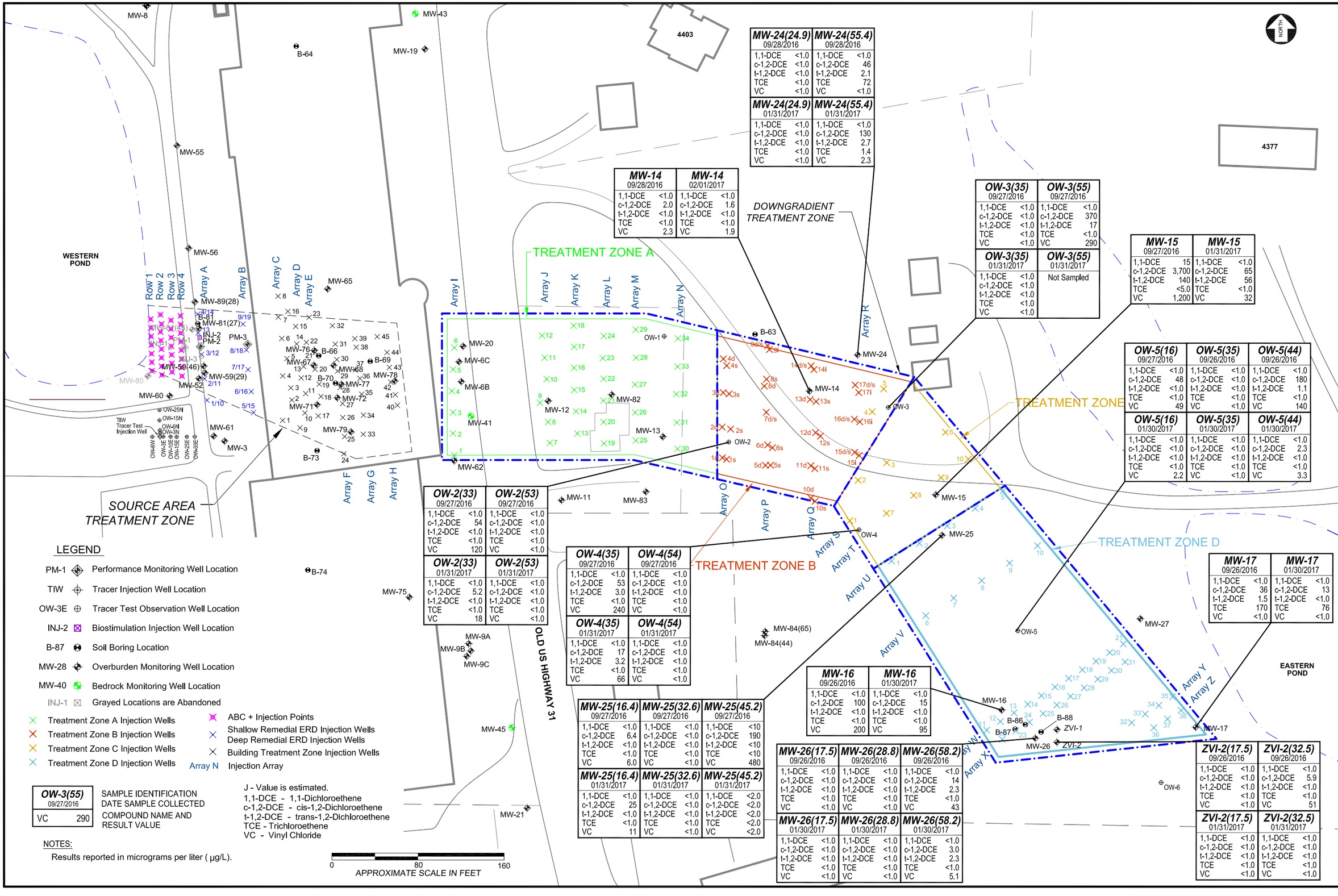
TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

amec foster wheeler

PERFORMANCE MONITORING
VOLATILE ORGANIC COMPOUNDS
SOURCE AREA
INSIDE BUILDING

FIGURE **8**

SHEET 1 of 1



MW-24(24.9) 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-24(55.4) 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	46
t-1,2-DCE	2.1
TCE	72
VC	<1.0

MW-24(24.9) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-24(55.4) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	130
t-1,2-DCE	2.7
TCE	1.4
VC	2.3

MW-14 09/28/2016	
1,1-DCE	<1.0
c-1,2-DCE	2.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	2.3

MW-14 02/01/2017	
1,1-DCE	<1.0
c-1,2-DCE	1.6
t-1,2-DCE	<1.0
TCE	<1.0
VC	1.9

OW-3(35) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-3(55) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	370
t-1,2-DCE	17
TCE	<1.0
VC	290

OW-3(35) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-3(55) 01/31/2017
Not Sampled

MW-15 09/27/2016	
1,1-DCE	15
c-1,2-DCE	3,700
t-1,2-DCE	140
TCE	<5.0
VC	1,200

MW-15 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	65
t-1,2-DCE	56
TCE	<1.0
VC	32

OW-5(16) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	48
t-1,2-DCE	<1.0
TCE	<1.0
VC	49

OW-5(35) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-5(44) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	180
t-1,2-DCE	1.1
TCE	<1.0
VC	140

OW-5(16) 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	2.2

OW-5(35) 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-5(44) 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	2.3
t-1,2-DCE	<1.0
TCE	<1.0
VC	3.3

MW-17 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	36
t-1,2-DCE	1.5
TCE	170
VC	<1.0

MW-17 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	13
t-1,2-DCE	<1.0
TCE	76
VC	<1.0

OW-2(33) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	54
t-1,2-DCE	<1.0
TCE	<1.0
VC	120

OW-2(53) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-2(33) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	5.2
t-1,2-DCE	<1.0
TCE	<1.0
VC	18

OW-2(53) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-4(35) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	53
t-1,2-DCE	3.0
TCE	<1.0
VC	240

OW-4(54) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

OW-4(35) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	17
t-1,2-DCE	3.2
TCE	<1.0
VC	66

OW-4(54) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-16 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	100
t-1,2-DCE	<1.0
TCE	<1.0
VC	200

MW-16 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	15
t-1,2-DCE	<1.0
TCE	<1.0
VC	95

MW-25(16.4) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	6.4
t-1,2-DCE	<1.0
TCE	<1.0
VC	6.0

MW-25(32.6) 09/27/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-25(45.2) 09/27/2016	
1,1-DCE	<10
c-1,2-DCE	190
t-1,2-DCE	<10
TCE	<10
VC	480

MW-25(16.4) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	25
t-1,2-DCE	<1.0
TCE	<1.0
VC	11

MW-25(32.6) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-25(45.2) 01/31/2017	
1,1-DCE	<2.0
c-1,2-DCE	<2.0
t-1,2-DCE	<2.0
TCE	<2.0
VC	<2.0

MW-26(17.5) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-26(28.8) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-26(58.2) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	14
t-1,2-DCE	2.3
TCE	<1.0
VC	43

MW-26(17.5) 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-26(28.8) 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

MW-26(58.2) 01/30/2017	
1,1-DCE	<1.0
c-1,2-DCE	3.0
t-1,2-DCE	2.3
TCE	<1.0
VC	5.1

ZVI-2(17.5) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

ZVI-2(32.5) 09/26/2016	
1,1-DCE	<1.0
c-1,2-DCE	5.9
t-1,2-DCE	<1.0
TCE	<1.0
VC	51

ZVI-2(17.5) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

ZVI-2(32.5) 01/31/2017	
1,1-DCE	<1.0
c-1,2-DCE	<1.0
t-1,2-DCE	<1.0
TCE	<1.0
VC	<1.0

LEGEND

- PM-1 — Performance Monitoring Well Location
- TIW — Tracer Injection Well Location
- OW-3E — Tracer Test Observation Well Location
- INJ-2 — Biostimulation Injection Well Location
- B-87 — Soil Boring Location
- MW-28 — Overburden Monitoring Well Location
- MW-40 — Bedrock Monitoring Well Location
- INJ-1 — Grayed Locations are Abandoned
- Treatment Zone A Injection Wells
- Treatment Zone B Injection Wells
- Treatment Zone C Injection Wells
- Treatment Zone D Injection Wells
- ABC + Injection Points
- Shallow Remedial ERD Injection Wells
- Deep Remedial ERD Injection Wells
- Building Treatment Zone Injection Wells
- Array N — Injection Array

OW-3(55) 09/27/2016	
VC	290

SAMPLE IDENTIFICATION
DATE SAMPLE COLLECTED
COMPOUND NAME AND RESULT VALUE

J - Value is estimated.
1,1-DCE - 1,1-Dichloroethene
c-1,2-DCE - cis-1,2-Dichloroethene
t-1,2-DCE - trans-1,2-Dichloroethene
TCE - Trichloroethene
VC - Vinyl Chloride

NOTES:
Results reported in micrograms per liter (µg/L).

0 80 160
APPROXIMATE SCALE IN FEET

FIGURE 9
SHEET 1 of 1

PERFORMANCE MONITORING VOLATILE ORGANIC COMPOUNDS TREATMENT ZONES B, C & D

amec foster wheeler

TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA

DRAWN BY: RLB
APPROVED BY: PJS
PROJECT NO. 3359 15 1040
FILE NO. P:\Textron\TFS\Drawings\Perf Mon 2015.dwg
DATE 08/04/2017
SOURCE Wells surveyed by Territorial Engineering, Fulton County, IN GIS, 2005.
SCALE SEE ABOVE

APPENDIX A

GROUNDWATER SAMPLE COLLECTION FIELD LOGS

APPENDIX B

LABORATORY REPORTS AND DATA VALIDATION REPORTS