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25 January 2017

Mr. Joshua Keller
Environmental Manager
Indiana Department of Environmental Management
100 North Senate Ave.
Indianapolis, IN 46204-2251

**RE: Report of the Fourth Performance Groundwater Monitoring Event
In Support of the Remedial Activities
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana
Facility Cleanup ID 7100149
Amec Foster Wheeler Project Number 3359-15-1040**

Dear Mr. Keller:

Enclosed is the *Report of the Fourth Performance Groundwater Monitoring Event In Support of the Remedial Activities* performed at the TORX Facility located in Rochester, Indiana prepared by Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler). The report documents the fourth performance groundwater monitoring event performed at the referenced site. The work was completed as described in the *Remediation Work Plan* dated 24 June 2014.

The rate of chlorinated compound degradation continues to increase when compared with the third performance monitoring data. The overall total site-wide mass of chlorinated compounds in the treatment areas has been reduced by 67% from baseline concentrations. The performance groundwater monitoring documents significant concentrations of ethene in the groundwater, demonstrating that the reductive dechlorination process is going to completion.

Polishing injections of biostimulant were implemented at select locations in the treatment areas during the fourth quarter 2016. A report detailing the additional biostimulant injections will be included in the fifth performance groundwater monitoring report, which will be submitted to your office in the future. If you have any questions or comments following your review of this report, please call our office at 937-859-3600.

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.



Paul J. Stork
Project Manager



K. Joe Deatherage, PE
Senior Engineer

Enclosure

cc: Jamison Schiff, Textron, Inc.

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REPORT OF THE FOURTH REMEDIAL INJECTION PERFORMANCE GROUNDWATER MONITORING EVENT

Former TORX Facility

4366 North Old US Highway 31
Rochester, Indiana

Prepared for:

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Prepared by:

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January 2017

Project No. 3359-15-1040

IMPORTANT NOTICE

This report was prepared exclusively for Textron, Inc. by Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in Amec Foster Wheeler's services and based on: i) information available at the time of preparation, ii) data supplied by outside sources and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by Textron, Inc. only, subject to the terms and conditions of its contract with Amec Foster Wheeler. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

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ACRONYMS

µg/L	micrograms per liter
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
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
mV	millivolts
NTU	Nephelometric Turbidity Units
ORP	oxygen reduction potential
PVC	polyvinyl chloride
QAPP	Quality Assurance Project Plan
RWP	Remediation Work Plan
TCE	trichloroethene
TOC	total organic carbon
USEPA	U.S. Environmental Protection Agency
VFA	volatile fatty acid
VOC	Volatile organic compound

1.0 INTRODUCTION

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) has prepared this report to document performance monitoring results associated with the implementation of In-Situ Chemical Reduction (ISCR) and Enhanced Reductive Dechlorination (ERD) as remedies for groundwater containing 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 REMEDIAL INJECTION ACTIVITIES

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 purpose of the remediation activities is to reduce the concentration of VOCs in the groundwater at and in the vicinity of the Site.

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 behind (west of) the building and beneath the manufacturing plant is being addressed by stimulating biologically mediated enhanced reductive dechlorination, referred to as ERD or biostimulation. The downgradient treatment zone (downgradient plume) to the vicinity of MW26 and MW17 is also being addressed by ERD. In the vicinity of MW26 and MW17, a biobarrier was installed based on the use of a long lived reductive dechlorination amendment.

Amec Foster Wheeler performed injection services within the source and treatment areas shown in Figures 2 through 5. 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*. 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.

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 ERD injections in the source area located beneath the Acument building were performed in February 2016. Three previous performance monitoring events have been conducted. 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.

2.1 Performance Monitoring Objectives

Amec Foster Wheeler conducted the fourth groundwater performance monitoring sampling event during September 2016. 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 used to identify refinements to the biostimulant or ISCR amendment injections plans in order to optimize remedy effectiveness.

2.2 Scope of Work

Amec Foster Wheeler conducted groundwater monitoring and sampling at 43 monitoring wells located within and downgradient of the treatment zones. The fourth groundwater performance monitoring event took place in during the week of 26 September 2016.

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), and dissolved gases (methane, ethane, and ethene). As specified in the June 2014 RWP, the fourth performance groundwater monitoring event analytical parameters were a limited subset of the entire performance monitoring parameters.

3.0 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. Groundwater was assessed for geochemical parameters [oxidation-reduction potential (ORP), dissolved oxygen (DO), and pH], VOCs, anions (nitrate, chloride, and sulfate), TOC, alkalinity, Dehalococcoides bacteria (DHC), dissolved gases (methane, ethane, and ethene), volatile fatty acids (VFAs), and select metals (arsenic, selenium, iron, and manganese). The analytical methods used are presented in Table 1. The results of this baseline sampling, supplemented with results of routine groundwater monitoring conducted from 2012 through 2014, are included on Tables 2 through 4. 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), as annotated in Section 6.0.

4.0 Field Activities

The performance monitoring wells that were sampled are indicated on Table 1. In addition, MW89(28) was sampled for VOCs and dissolved gases. Prior to purging and sampling, total depths and static water levels were measured in monitoring wells within and downgradient of the treatment zone. The water level measurements and calculated groundwater elevations are shown on Table 5. Groundwater elevation contours for shallow overburden wells are shown on Figure 6. Groundwater elevation contours for the intermediate overburden wells are shown on Figure 7. Groundwater flow is generally to the southeast in both zones with indication of a southerly component in the area of North Old Highway 31 in the intermediate zone.

The 1-inch diameter monitoring wells, MW12 and MW13 located east of North Old US Highway 31 and monitoring wells MW67, MW68, MW71 and MW72 located inside the Acument building were purged and sampled using disposable 0.75-inch diameter polyvinyl chloride (PVC) 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. Samples for dissolved gas analyses were shipped under chain-of-custody to Microseeps, a division of Pace Analytical, in Pittsburgh, Pennsylvania.

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 MW12, MW13, MW67, MW68, MW71 and MW72. Disposable equipment was changed out between each well.

5.0 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 1. For this fourth performance monitoring event the groundwater samples collected from the performance monitoring wells were analyzed for the reduced list of analytical parameters as indicated on Table 1.

5.1 Amendment Distribution Indicators

5.1.1 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.

5.2 Redox Conditions

5.2.1 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).

5.2.2 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).

5.3 Buffering

5.3.1 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.

5.4 Degradation of Chlorinated VOCs

5.4.1 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.

5.4.2 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.

6.0 Data Evaluation

Tables 2 through 4 present the analytical results. The measured field parameters referenced in Section 4.0 are included in Table 2. Figures 8 through 10 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.

6.1 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), PM2, and PM3. TOC concentrations were above 20 mg/L in MW81(27), MW59(29), and PM3, indicating continued presence of amendment. The TOC concentration at PM2 was 12 mg/L, which may indicate that the amendment is depleting.

The pH ranged from 5.68 to 6.53, which is within acceptable limits for biological activity. ORP indicates reducing conditions in all the wells except PM3.

Trichloroethene (TCE) was below reporting limits in all four wells, indicating remediation of the source contaminant has occurred at this location. In comparison to the June 2016 monitoring event results, the cis-1,2-DCE concentrations were lower at MW81(27), PM2, and PM3 and similar in range at MW59(29). Vinyl chloride concentrations were lower at MW81(27), MW59(29), and PM2 in comparison to the June 2016 monitoring event samples. The vinyl chloride concentration at PM3 has increased over the past two sampling events, likely due to the associated reduction in cis-1,2-DCE.

Methane concentrations for all four 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	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW81(27)	33%	100%	72%	-190%	YES	YES	-	NO
MW59(29)	99%	--	99.9%	98%	YES	YES	-	NO
PM2	98%	100%	99.9%	94%	NO	YES	-	YES
PM3	-23%	--	75%	-310%	YES	YES	+	YES
Total (4 wells)	43%							

Prepared By: LF
 Checked By: JD

Conclusions

- Total CVOC mass has decreased by 43% relative to baseline with a significant shift in mass makeup from TCE to degradation products, reflecting the ongoing dechlorination process.
- Contaminant mass has been substantially reduced in the two performance monitoring wells (PM2 and MW59(29)) located in the middle of the source area.
- Contaminant mass has increased in PM3, likely due to liberation of mass from silt layers. However, the effects of ERD are evident, as the parent contaminant TCE is now non-detect, while the increase in mass is from daughter products DCE and vinyl chloride.

6.2 Source Zone Inside (Beneath) Plant

Seven monitoring wells located in the source zone beneath the plant were sampled for performance monitoring: MW67, MW68, MW71, MW72, MW76, MW77, and MW78. TOC concentrations were above 20 mg/L in all the wells except MW77. A significant reduction in CVOC mass is observed in all the wells except for MW76. ORP indicates reducing conditions in all wells, and pH ranged 6.12 to 7.47, which is in the ideal range for biological-based treatment.

TCE was below reporting limits in all the wells. Cis-1,2-DCE concentrations decreased at MW67, MW71, and MW72 and were similar at the other four performance monitoring wells in comparison to the June 2016 monitoring event results. The vinyl chloride concentration at MW68 increased relative to the June 2016 result, but otherwise vinyl chloride concentrations decreased or were similar to the June 2016 results.

Methane concentrations remain high, indicating anaerobic fermentation is occurring. Ethene concentrations were high except MW77 and MW78. High ethene concentrations are 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	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW67	99%	--	99.7%	98%	YES	YES	-	NO
MW68	97%	--	99%	86%	YES	YES	-	NO
MW71	99.5%	--	99.9%	98%	YES	YES	-	NO
MW72	99.9%	--	99.9%	99.6%	YES	YES	-	NO
MW76	-353%	--	-27%	-2669%	YES	YES	-	NO
MW77	98%	--	98%	100%	NO	NO	-	NO
MW78	99.9%	--	99.6%	100%	YES	NO	-	NO
Total (7 wells)	83%							

Prepared By: LF
 Checked By: JD

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 83% in the Source Zone Inside (Beneath) the Plant based upon data from the seven performance monitoring wells relative to baseline.

- While total CVOC mass at MW76 has increased, the remaining mass is daughter products DCE and vinyl chloride.
- Cis-1,2-DCE is the only primary CVOC detected at MW77 and MW78 and the concentrations were just above the reporting limit, indicating dechlorination is nearly complete at these two wells.

6.3 Treatment Zone A

Nine monitoring wells located in Treatment Zone A were sampled for performance monitoring: MW6C, MW12, MW13, MW62, MW20(35), MW20(51), MW82, OW1(28), and OW1(39). The contaminant mass at MW20(51), MW82(58), OW1(28), and OW1(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 MW12 and MW62(36). ORP indicates reducing conditions in all wells. The pH ranged from 6.73 to 7.59, which is in the ideal range for biological-based treatment.

TCE was below reporting limits in all the wells except for a minimal detection at MW6C. Cis-1,2-DCE concentrations were significantly lower than the previous sampling event (June 2016) in all the wells except MW6C. Vinyl chloride concentrations were similar or lower in all the performance monitoring wells relative to the previous sampling event except at MW6C.

Methane concentrations were high in the performance monitoring wells, indicating anaerobic fermentation is occurring. Ethene was substantially present in the 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	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW6C	78%	--	84%	70%	NO	YES	-	YES
MW12	94%	--	98%	61%	YES	YES	-	NO
MW13	96%	--	95%	98%	NO	YES	-	NO
MW62(36)	99.8%	--	99.9%	99.6%	YES	YES	-	YES
MW20(35)	100%	--	100%	100%	NO	YES	-	NO
MW20(51)	100%	--	100%	100%	YES	NO	-	YES
MW82(58)	100%	100%	100%	100%	YES	NO	-	YES
OW1(28)	100%	--	100%	100%	NO	YES	-	YES
OW1(39)	100%	--	100%	100%	NO	YES	-	YES
Total (9 wells)	95%							

Prepared By: LF

Checked By: JD

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 95% in Treatment Zone A based upon data from the nine performance monitoring wells relative to baseline.
- Contaminant mass has been fully reduced in MW20(51), MW82(58), OW1(28), and OW1(39).
- Significant CVOC mass reduction has been observed in all wells.
- Additional amendment may be beneficial at performance monitoring well MW6C.

6.4 Treatment Zone B

Seven monitoring wells located in Treatment Zone B were sampled for performance monitoring: MW14, MW24(24.9), MW24(55.4), OW2(33), OW2(53), OW3(35), and OW3(55). Contaminant mass has not been present at MW24(24.9), and the mass at



OW2(53) and OW3(35) has been reduced by 100%; therefore, these wells are not included in the subsequent discussions on indicator parameters.

The TOC levels were greater than 20 mg/L at MW14 and OW3(55). The ORP indicates reducing conditions in the wells. The pH ranged from 6.68 to 7.83, which is in the ideal range for biological-based treatment.

TCE was below reporting limits in the wells except MW24(55.4). Cis-1,2-DCE concentrations were lower or comparable to the previous sampling event (June 2016). Vinyl chloride concentrations were lower than the previous sampling event in all the wells except OW3(55).

Ethene was substantially present in all wells except MW24(55.4). Methane was elevated in MW14, OW2(33), and OW3(55).

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	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW14	98%	100%	96%	45%	YES	YES	-	YES
MW24(24.9)	--	--	--	--	NO	NO	-	NO
MW24(55.4)	31%	35%	19%	--	NO	NO	-	YES
OW2(33)	40%	--	70%	14%	NO	YES	-	YES
OW2(53)	100%	--	100%	100%	YES	NO	-	YES
OW3(35)	100%	100%	100%	100%	NO	YES	-	NO
OW3(55)	-26%	100%	-236%	-8688%	YES	YES	-	YES
Total (7 wells)	78%							

Prepared By: LF
 Checked By: JD

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 78% in Treatment Zone B based upon data from the seven performance monitoring wells relative to baseline.
- Contaminant mass has been fully reduced in OW2(53) and OW3(35).
- A significant reduction in the concentrations of degradation products has occurred at OW2(33) relative to the June 2016 performance monitoring event.
- Contaminant mass has increased from baseline in OW3(55), likely due to liberation from silt layers from the effects of the injection. Conditions are favorable for continued reductive dechlorination in this well.

6.5 Treatment Zone C

Six monitoring wells located in Treatment Zone C were sampled for performance monitoring: MW15, MW25(16.4), MW25(32.6), MW25(45.2), OW4(35), OW4(54). Contaminant mass has been reduced 100% or is not present at OW4(54) and MW25(32.6); therefore, these wells are not included in the subsequent discussion on indicator parameters.

TOC concentrations were above 20 mg/L in the wells. The pH ranged from 6.72 to 7.57, which is in the ideal range for biological-based treatment. ORP indicates reducing conditions in all wells.

Total CVOC molar mass is above baseline in MW15 due to an increase in degradation products. TCE was below reporting limits in all the wells. Cis-1,2-DCE concentrations were lower in all the wells compared to the previous sampling event (June 2016). Vinyl chloride concentrations were lower compared to the previous sampling event except at MW15.

Methane concentrations were high, and ethene was substantially present in the wells.

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 TOC > 20 mg/L	Gases Ethene > 10 µg/L	Geochemical Environment	
	Total CVOOC	TCE	cis-1,2-DCE	Vinyl Chloride			ORP (+) or (-)	DO < 0.5 mg/L
MW15	-121%	100%	-76%	-532%	YES	YES	-	YES
MW25(16.4)	99.5%	--	99.7%	99%	YES	YES	-	YES
MW25(32.6)	100%	--	100%	100%	YES	YES	-	YES
MW25(45.2)	4%	100%	75%	-422%	YES	YES	-	YES
OW4(35)	59%	100%	75%	56%	YES	YES	-	NO
OW4(54)	100%	--	100%	--	YES	NO	-	YES
Total (6 wells)	26%							

Prepared By: LF
 Checked By: JD

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 26% 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 OW4(54) and MW25(32.6).
- Significant reduction in concentrations of degradation products was observed at MW25(45.2) and OW4(35) relative to the previous sampling event.
- Vinyl chloride increased at MW15 relative to the previous event but conditions are favorable for continued reductive dechlorination.

6.6 Treatment Zone D

Ten monitoring wells located in Treatment Zone D were sampled for performance monitoring: MW16, MW17, MW26(17.5), MW26(28.8), MW26(58.8), ZVI-2(17.5), ZVI-2(32.5), OW5(16), OW5(35), and OW5(45). The contaminant mass at MW26(17.5),

MW26(28.8), ZVI-2(17.5), and OW5(35) has been reduced 100%, therefore these wells are not included in the subsequent discussions on indicator parameters.

TOC levels were greater than 20 mg/L at MW16, MW26(58.8), and OW5(45). The pH ranged from 7.00 to 7.79, which is in the ideal range for biological-based treatment. ORP indicates reducing conditions in all wells except MW17.

TCE was below reporting limits in all the wells except MW17. Cis-1,2-DCE concentrations and vinyl chloride concentrations were comparable or lower in all the wells except MW26(58.2) compared to the previous sampling event (June 2016). The cis-1,2-DCE and vinyl chloride concentrations at MW26(58.2) increased slightly relative to the previous sampling event.

Methane concentrations were high except MW17. Ethene was substantially present except MW17.

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	Ethene > 10 µg/L	ORP (+) or (-)	DO < 0.5 mg/L
MW16	45%	100%	76%	0%	YES	YES	-	YES
MW17	16%	11%	29%	--	NO	NO	+	YES
MW26(17.5)	100%	--	100%	100%	NO	YES	-	YES
MW26(28.8)	100%	100%	100%	100%	NO	NO	-	YES
MW26(58.8)	-3358%	--	-483%	-4200%	YES	NO	-	YES
ZVI2(17.5)	100%	--	100%	100%	NO	YES	-	YES
ZVI2(32.5)	93%	--	99%	85%	NO	YES	-	YES
OW5(16)	89%	100%	94%	79%	NO	YES	-	YES
OW5(35)	100%	100%	100%	100%	YES	YES	-	YES
OW5(45)	65%	100%	18%	76%	YES	YES	-	YES
Total (10 wells)	88%							

Prepared By: LF
 Checked By: JD

Conclusions

- The total molar mass for the primary CVOCs has thus far been reduced by 88% 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 MW26(58.8).
- Contaminant mass has been fully reduced at MW26(17.5), MW26(28.8), ZVI-2(17.5), and OW5(35).
- Significant reduction in concentrations of degradation products was observed at OW5(35) and OW5(45) relative to the previous sampling event.
- TCE persists at MW17 and additional amendment to this area may be beneficial.

6.7 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. Chloromethane was reported in two of the three equipment blanks so chloromethane detections in the samples were qualified as non-detect. The laboratory control sample for bromomethane was below control limits. Bromomethane was not detected in the samples but the reporting limits were qualified as estimated. Matrix spike and/or matrix spike duplicate recovery for a subset of the samples were outside the control limits for 2-butanone, bromoform, bromomethane, and chloromethane, therefore the associated concentrations were J (estimated) or UJ (undetected and reporting limit is estimated) flagged. The VOC sample for MW67 had a pH measurement greater than 2; therefore, results analyzed outside of a 7 day holding time were qualified as J (estimated) or UJ (undetected and reporting limit is estimated). Non-detect results for bromoform and bromomethane were qualified as UJ (undetected and reporting limit is estimated) in a subset of the samples due to continuing calibration standard outside the control limits. 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, two field replicates, and a trip blank were submitted and analyzed for VOCs. Total organic carbon concentrations in the equipment blanks ranged from 0.99 mg/L to 26 mg/L. Chloromethane was detected in two of the equipment blank samples: 1.4 micrograms per liter ($\mu\text{g/L}$) for ATR-EB001-G092816 and 1.6 $\mu\text{g/L}$ for ATR-EB003-G092916. No VOCs were detected in the trip blank sample.

7.0 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 67% from baseline concentrations.

- Select locations may benefit from another round of injections.

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 67% from baseline concentrations.
- The source area mass (combined behind building and inside building) has been reduced 65% from baseline.
- The mass at the leading edge of the treatment area (MW17, MW26, and ZVI-2) has been reduced by 94% from baseline.

8.0 Upcoming Activities

The performance monitoring results show significant and substantial reduction in CVOCs at and in the vicinity of the site. Additional polishing injections, designed to further enhance the established reductive dechlorination of the CVOCs, were conducted in the fourth quarter of 2016. The fifth Performance Groundwater Monitoring Event will be completed in the first calendar quarter of 2017 and the report documenting that sampling data will include details of the polishing injections.



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TORX Facility Remediation
Report of Performance Monitoring

TABLES

Table 1
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						Frequency	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						
	4 Wells	7 Wells	9 Wells	7 Wells	6 Wells	10 Wells		4 Wells	7 Wells	9 Wells	7 Wells	6 Wells	10 Wells
VOCs ⁽¹⁾ , TOC ⁽²⁾ , Dissolved Gases ⁽³⁾	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); MW-82; 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)	VOCs; TOC; Dissolved Gases	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)
Metals ⁽⁴⁾ , Alkalinity ⁽⁵⁾													
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: dehalococoides [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

Table 2
Summary of Measured Field Parameters, Geochemistry, and Metals
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	Field Measured Parameters						Geochemistry						Metals	
			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-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-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	1.0 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-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	

Table 2 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from the Pilot Test Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Field Measured Parameters						Geochemistry						Metals	
			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 - 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-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-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-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-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-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-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	
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	0.020 U	8.0	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-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

Table 2 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from the Pilot Test Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Field Measured Parameters						Geochemistry						Metals	
			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-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-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	1.0 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-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	1.0 U	9.6	0.86
	ATR-MW20(35)-G022316R	2/23/2016	NA	NA	NA	NA	NA	NA	320	320	110	22	0.079	1.0 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(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	1.0 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-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	0.10	1.0 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-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(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	9/1/2816	7.80	0.565	14.06	2.0	0.20	-142.9	NA	NA	5.9	NA	NA	NA	NA	NA	

Table 2 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from the Pilot Test Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Field Measured Parameters						Geochemistry						Metals	
			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-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
	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(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	0.020 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-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(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-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	1.0 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(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	

Table 2 (continued)
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TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

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			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-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-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(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	1.0 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
	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	1.0 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-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	0.14	1.0 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(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	0.020 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

Table 2 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from the Pilot Test Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Field Measured Parameters						Geochemistry						Metals	
			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-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	0.90	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-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	0.10	1.0 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(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	0.10	1.0 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	

Table 2 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from the Pilot Test Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Treatment Area	Sample ID	Sample Date	Field Measured Parameters						Geochemistry						Metals	
			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-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-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	1.0 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-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-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	1.0 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(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	1.0 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(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	1.0 U	17	0.85
	ATR-OW5(45)-G61416	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)-G92616	9/26/2016	7.03	1.528	16.00	8.1	0.18	-158.1	NA	NA	220	NA	NA	NA	NA	NA	

Table 2 (continued)
Summary of Measured Field Parameters, Geochemistry, and Metals
Performed on the Groundwater Samples Collected from the Pilot Test Performance Monitoring Wells
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

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: RLB

Checked by: PJS

Table 3
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	0.8	50 U		50 U		20,000	320	455
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

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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
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
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	0.7	1 U		1 UJ		1 UJ		35 J	0.6	1.2

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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												Total Molar Mass
			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)		
			µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/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
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
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	0.5	0.66
	ATR-MW72-G092916	9/29/16	1 U		11	0.11	1 U		1 U		1 U		40	0.6	0.75
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
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

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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												Total Molar Mass
			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)		
			µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/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
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	
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
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	0.5	2.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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
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		0.0
ATR-MW20(35)-G092816R	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0	
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		0.0
	ATR-MW20(51)-G061616	6/16/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-MW20(51)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
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		0.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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												Total Molar Mass
			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)		
			µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	
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		0.0
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		0.0
	ATR-OW1(39)-G061616	6/16/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-OW1(39)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
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	0.6
	ATR-MW14-G092816	9/28/16	1 U		2.0	0.02	1 U		1 U		1 U		2.3	0.04	0.06
Zone B	MTR-MW24(24.9)-6082213	7/22/13	1 U		1 U		1 U		2 U		1 U		1 U		0.0
	ATR-MW24 (24.9)-G100815	10/8/15	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-MW24(24.9)-G022916	2/29/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-MW24(24.8)-G061516	6/15/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-MW24(24.9)-G092816	9/28/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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-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
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	0.6	1 U		1 U		1 U		120	1.9	2.5
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		0.0
	ATR-OW2(53)-G061616	6/16/16	5 U		5 U		5 U		5 U		5 U		5 U		0.0
	ATR-OW2(53)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
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		0.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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(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
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	140	1.4	5 U		5 U		1,200	19	59
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	0.07	1 U		1 U		1 U		6.0	0.10	0.16

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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(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		0.0
	ATR-MW25(32.6)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
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
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
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		0.0
	ATR-OW4(54)-G030116	3/1/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-OW4(54)-G061516	6/15/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-OW4(54)-G092716	9/27/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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-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
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
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		0.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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												Total Molar Mass
			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)		
			µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	µg/L	m/L*	
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		0.0
	ATR-MW26(28.8)-G030116	3/1/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-MW26(28.8)-G061416	6/14/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
	ATR-MW26(28.8)-G092616	9/26/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0
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
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		0.0
	ATR-ZVI2(17.5)-G092616	9/26/16	1 U		1 U		1 U		1 U		1 U		1 U		0.0

Table 3 (continued)

**Summary of Target VOC Analytical and Molecular Concentrations
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(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	
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	0.8	3.1
	ATR-OW5(16)-G092716	9/27/16	1 U		48	0.5	1 U		1 U		1 U		49	0.8	1.3
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		0.0

Table 3 (continued)

Summary of Target VOC Analytical and Molecular Concentrations
 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(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

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

Prepared by: RED

Checked by: PJS

Table 4
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	teeA 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
	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-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-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	
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	
	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	
	ATR-MW67-G092916	9/29/16	NA	NA	NA	NA	3,800	170	4,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Table 4 (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	teeA 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 - Inside	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-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-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-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-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-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	
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-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
	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-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	

Table 4 (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-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	mg/L
Zone A	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	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	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	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	NA
	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	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	NA
	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	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	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	NA
	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	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	NA
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	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	NA	
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	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	NA
	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	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	NA
	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	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	NA	

Table 4 (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-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
Zone B	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 (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)-G022916	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-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 (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
	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(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(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-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	

Table 4 (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-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
Zone C	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
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-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
	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	0.15 U	0.070 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	0.15 U	0.070 U	0.050 U
	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
	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	0.15 U	0.070 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	0.15 U	0.070 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 (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
	ZVI-2(17.5)-G121812	12/18/12	1.00E+00	1.00E+00	1.00E+00	1.00E+00	NA	NA	NA	1.0 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	

Table 4 (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-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
Zone D	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-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	0.75	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 (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 (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	

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

Table 5
Surveyed Elevation Data and Depth to Water for Monitoring Wells Used
for Groundwater Elevation Contour Mapping - 26 September 2016
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Monitoring Well/Point ID	Top of Casing Elevation ⁽¹⁾	Depth to Water (btoc) ⁽²⁾	Ground Water Elevation
Shallow Overburden Wells			
MW-1	840.48	39.55	800.93
MW-3	805.45	21.20	784.25
MW-5	807.89	21.70	786.19
MW-6C	810.40	26.35	784.05
MW-9C	808.16	24.11	784.05
MW-12	808.46	24.49	783.97
MW-13	806.67	22.70	783.97
MW-14	802.70	18.90	783.80
MW-17	784.41	3.51	780.90
MW-20(35)	810.42	26.35	784.07
MW-21(40.2)	810.33	26.50	783.83
MW-23(39.9)	816.67	32.45	784.22
MW-24(24.9)	804.92	21.16	783.76
MW-25(16.4)	791.93	8.56	783.37
MW-26(17.5)	792.16	11.00	781.16
MW-27(18)	785.82	4.91	780.91
MW-30(41.1)	794.57	20.75	773.82
MW-31(30.9)	781.48	10.15	771.33
MW-53(41)	809.87	25.65	784.22
MW-57(38)	795.51	9.41	786.10
MW-59(29)	799.57	15.22	784.35
MW-60(38)	798.51	13.98	784.53
MW-62(36)	810.71	26.66	784.05
MW-65(32)	809.40	25.30	784.10
MW-67(30)	809.53	25.25	784.28
MW-68(32)	809.46	25.20	784.26
MW-71(33)	809.15	24.89	784.26
MW-72(32)	808.92	24.65	784.27
MW-75(32)	809.39	25.31	784.08
MW-76(30)	809.28	25.00	784.28
MW-77(41)	809.39	25.25	784.14
MW-78(35)	809.30	25.21	784.09
MW-79(30)	809.26	25.15	784.11
MW-81(27)	798.34	13.65	784.69
MW-84(44)	824.91	41.17	783.74
MW-85(39)	796.49	12.79	783.70
MW-89(28)	797.77	13.46	784.31
OW-1(28)	805.18	21.21	783.97
OW-2(33)	805.54	21.68	783.86
OW-3(35)	801.72	18.02	783.70
OW-4(35)	801.35	18.09	783.26
OW-5(16)	790.72	9.22	781.50
OW-6(38)	789.27	9.26	780.01
PM-2	798.45	13.75	784.70
PM-3	808.40	24.11	784.29
ZVI-2(17.5)	791.17	10.00	781.17

Table 5
Surveyed Elevation Data and Depth to Water for Monitoring Wells Used
for Groundwater Elevation Contour Mapping - 26 September 2016
TORX Facility, 4366 North Old US Highway 31, Rochester, Indiana

Monitoring Well/Point ID	Top of Casing Elevation ⁽¹⁾	Depth to Water (btoc) ⁽²⁾	Ground Water Elevation
Intermediate Overburden Wells			
MW-9B	808.07	24.00	784.07
MW-15	792.90	9.88	783.02
MW-19(53)	809.56	25.45	784.11
MW-20(51)	810.41	26.35	784.06
MW-24(55.4)	804.94	21.13	783.81
MW-25(45.2)	791.91	8.89	783.02
MW-26(58.2)	792.17	10.36	781.81
MW-27(53.05)	785.84	3.99	781.85
MW-29(82.5)	801.45	26.07	775.38
MW-31(55.5)	781.47	10.52	770.95
MW-52(55)	798.84	15.21	783.63
MW-55(49)	799.24	13.94	785.30
MW-56(50)	797.23	12.10	785.13
MW-82(58)	807.38	23.36	784.02
MW-83(64)	807.67	23.71	783.96
MW-84(65)	824.56	41.05	783.51
OW-1(39)	805.15	21.20	783.95
OW-2(53)	805.50	21.62	783.88
OW-3(55)	801.66	17.99	783.67
OW-4(54)	801.33	18.00	783.33
OW-5(35)	790.76	8.40	782.36
OW-6(63)	789.27	8.67	780.60
ZVI-2(32.5)	791.19	9.11	782.08

S - Shallow Overburden (Water Table)

⁽¹⁾ Top of casing elevation established using NAVD 88 datum (US survey feet)

⁽²⁾ Below top of casing (feet)

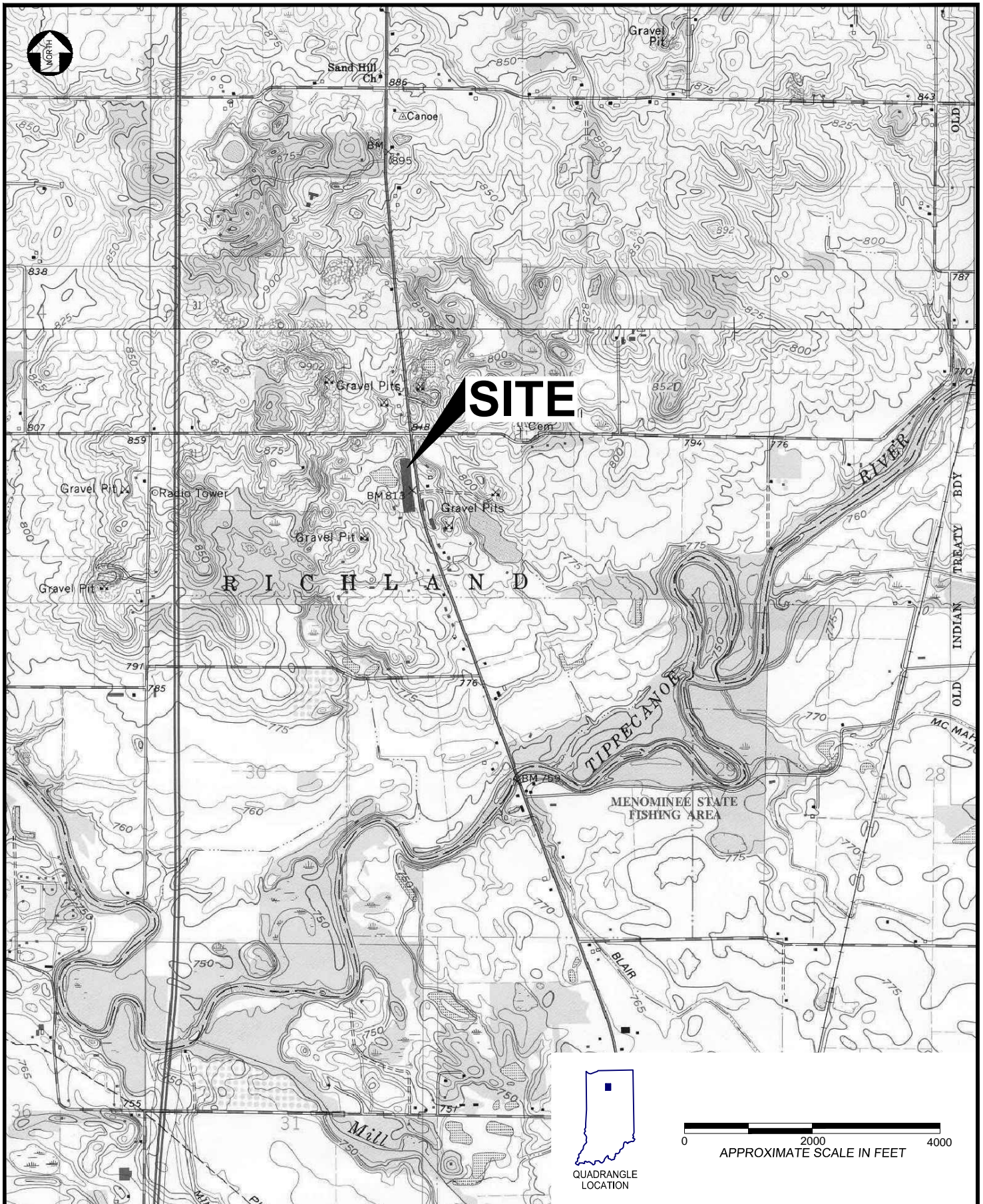
Prepared By: RLB

Checked By: PJS



Textron, Inc.
TORX Facility Remediation
Report of Performance Monitoring

FIGURES



QUADRANGLE LOCATION



APPROXIMATE SCALE IN FEET

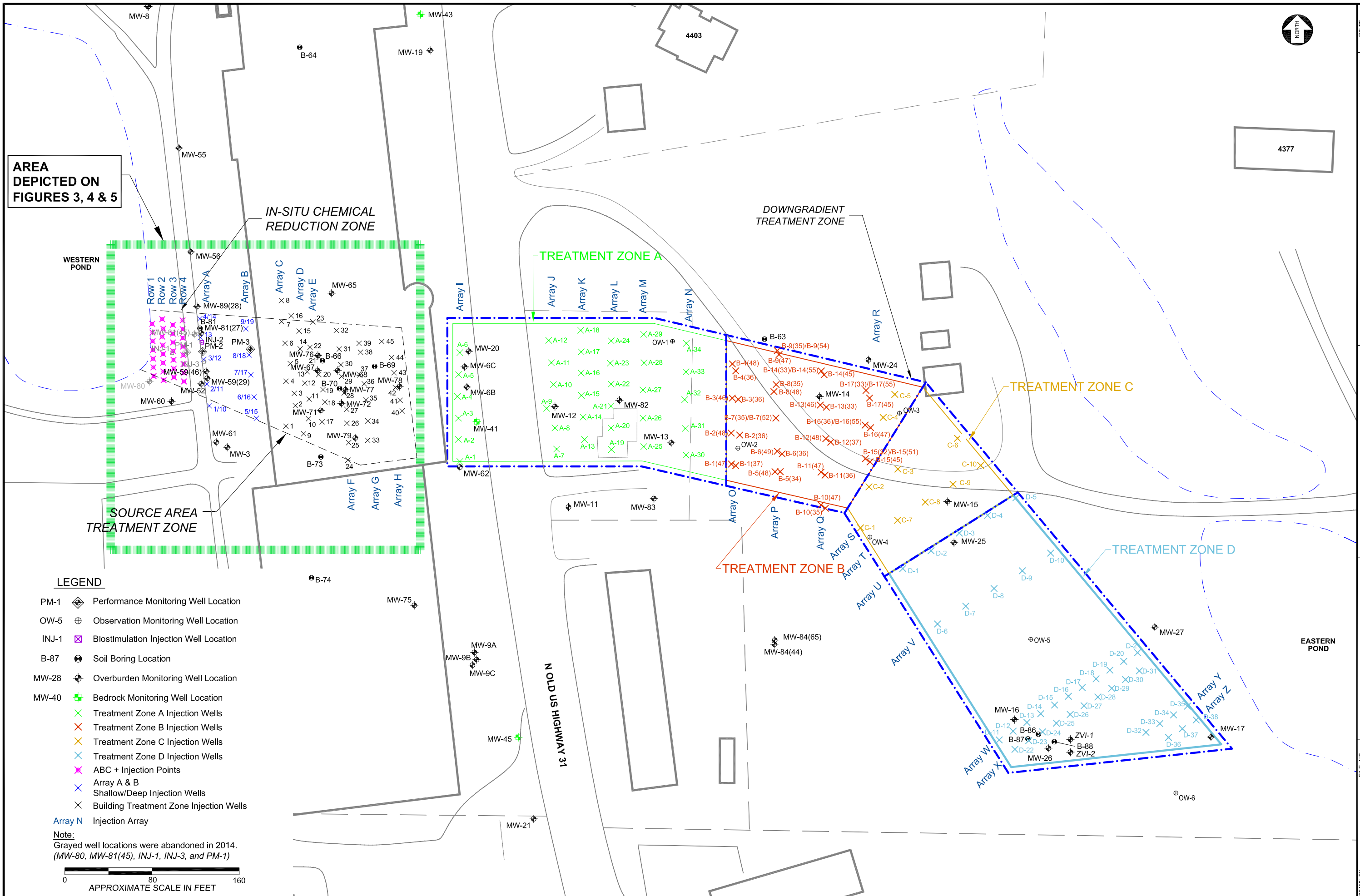
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 PROJECT NO. SCALE
 3359 15 1040 SEE ABOVE

FORMER TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA



SITE LOCATION MAP

FIGURE
1
 SHEET 1 of 1



AREA
DEPICTED ON
FIGURES 3, 4 & 5

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)



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**

FILE NO. P:\Tektron\TFS\Drawings\Temp-Perf Mon 2016.dwg
DATE 11/10/2016
APPROVED BY PJS
SOURCE Wells surveyed by Territorial Engineering, Fulton County, IN GIS, 2005.
PROJECT NO. 3.359.15.1040
SCALE SEE ABOVE



WESTERN POND

MW-56

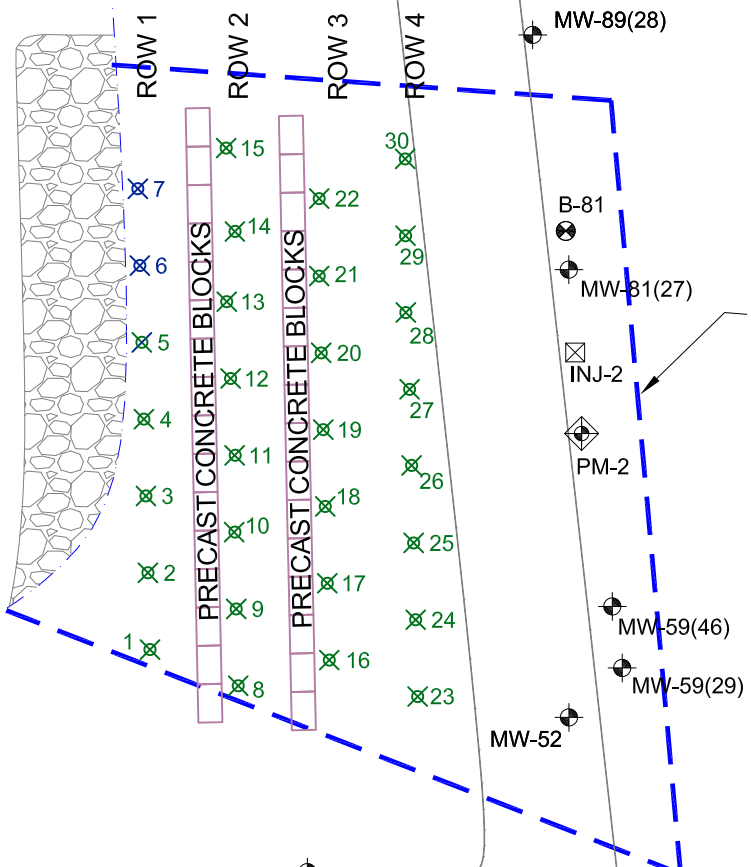
ZVI INJECTION INTERVALS (MSL (ft.) NAVD 88)

ROWS 1 & 2

755-758	758-761
761-764	764-767
767-770	770-773
773-776	

ROWS 3 & 4

755-758	758-761
761-764	764-767
767-770	770-773
773-776	776-779

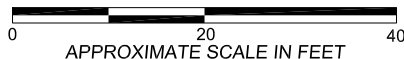


IN-SITU CHEMICAL REDUCTION TREATMENT ZONE

PM-3

LEGEND

- PM-1 PERFORMANCE MONITORING WELL LOCATION
- INJ-1 BIOSTIMULATION INJECTION WELL LOCATION
- B-87 SOIL BORING LOCATION OVERBURDEN
- MW-28 MONITORING WELL LOCATION
- ABC + INJECTION POINTS
- GRAVEL BACKFILL AREA

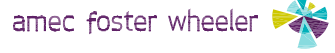


EQUIPMENT STAGING AREA

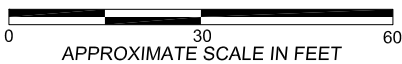
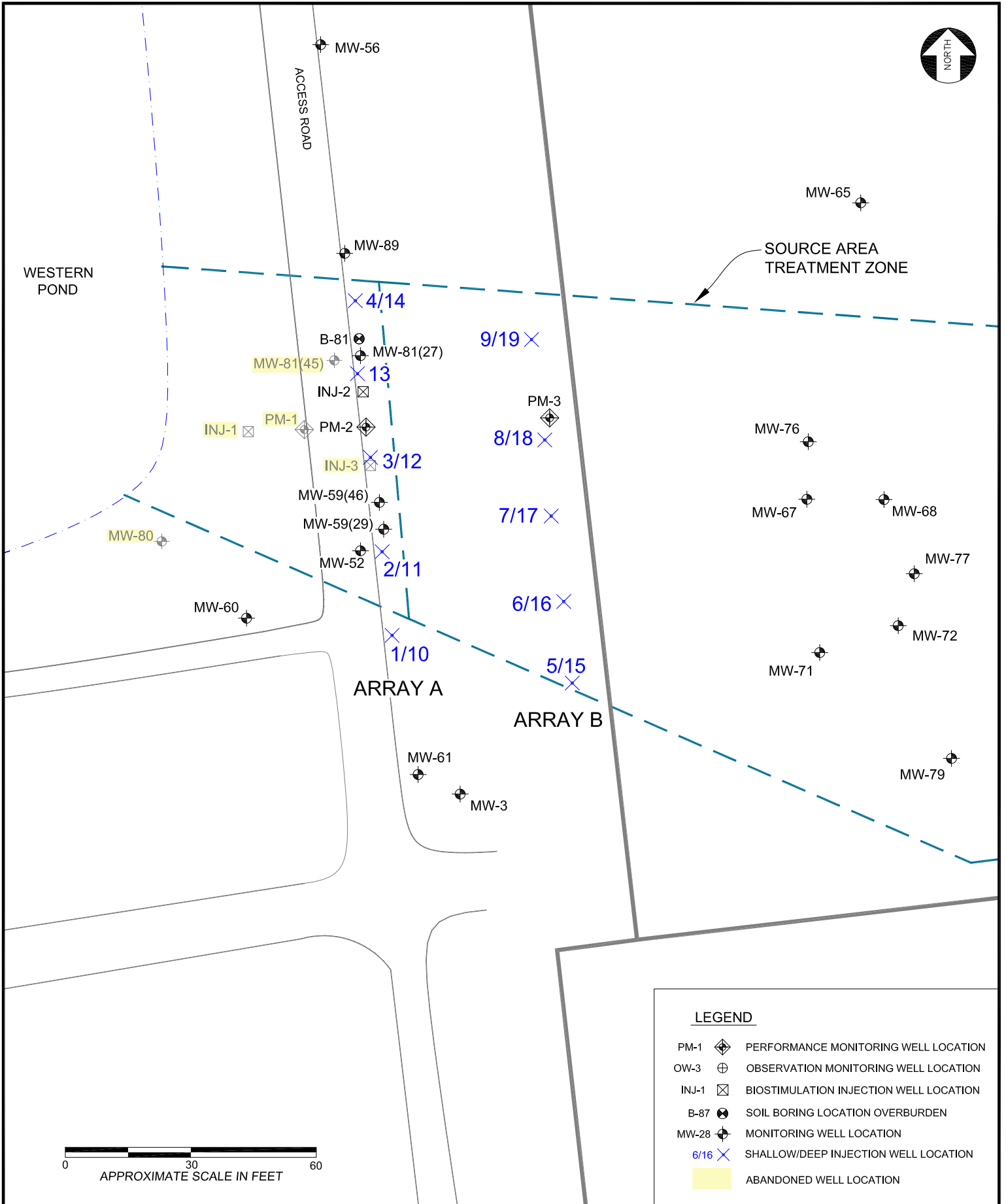
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TORX FACILITY
 4366 NORTH OLD US HIGHWAY 31
 ROCHESTER, INDIANA



MONITORING WELLS AND IN-SITU CHEMICAL REDUCTION INJECTION POINTS



LEGEND

- PM-1 PERFORMANCE MONITORING WELL LOCATION
- OW-3 OBSERVATION MONITORING WELL LOCATION
- INJ-1 BIOSTIMULATION INJECTION WELL LOCATION
- B-87 SOIL BORING LOCATION OVERBURDEN
- MW-28 MONITORING WELL LOCATION
- 6/16 SHALLOW/DEEP INJECTION WELL LOCATION
- ABANDONED WELL LOCATION

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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



**MONITORING WELLS
AND INJECTION WELLS
IN SOURCE AREA
BEHIND BUILDING**





FIGURE

4

SHEET 1 of 1




LEGEND

-  9 INJECTION POINT LOCATION
-  B-73 SOIL BORING LOCATION
-  MW-79 MONITORING WELL LOCATION
-  PM-3 PERFORMANCE MONITORING WELL LOCATION
- 19 COLUMN / ROW DESIGNATION



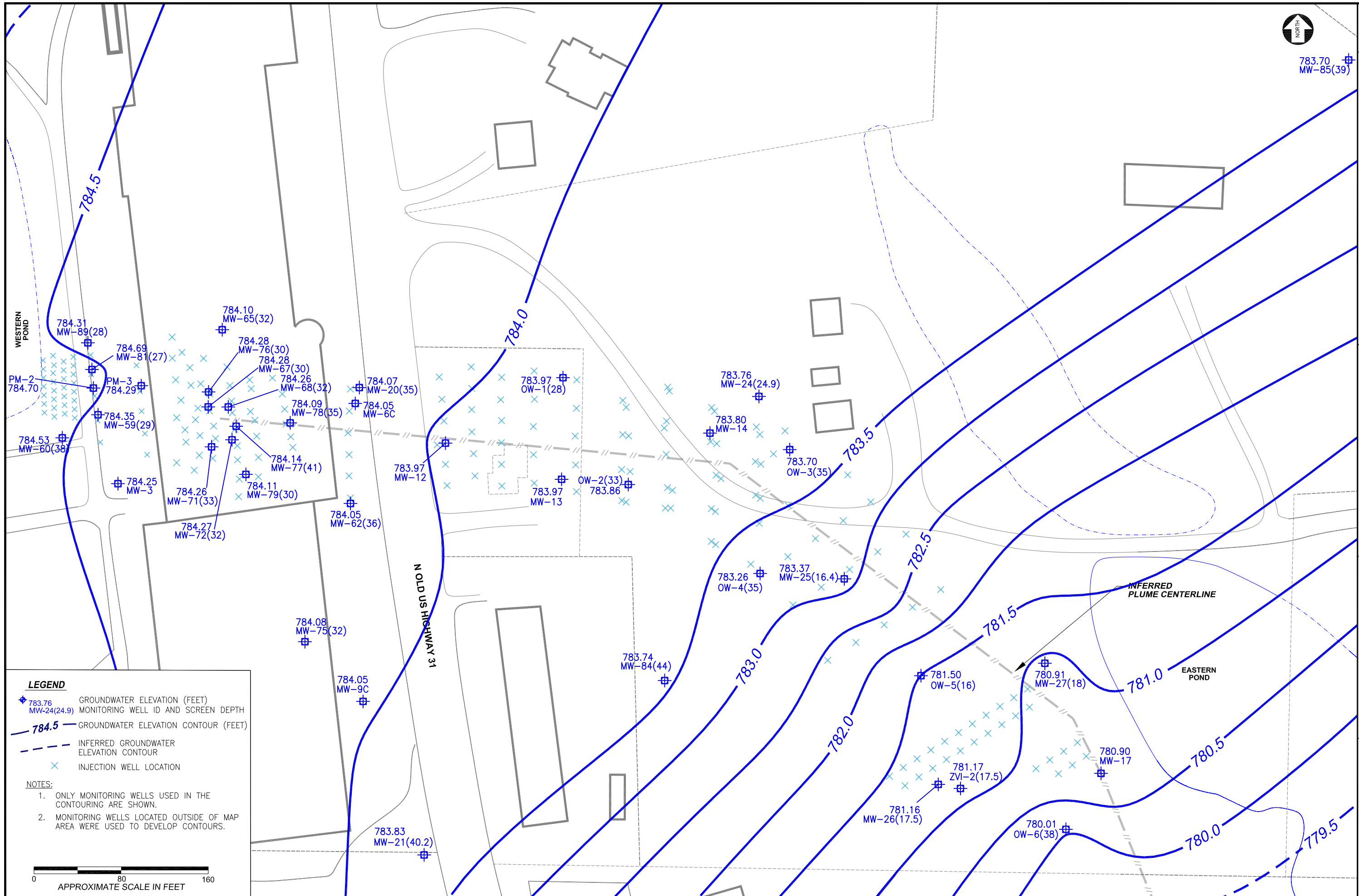
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 LF 12/13/2016
 SOURCE Wells surveyed by Territorial Engineering;
 Fulton County, IN GIS, 2005; historical maps from Textron
 PROJECT NO. SCALE
 3359 15 1040 SEE ABOVE

TORX FACILITY
 4366 NORTH OLD US HIGHWAY 31
 ROCHESTER, INDIANA

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**MONITORING WELLS
 AND INJECTION WELLS
 IN SOURCE AREA
 INSIDE BUILDING**

FIGURE
5
 SHEET 1 of 1



LEGEND

- 783.76 MW-24(24.9) GROUNDWATER ELEVATION (FEET) MONITORING WELL ID AND SCREEN DEPTH
- 784.5 GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- INJECTION WELL LOCATION

NOTES:

1. ONLY MONITORING WELLS USED IN THE CONTOURING ARE SHOWN.
2. MONITORING WELLS LOCATED OUTSIDE OF MAP AREA WERE USED TO DEVELOP CONTOURS.

APPROXIMATE SCALE IN FEET

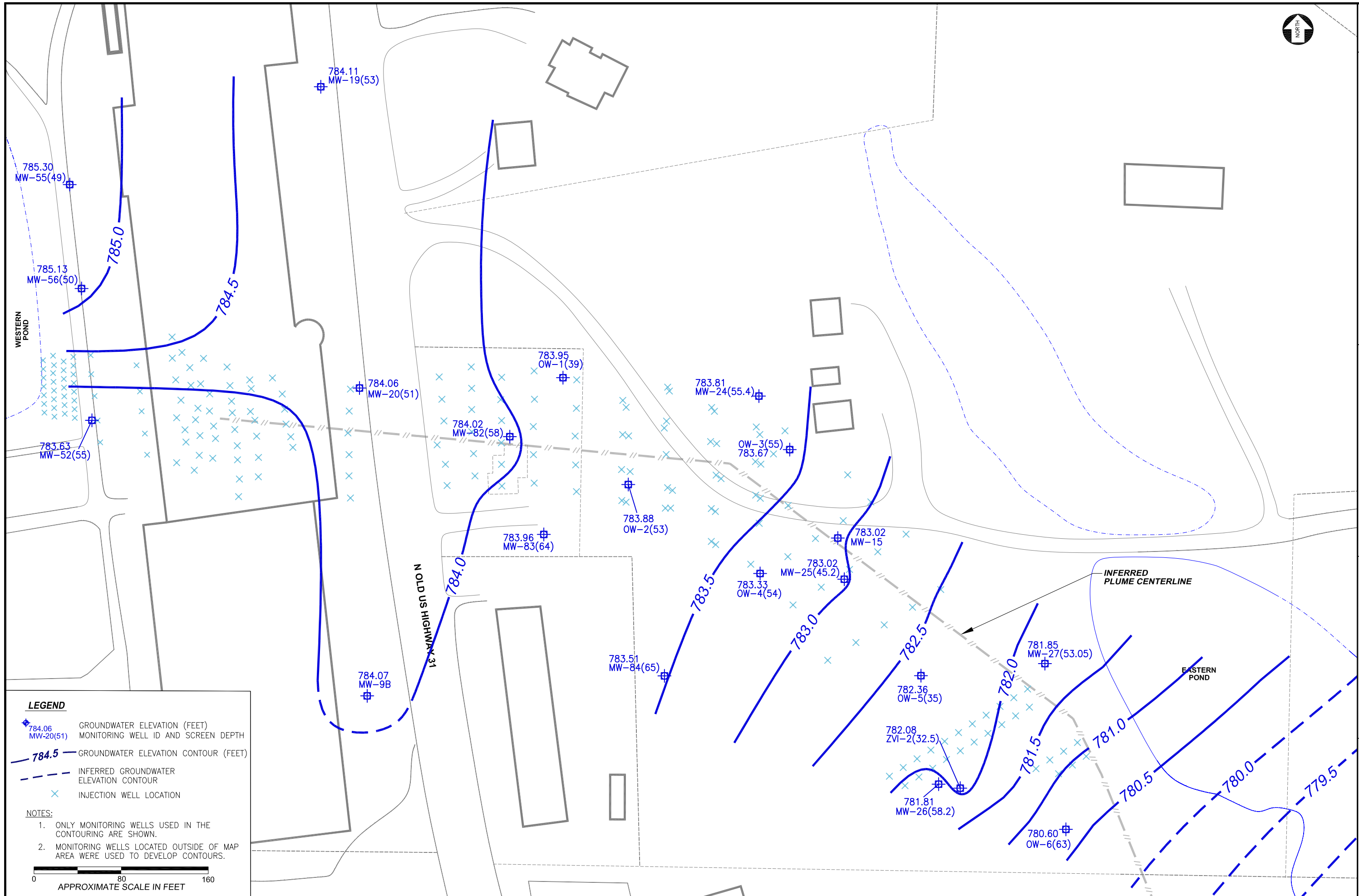
FIGURE **6**
SHEET 1 of 1

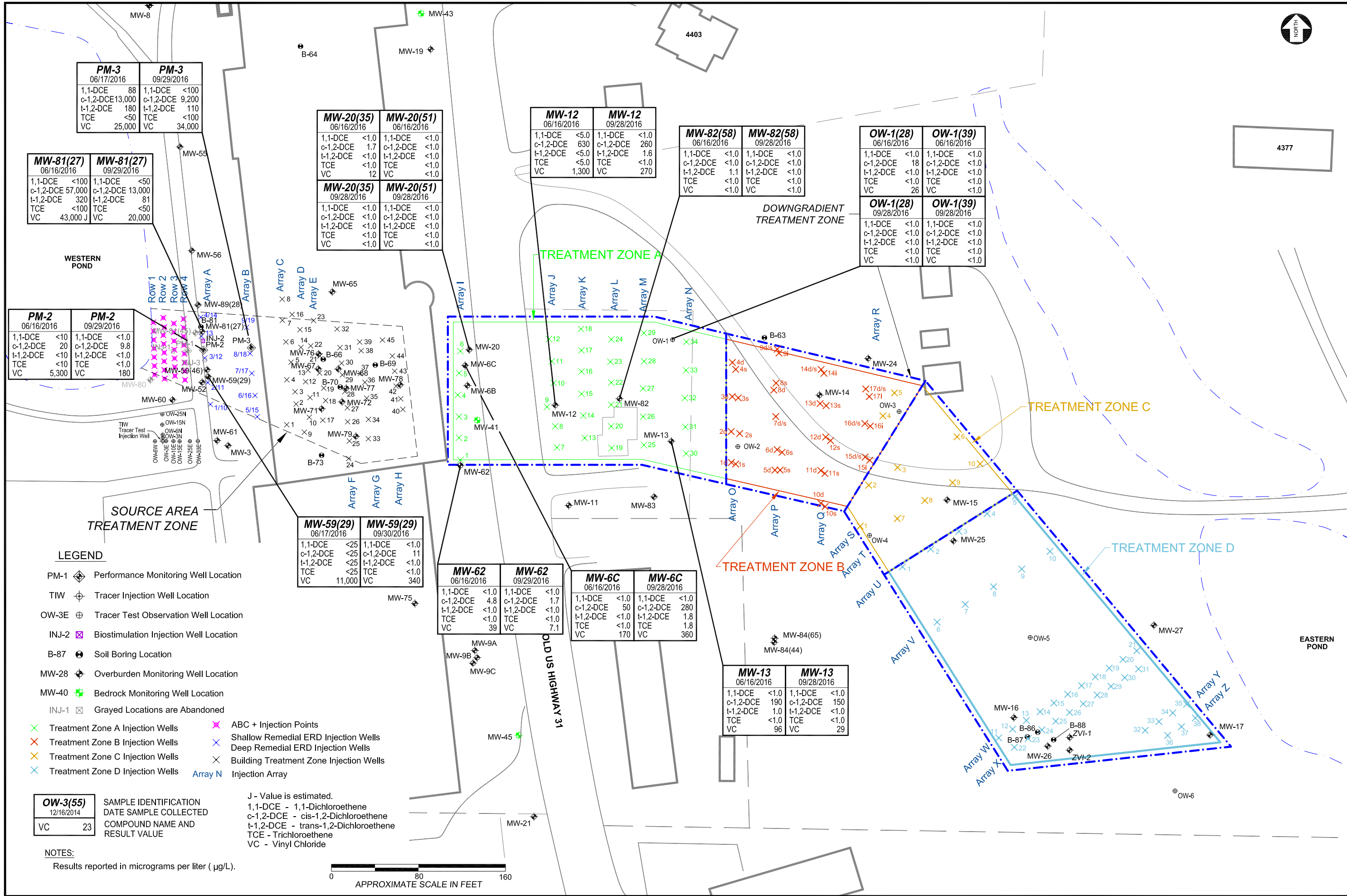
**GROUNDWATER CONTOUR MAP
SHALLOW OVERBURDEN WELLS**
26 September 2016

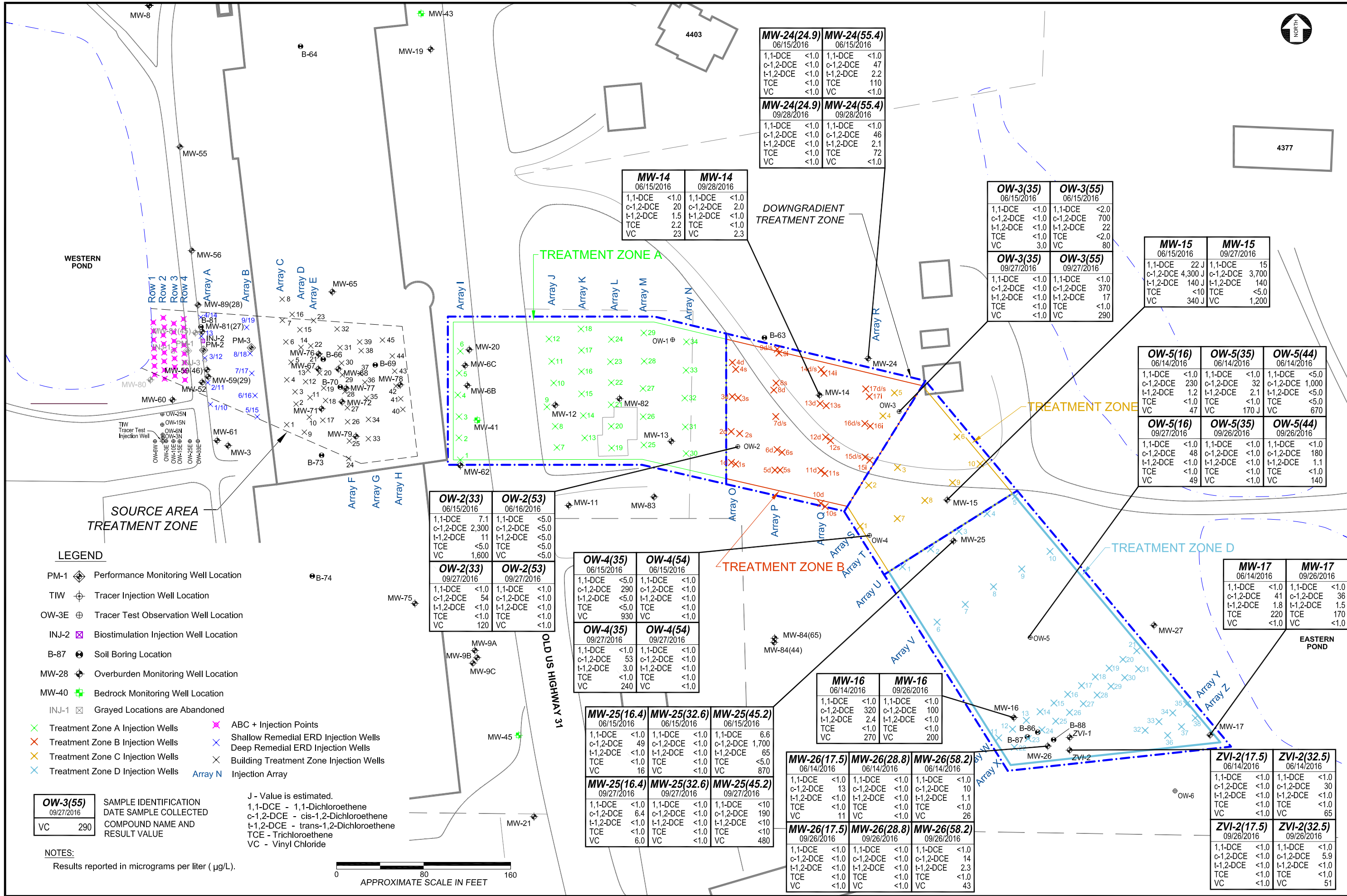
amec foster wheeler

**TORX FACILITY
4366 NORTH OLD US HIGHWAY 31
ROCHESTER, INDIANA**

DRAWN BY RLB	FILE NO. P:\Tetron\TFS Drawings\GW Contours 2014_RA.dwg	DATE 11/17/2016	SCALE SEE ABOVE
APPROVED BY LF	SOURCE Wells surveyed by Territorial Engineering; Fulton County, IN GIS, 2005.		
PROJECT NO. 3359.15.1040			







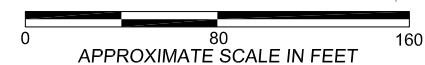
LEGEND

- 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
- Injection Array

OW-3(55)	DATE SAMPLE COLLECTED	COMPOUND NAME AND RESULT VALUE
09/27/2016		
VC		290

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).



OW-2(33)	OW-2(53)
06/15/2016	06/16/2016
1,1-DCE 7.1	1,1-DCE <5.0
c-1,2-DCE 2,300	c-1,2-DCE <5.0
t-1,2-DCE 11	t-1,2-DCE <5.0
TCE <5.0	TCE <5.0
VC 1,600	VC <5.0

OW-2(33)	OW-2(53)
09/27/2016	09/27/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 54	c-1,2-DCE <1.0
t-1,2-DCE <1.0	t-1,2-DCE <1.0
TCE <1.0	TCE <1.0
VC 120	VC <1.0

OW-4(35)	OW-4(54)
06/15/2016	06/15/2016
1,1-DCE <5.0	1,1-DCE <1.0
c-1,2-DCE 290	c-1,2-DCE <1.0
t-1,2-DCE <5.0	t-1,2-DCE <1.0
TCE <5.0	TCE <1.0
VC 930	VC <1.0

OW-4(35)	OW-4(54)
09/27/2016	09/27/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 53	c-1,2-DCE <1.0
t-1,2-DCE 3.0	t-1,2-DCE <1.0
TCE <1.0	TCE <1.0
VC 240	VC <1.0

MW-25(16.4)	MW-25(32.6)	MW-25(45.2)
06/15/2016	06/15/2016	06/15/2016
1,1-DCE <1.0	1,1-DCE <1.0	1,1-DCE 6.6
c-1,2-DCE 49	c-1,2-DCE <1.0	c-1,2-DCE 1,700
t-1,2-DCE <1.0	t-1,2-DCE <1.0	t-1,2-DCE 65
TCE <1.0	TCE <1.0	TCE <5.0
VC 16	VC <1.0	VC 870

MW-25(16.4)	MW-25(32.6)	MW-25(45.2)
09/27/2016	09/27/2016	09/27/2016
1,1-DCE <1.0	1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 6.4	c-1,2-DCE <1.0	c-1,2-DCE 190
t-1,2-DCE <1.0	t-1,2-DCE <1.0	t-1,2-DCE <1.0
TCE <1.0	TCE <1.0	TCE <1.0
VC 6.0	VC <1.0	VC 480

MW-24(24.9)	MW-24(55.4)
06/15/2016	06/15/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE <1.0	c-1,2-DCE 47
t-1,2-DCE <1.0	t-1,2-DCE 2.2
TCE <1.0	TCE 110
VC <1.0	VC <1.0

MW-24(24.9)	MW-24(55.4)
09/28/2016	09/28/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE <1.0	c-1,2-DCE 46
t-1,2-DCE <1.0	t-1,2-DCE 2.1
TCE <1.0	TCE 72
VC <1.0	VC <1.0

MW-14	MW-14
06/15/2016	09/28/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 20	c-1,2-DCE 2.0
t-1,2-DCE 1.5	t-1,2-DCE <1.0
TCE 2.2	TCE <1.0
VC 23	VC 2.3

OW-3(35)	OW-3(55)
06/15/2016	06/15/2016
1,1-DCE <1.0	1,1-DCE <2.0
c-1,2-DCE <1.0	c-1,2-DCE 700
t-1,2-DCE <1.0	t-1,2-DCE 22
TCE <1.0	TCE <2.0
VC 3.0	VC 80

OW-3(35)	OW-3(55)
09/27/2016	09/27/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE <1.0	c-1,2-DCE 370
t-1,2-DCE <1.0	t-1,2-DCE 17
TCE <1.0	TCE <1.0
VC <1.0	VC 290

MW-15	MW-15
06/15/2016	09/27/2016
1,1-DCE 22 J	1,1-DCE 15
c-1,2-DCE 4,300 J	c-1,2-DCE 3,700
t-1,2-DCE 140 J	t-1,2-DCE 140
TCE <10	TCE <5.0
VC 340 J	VC 1,200

OW-5(16)	OW-5(35)	OW-5(44)
06/14/2016	06/14/2016	06/14/2016
1,1-DCE <1.0	1,1-DCE <1.0	1,1-DCE <5.0
c-1,2-DCE 230	c-1,2-DCE 32	c-1,2-DCE 1,000
t-1,2-DCE 1.2	t-1,2-DCE 2.1	t-1,2-DCE <5.0
TCE <1.0	TCE <1.0	TCE <5.0
VC 47	VC 170 J	VC 670

OW-5(16)	OW-5(35)	OW-5(44)
09/27/2016	09/26/2016	09/26/2016
1,1-DCE <1.0	1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 48	c-1,2-DCE <1.0	c-1,2-DCE 180
t-1,2-DCE <1.0	t-1,2-DCE <1.0	t-1,2-DCE 1.1
TCE <1.0	TCE <1.0	TCE <1.0
VC 49	VC <1.0	VC 140

MW-17	MW-17
06/14/2016	09/26/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 41	c-1,2-DCE 36
t-1,2-DCE 1.8	t-1,2-DCE 1.5
TCE 220	TCE 170
VC <1.0	VC <1.0

MW-16	MW-16
06/14/2016	09/26/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 320	c-1,2-DCE 100
t-1,2-DCE 2.4	t-1,2-DCE <1.0
TCE <1.0	TCE <1.0
VC 270	VC 200

MW-26(17.5)	MW-26(28.8)	MW-26(58.2)
06/14/2016	06/14/2016	06/14/2016
1,1-DCE <1.0	1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE 13	c-1,2-DCE <1.0	c-1,2-DCE 10
t-1,2-DCE <1.0	t-1,2-DCE <1.0	t-1,2-DCE 1.1
TCE <1.0	TCE <1.0	TCE <1.0
VC 11	VC <1.0	VC 26

MW-26(17.5)	MW-26(28.8)	MW-26(58.2)
09/26/2016	09/26/2016	09/26/2016
1,1-DCE <1.0	1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE <1.0	c-1,2-DCE <1.0	c-1,2-DCE 14
t-1,2-DCE <1.0	t-1,2-DCE <1.0	t-1,2-DCE 2.3
TCE <1.0	TCE <1.0	TCE <1.0
VC <1.0	VC <1.0	VC 43

ZVI-2(17.5)	ZVI-2(32.5)
06/14/2016	06/14/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE <1.0	c-1,2-DCE 30
t-1,2-DCE <1.0	t-1,2-DCE <1.0
TCE <1.0	TCE <1.0
VC <1.0	VC 65

ZVI-2(17.5)	ZVI-2(32.5)
09/26/2016	09/26/2016
1,1-DCE <1.0	1,1-DCE <1.0
c-1,2-DCE <1.0	c-1,2-DCE 5.9
t-1,2-DCE <1.0	t-1,2-DCE <1.0
TCE <1.0	TCE <1.0
VC <1.0	VC 51



WESTERN POND

MW-76		MW-76	
06/20/2016		09/29/2016	
1,1-DCE	31	1,1-DCE	<50
c-1,2-DCE	8,700	c-1,2-DCE	9,000
t-1,2-DCE	82	t-1,2-DCE	64
TCE	<1.0	TCE	<50
VC	22,000	VC	18,000

MW-68		MW-68	
06/17/2016		09/29/2016	
1,1-DCE	2.1	1,1-DCE	1.1
c-1,2-DCE	190	c-1,2-DCE	200
t-1,2-DCE	5.0	t-1,2-DCE	2.1
TCE	<1.0	TCE	<1.0
VC	89	VC	420

MW-78		MW-78	
06/20/2016		09/29/2016	
1,1-DCE	<1.0	1,1-DCE	<1.0
c-1,2-DCE	2.9	c-1,2-DCE	1.5
t-1,2-DCE	<1.0	t-1,2-DCE	<1.0
TCE	<1.0	TCE	<1.0
VC	<1.0	VC	<1.0

MW-67		MW-67	
06/20/2016		09/29/2016	
1,1-DCE	<1.0	1,1-DCE	<1.0
c-1,2-DCE	160 J	c-1,2-DCE	66 J
t-1,2-DCE	2.1 J	t-1,2-DCE	<1.0
TCE	<1.0	TCE	<1.0
VC	64 J	VC	35 J

MW-71		MW-71	
06/20/2016		09/29/2016	
1,1-DCE	<1.0	1,1-DCE	<1.0
c-1,2-DCE	26	c-1,2-DCE	8.8
t-1,2-DCE	<1.0	t-1,2-DCE	<1.0
TCE	<1.0	TCE	<1.0
VC	300	VC	140

MW-72		MW-72	
06/20/2016		09/29/2016	
1,1-DCE	<1.0	1,1-DCE	<1.0
c-1,2-DCE	16	c-1,2-DCE	11
t-1,2-DCE	<1.0	t-1,2-DCE	<1.0
TCE	<1.0	TCE	<1.0
VC	31	VC	40

MW-77		MW-77	
06/20/2016		09/29/2016	
1,1-DCE	<1.0	1,1-DCE	<1.0
c-1,2-DCE	<1.0	c-1,2-DCE	1.2
t-1,2-DCE	<1.0	t-1,2-DCE	<1.0
TCE	<1.0	TCE	<1.0
VC	2.7	VC	<1.0

LEGEND

- PM-1 Performance Monitoring 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

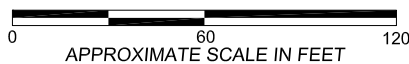
- Treatment Zone A Injection Wells
- ABC + Injection Points
- Shallow Remedial ERD Injection Wells
- Deep Remedial ERD Injection Wells
- Building Treatment Zone Injection Wells

OW-3(55)	09/29/2016
VC	240

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).



DRAWN BY RLB	P:\Textron\TFS\ Drawings\Perf Mon 2015.dwg	FILE NO.
APPROVED BY PJS	DATE 12/12/2016	
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



**PERFORMANCE MONITORING
VOLATILE ORGANIC
COMPOUNDS
SOURCE AREA
INSIDE BUILDING**



Textron, Inc.
TORX Facility Remediation
Report of Performance Monitoring

APPENDIX A

GROUNDWATER SAMPLE COLLECTION FIELD LOGS

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 17
 Project Number _____ (Use: Well name)
 Sampling Personnel SE Date 9-26-16 Start Time 1200 Weather _____

MEASUREMENT SUMMARY:

Measuring Point J0C Depth to Water 3.74 Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth 39.20 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailer
 Pump Started 1220 Pump Stopped 1300 Total Gallons 5.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1230</u>	<u>6.97</u>	<u>0.923</u>	<u>14.74</u>	<u>55.8</u>	<u>200</u>	<u>3.76</u>	<u>.02</u>	<u>0.44</u>	<u>184.4</u>
<u>1235</u>	<u>7.08</u>	<u>0.913</u>	<u>14.70</u>	<u>26.0</u>	<u>200</u>	<u>3.74</u>	<u>0</u>	<u>0.32</u>	<u>182.9</u>
<u>1240</u>	<u>7.00</u>	<u>0.910</u>	<u>14.67</u>	<u>15.3</u>	<u>200</u>	<u>3.74</u>	<u>0</u>	<u>0.27</u>	<u>182.9</u>
<u>1245</u>	<u>7.00</u>	<u>0.911</u>	<u>14.62</u>	<u>10.9</u>	<u>200</u>	<u>3.74</u>	<u>0</u>	<u>0.25</u>	<u>182.2</u>
<u>1250</u>	<u>7.00</u>	<u>0.910</u>	<u>14.64</u>	<u>8.7</u>	<u>200</u>	<u>3.74</u>	<u>0</u>	<u>0.24</u>	<u>182.1</u>

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1250</u>	<u>7.00</u>	<u>0.910</u>	<u>14.64</u>	<u>8.7</u>	<u>200</u>	<u>3.74</u>	<u>0</u>	<u>0.24</u>	<u>182.1</u>

Comments: MP-58 65 PSI CPM=4 10.5/4.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 2.49 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW17-6092616 Time 1250 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW26(58,8)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. King Date 9-26-16 Start Time 1515 Weather Sunny, 73°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 110.45 Depth to Product _____ Product Thickness _____
 Total Casing Depth 572 Borehole Diameter 4.1 in. Approx. Pump Depth 56.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1620 Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1625</u>	<u>7.20</u>	<u>1.006</u>	<u>15.25</u>	<u>0</u>	<u>200</u>	<u>10.35</u>	<u>-0.10</u>	<u>0.69</u>	<u>-160.6</u>
<u>1630</u>	<u>7.22</u>	<u>1.048</u>	<u>14.81</u>	<u>0</u>	<u>200</u>	<u>10.40</u>	<u>-0.05</u>	<u>0.69</u>	<u>-170.1</u>
<u>1635</u>	<u>7.18</u>	<u>1.065</u>	<u>14.71</u>	<u>0</u>	<u>200</u>	<u>10.40</u>	<u>-0.05</u>	<u>0.48</u>	<u>-174.4</u>
<u>1640</u>	<u>7.20</u>	<u>1.067</u>	<u>14.61</u>	<u>0</u>	<u>200</u>	<u>10.38</u>	<u>-0.07</u>	<u>0.41</u>	<u>-177.9</u>
<u>1645</u>	<u>7.24</u>	<u>1.064</u>	<u>14.51</u>	<u>0</u>	<u>200</u>	<u>10.38</u>	<u>-0.07</u>	<u>0.36</u>	<u>-180.5</u>
<u>1650</u>	<u>7.27</u>	<u>1.060</u>	<u>14.47</u>	<u>0</u>	<u>200</u>	<u>10.38</u>	<u>-0.07</u>	<u>0.34</u>	<u>-183.6</u>
<u>1655</u>	<u>7.30</u>	<u>1.055</u>	<u>14.46</u>	<u>0</u>	<u>200</u>	<u>10.38</u>	<u>-0.07</u>	<u>0.32</u>	<u>-188.4</u>

Final:

Time 1655 pH 7.30 SC 1.055 Temp 14.46 Turb. 0 Flow Rate 200 DTW 10.38 Drawdown -0.07 DO 0.32 ORP -188.4

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 4179 mS/cm Turbidity Cal. Solution _____ NTUs
 Sample Name ATR-MW26(58,8) GWS Time 1700 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW26(28.8)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Maganuco Date 9-26-16 Start Time 1535 Weather Sunny, 73°F

MEASUREMENT SUMMARY:
 Measuring Point TOC Depth to Water 10.90 Depth to Product _____ Product Thickness _____
 Total Casing Depth 28.8 Borehole Diameter 4.0 Approx. Pump Depth 27.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1535 Pump Stopped 1610 Total Gallons 6.0L

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1540</u>	<u>7.04</u>	<u>1.190</u>	<u>15.06</u>	<u>10.13</u>	<u>~150</u>	<u>10.90</u>	<u>0</u>	<u>0.36</u>	<u>-121.1</u>
<u>1545</u>	<u>6.76</u>	<u>1.249</u>	<u>14.73</u>	<u>10.14</u>	<u>~150</u>	<u>10.90</u>	<u>0</u>	<u>0.34</u>	<u>-122.4</u>
<u>1555</u>	<u>6.60</u>	<u>1.251</u>	<u>14.71</u>	<u>10.1</u>	<u>~150</u>	<u>10.90</u>	<u>0</u>	<u>0.32</u>	<u>-125.3</u>
<u>1600</u>	<u>6.79</u>	<u>1.257</u>	<u>14.78</u>	<u>9.5</u>	<u>~150</u>	<u>10.90</u>	<u>0</u>	<u>0.30</u>	<u>-128.4</u>

Final:
 Time 1600 pH 6.79 SC 1.257 Temp 14.78 Turb. 9.5 Flow Rate ~150 DTW 10.90 Drawdown 0 DO 0.30 ORP -128.4

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 1149 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW26(28.8)-6092616-1605 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR- MW26/17.5
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Regardus Date 9-26-16 Start Time 1420 Weather Sunny 71°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 10.98 Depth to Product _____ Product Thickness _____
 Total Casing Depth 17.5 Borehole Diameter 4 in Approx. Pump Depth 16.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1435 Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1440	7.41	0.873	15.13	17.3	150	10.98	0	0.63	-171.6
1445	7.41	0.884	15.19	4.8	150	10.98	0	0.53	-175.3
1450	7.41	0.885	15.25	0	150	10.98	0	0.42	-178.1
1455	7.42	0.897	15.43	0	150	10.98	0	0.35	-180.5
1500	7.41	0.900	15.52	0	150	10.98	0	0.28	-181.9
1505	7.40	0.900	15.55	0	150	10.98	0	0.29	-182.7
1510	7.39	0.902	15.58	0	150	10.98	0	0.28	-179.5

Final:

Time _____ pH _____ SC _____ Temp _____ Turb. _____ Flow Rate _____ DTW _____ Drawdown _____ DO _____ ORP _____

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 4.49 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR- MW26/17.5-6002616-1515 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR- ZVF2(17.5)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel A. Hines Date 9-26-15 Start Time 1200 Weather Sunny, 86°F

MEASUREMENT SUMMARY:

Measuring Point PTC Depth to Water 10.00 Depth to Product _____ Product Thickness _____
 Total Casing Depth 17.5 Borehole Diameter 4 in Approx. Pump Depth 16.0 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1225 Pump Stopped 1310 Total Gallons 2.0

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1230	7.24	0.915	16.73	119.0	~150	10.00	0	0.66	-170.8
1235	7.23	0.883	16.60	67.7	~150	10.00	0	0.50	-176.2
1240	7.23	0.871	16.44	47.6	~150	10.00	0	0.42	-181.3
1245	7.33	0.861	16.23	33.1	~150	10.00	0	0.38	-185.5
1250	7.38	0.851	15.96	12.3	~150	10.00	0	0.33	-188.9
1255	7.39	0.843	15.99	6.2	~150	10.00	0	0.31	-189.0
1300	7.41	0.841	15.98	3.5	~150	10.00	0	0.3	-189.6
1310					~150	10.00	0		

Final:
 Time 1300 pH 7.41 SC 0.841 Temp 15.98 Turb. 3.5 Flow Rate ~150 DTW 10.00 Drawdown 0 DO 0.31 ORP -189.6

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 4.49 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR- ZVF2(17.5) ~~109266~~ ¹³⁰⁵ Time 1305 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: Gas
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR- 2V12(1325)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hines Date 8-26-16 Start Time (1320) Weather Sunny 68°F

MEASUREMENT SUMMARY:

Measuring Point 700 Depth to Water 9.90 Depth to Product _____ Product Thickness _____
 Total Casing Depth 32.5 Borehole Diameter 4in. Approx. Pump Depth 30.0 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1330 Pump Stopped 1415 Total Gallons 9.02

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1335	7.82	0.763	14.20	5.2	200	9.90	0	1.01	-131.9
1340	7.13	0.768	14.46	0.3	200	9.90	0	0.73	-129.1
1345	7.13	0.790	14.25	0	200	9.90	0	0.44	-110.0
1350	7.19	0.802	14.13	0	200	9.90	0	0.37	-145.4
1355	7.27	0.812	14.09	0	200	9.90	0	0.34	-150.5
1400	7.30	0.814	14.08	0	200	9.90	0	0.33	-151.2
1415					200	9.90	0		

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
1400	7.30	0.814	14.08	0	200	9.90	0	0.33	-151.2

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 4.49 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR- 2V12(1325)-082616 Time 1405 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: Cr&S
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-OW5(35)
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 7-26-16 Start Time 1600 Weather 65°F Sunny

MEASUREMENT SUMMARY:

Measuring Point: TBC Depth to Water 8.36 Depth to Product _____ Product Thickness _____
 Total Casing Depth 35.45 Borehole Diameter _____ Approx. Pump Depth 32.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailer

Pump Started 1610 Pump Stopped 1658 Total ^{Aer}Gallons 7

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1620	7.57	1.411	16.37	84.8	200	8.36	0	0.53	-177.1
1625	7.49	1.451	16.18	59.9	200	8.38	0.02	0.28	-180.0
1630	7.42	1.454	16.38	45.4	200	8.36	0	0.22	-176.6
1635	7.40	1.468	16.56	31.1	200	8.36	0	0.20	-175.0
1640	7.39	1.477	16.36	22.1	200	8.36	0	0.17	-172.8
1645	7.35	1.480	16.35	13.0	200	8.36	0	0.16	-172.4
1650	7.35	1.481	16.35	8.2	200	8.36	0	0.16	-172.2

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 1650 pH 7.35 SC 1.481 Temp 16.35 Turb. 8.2 Flow Rate 200 DTW 8.36 Drawdown 0 DO 0.16 ORP -172.2

Comments: MR50 55 PSI CPM24 1 1/4

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 229 mV
 SC Reference Solution 4.399 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-OW5(35)-G092616 Time 1650 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-DW5(45)-6092616
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-26-16 Start Time 1445 Weather 65°F Sunny

MEASUREMENT SUMMARY:

Measuring Point TBC Depth to Water 8.31 Depth to Product _____ Product Thickness _____
 Total Casing Depth 43.98 Borehole Diameter _____ Approx. Pump Depth 42.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1455 Pump Stopped _____ Total ^{liters} Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1505</u>	<u>7.17</u>	<u>1.351</u>	<u>16.92</u>	<u>37.1</u>	<u>200</u>	<u>8.32</u>	<u>0.01</u>	<u>0.86</u>	<u>-133.7</u>
<u>1510</u>	<u>7.11</u>	<u>1.456</u>	<u>16.13</u>	<u>35.8</u>	<u>200</u>	<u>8.31</u>	<u>0</u>	<u>0.35</u>	<u>-137.6</u>
<u>1515</u>	<u>7.08</u>	<u>1.508</u>	<u>16.00</u>	<u>34.3</u>	<u>200</u>	<u>8.31</u>	<u>0</u>	<u>0.26</u>	<u>-144.9</u>
<u>1520</u>	<u>7.06</u>	<u>1.512</u>	<u>16.02</u>	<u>27.0</u>	<u>200</u>	<u>8.31</u>	<u>0</u>	<u>0.26</u>	<u>-149.4</u>
<u>1525</u>	<u>7.05</u>	<u>1.524</u>	<u>16.03</u>	<u>16.6</u>	<u>150</u>	<u>8.31</u>	<u>0</u>	<u>0.21</u>	<u>-152.5</u>
<u>1530</u>	<u>7.03</u>	<u>1.526</u>	<u>16.01</u>	<u>11.1</u>	<u>150</u>	<u>8.31</u>	<u>0</u>	<u>0.19</u>	<u>-156.0</u>
<u>1535</u>	<u>7.03</u>	<u>1.528</u>	<u>16.00</u>	<u>8.1</u>	<u>150</u>	<u>8.31</u>	<u>0</u>	<u>0.18</u>	<u>-158.1</u>

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1535</u>	<u>7.03</u>	<u>1.528</u>	<u>16.00</u>	<u>8.1</u>	<u>150</u>	<u>8.31</u>	<u>0</u>	<u>0.18</u>	<u>-158.1</u>

Comments: MRO 60 MSP CPM = 4 10.5/4.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 209 mV
 SC Reference Solution 4.49 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-DW5(45)-6092616 Time 1535 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gases VFA

Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUNDWATER/SURFACE WATER SAMPLING FORM

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW16-6092616
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-26-16 Start Time 1330 Weather 60°F Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 9.85 Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth 28.50 Feet
 Screen Interval top bottom Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1345 Pump Stopped 1407 Total ^{1.75} Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1355	7.57	1.591	15.00	7.9	200	9.85	0	0.27	-162.4
1400	7.48	1.605	14.96	8.2	200	9.87	.02	0.23	-163.3
1405	7.42	1.620	15.00	4.9	200	9.86	.01	0.18	-167.2
1410	7.40	1.632	15.01	3.6	200	9.87	.02	0.16	-168.6
1415	7.37	1.652	14.99	1.5	200	9.87	.02	0.16	-170.5
1420	7.37	1.653	14.98	1.0	200	9.87	.02	0.15	-171.3

Stabilization Criteria: pH ±3% Temp ±3% Turb. ±10 DO ±10% ORP ±10

Final:
 Time 1420 pH 7.37 SC 1.653 Temp 14.98 Turb. 1.0 Flow Rate 200 DTW 9.87 Drawdown .02 DO 0.15 ORP -171.3

Comments: MP-50 55 PSD CPM=4 11/4

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 223 mV
 SC Reference Solution 4.49 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW16-6092616 Time 1428 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-OW3(35)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. H. [Signature] Date 9-22-16 Start Time 1570 Weather Sunny, 76°F

MEASUREMENT SUMMARY:
 Measuring Point TGC Depth to Water 18.08 Depth to Product _____ Product Thickness _____
 Total Casing Depth 35 Borehole Diameter 4 in. Approx. Pump Depth 32.00 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:
 Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1525 Pump Stopped 1645 Total Gallons 8.0 L

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1530	7.19	0.670	19.80	153.3	120	18.08	0	1.70	-132.8
1535	7.24	0.658	18.68	122.4	120	18.08	0	0.45	-169.5
1540	7.25	0.659	18.92	100.6	120	18.08	0	0.47	-166.8
1548	7.27	0.652	19.16	84.7	120	18.08	0	0.54	-167.6
1550	7.25	0.650	19.33	60.4	120	18.08	0	0.77	-144.6
1555	7.23	0.648	19.75	46.6	120	18.08	0	0.75	-150.4
1600	7.23	0.648	19.81	41.8	120	18.08	0	0.77	-157.9
1605	7.22	0.648	20.02	32.4	120	18.08	0	0.79	-143.7
1610	7.22	0.646	20.08	25.7	120	18.08	0	0.82	-156.3
1615	7.22	0.646	20.08	20.2	120	18.08	0	0.82	-158.1
1620	7.23	0.644	20.01	17.6	120	18.08	0	0.82	-161.1
1645					120	18.08	0		

Final:
 Time 1620 pH 7.23 SC 0.644 Temp 20.01 Turb. 17.6 Flow Rate 120 DTW 18.08 Drawdown 0 DO 0.82 ORP -161.1

Comments: * Black colored water observed

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0.100 NTUs
 Sample Name ATR-OW3(35) G002-761605 Time 1625 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-0W2(33)
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-27-16 Start Time 1550 Weather 65°F Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 21.70 Depth to Product _____ Product Thickness _____
 Total Casing Depth 32.67 Borehole Diameter _____ Approx. Pump Depth 30 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1600 Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1610	8.02	0.662	16.29	117.2	200	21.70	0	0.25	-130.5
1615	8.05	0.652	16.04	161.0	200	21.70	0	0.19	-140.4
1620	9.02	0.675	15.17	66.3	200	21.70	0	0.15	-145.1
1625	7.99	0.609	15.43	50.9	200	21.70	0	0.14	-145.7
1630	7.99	0.662	15.96	40.5	200	21.70	0	0.14	-143.0
1635	7.93	0.652	15.94	28.0	200	21.70	0	0.13	-143.3
1640	7.89	0.642	15.95	19.7	200	21.70	0	0.12	-141.5
1645	7.86	0.640	15.96	21.1	200	21.70	0	0.12	-140.6
1650	7.85	0.637	15.91	15.7	200	21.70	0	0.12	-142.4
1655	7.83	0.636	15.95	11.6	200	21.70	0	0.11	-140.0
1700	7.83	0.637	15.91	9.4	200	21.70	0	0.11	-138.8

Stabilization Criteria: pH ±3% SC ±3% Temp ±10% Turb. ±10% DO ±10% ORP ±10%

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
1700	7.83	0.637	15.91	9.4	200	21.70	0	0.11	-138.8

Comments: MP-53 60 PSI CPM=4 11.5/3.5 * Pump water black foul odor

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-0W2(33)-6092716 Time 1700 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____
 MS/MSD ATR-0W2(33)-6092716 MS Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW2(53)
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-27-16 Start Time 1415 Weather 65°F Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 21.64 Depth to Product _____ Product Thickness _____
 Total Casing Depth 52.62 Borehole Diameter _____ Approx. Pump Depth 49 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1425 Pump Stopped 1545 Total ^{1.165} Gallons 7.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1435	8.11	0.818	16.96	225.0	200	21.64	0	0.60	-172.2
1440	8.24	0.804	16.49	285.1	200	21.64	0	0.32	-176.5
1445	8.25	0.801	16.35	98.1	150	26.64	0	0.24	-181.5
1450	8.25	0.788	16.31	63.6	150	26.64	0	0.20	-183.2
1455	8.22	0.784	16.32	60.9	150	26.64	0	0.18	-184.8
1500	8.21	0.782	16.33	49.9	150	26.64	0	0.16	-186.0
1505	8.12	0.781	16.32	45.7	150	26.64	0	0.16	-185.0
1510	8.11	0.778	16.33	37.2	150	26.64	0	0.17	-172.0
1515	8.11	0.780	16.32	32.2	150	26.64	0	0.17	-171.6
1520	8.12	0.778	16.33	26.3	150	26.64	0	0.16	-175.9
1525	8.13	0.778	16.33	20.7	150	26.64	0	0.15	-174.1
1530	8.13	0.775	16.34	19.6	150	26.64	0	0.14	-175.2
1535	8.14	0.776	16.34	19.7	150	26.64	0	0.14	-176.6

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time 1535 pH 8.14 SC 0.776 Temp 16.34 Turb. 19.7 Flow Rate 150 DTW 26.64 Drawdown 0 DO 0.14 ORP -176.6

Comments: MP-50 70PSI CPM=4 12/3

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW2(53)-6092716 Time 1535 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW15
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-27-16 Start Time 1300 Weather 68°F Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 9.88 Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth 49 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1315 Pump Stopped 1402 Total ^{1.75} Gallons 6.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1325	7.68	2.020	17.16	4.7	200	9.88	0	0.95	-126.5
1330	7.64	2.270	16.49	5.8	200	9.88	0	0.37	-123.7
1335	7.62	2.290	16.46	6.1	200	9.88	0	0.34	-123.6
1340	7.60	2.313	16.38	2.9	200	9.88	0	0.30	-123.1
1345	7.58	2.318	16.38	3.0	200	9.88	0	0.28	-123.4
1350	7.57	2.320	16.36	3.1	200	9.88	0	0.24	-123.4
1355	7.57	2.322	16.36	3.0	200	9.88	0	0.23	-123.5

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time 1355 pH 7.57 SC 2.322 Temp 16.36 Turb. 3.0 Flow Rate 200 DTW 9.88 Drawdown 0 DO 0.23 ORP -123.5

Comments: MP-50 TOC 25 PSI cpm=4 11/3

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW15-6092716 Time 1355 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUNDWATER/SURFACE WATER SAMPLING FORM

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 25(45.2)
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 2-27-16 Start Time 1100 Weather 65°F Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 8.86 Depth to Product _____ Product Thickness _____
 Total Casing Depth 45.2 Borehole Diameter _____ Approx. Pump Depth 42 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1115 Pump Stopped 1206 Total ^{1.425} Gallons 6.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1125</u>	<u>7.19</u>	<u>2.327</u>	<u>15.84</u>	<u>33.1</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.52</u>	<u>-91.3</u>
<u>1130</u>	<u>7.15</u>	<u>2.470</u>	<u>15.72</u>	<u>27.6</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.30</u>	<u>-89.8</u>
<u>1135</u>	<u>7.12</u>	<u>2.492</u>	<u>15.71</u>	<u>22.7</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.26</u>	<u>-89.6</u>
<u>1140</u>	<u>7.06</u>	<u>2.496</u>	<u>15.69</u>	<u>19.2</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.20</u>	<u>-90.0</u>
<u>1145</u>	<u>7.06</u>	<u>2.494</u>	<u>15.71</u>	<u>19.7</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.19</u>	<u>-90.3</u>
<u>1150</u>	<u>7.04</u>	<u>2.492</u>	<u>15.70</u>	<u>19.7</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.17</u>	<u>-91.4</u>
<u>1155</u>	<u>7.03</u>	<u>2.479</u>	<u>15.70</u>	<u>19.1</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.17</u>	<u>-91.0</u>

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1155</u>	<u>7.03</u>	<u>2.479</u>	<u>15.70</u>	<u>19.1</u>	<u>150</u>	<u>8.86</u>	<u>0</u>	<u>0.17</u>	<u>-91.0</u>

Comments: MP-50 65 PSI CPM=4 11.5/3.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.2113 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW 25(45.2) - 6092716 Time 1155 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-0W5(16)
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-27-16 Start Time 0755 Weather SOP Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 9.21 Depth to Product _____ Product Thickness _____
 Total Casing Depth 16.24 Borehole Diameter _____ Approx. Pump Depth 14.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 0915 Pump Stopped _____ Total 14.5 Gallons

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0925	7.94	0.633	16.41	270.9	200	9.21	0	0.80	-141.8
0930	Pump	has	air	100	150	9.21	0	Rebuilt pump	
0940	7.89	0.639	16.06	218.0	150	9.21	0	1.34	-130.9
0945	7.90	0.642	16.05	154.1	150	9.21	0	0.86	-130.5
0950	7.67	0.643	16.03	135.5	150	9.21	0	0.64	-133.9
0955	7.84	0.643	16.08	71.0	150	9.21	0	0.49	-139.5
1000	7.84	0.643	16.10	66.3	150	9.21	0	0.47	-138.9
1005	7.84	0.643	16.14	52.6	150	9.21	0	0.44	-141.2
1010	7.83	0.642	16.16	38.9	150	9.21	0	0.40	-141.5
1015	7.82	0.642	16.17	30.3	150	9.21	0	0.36	-142.4
1020	7.81	0.642	16.18	27.0	150	9.21	0	0.35	-142.6
1025	7.81	0.642	16.18	19.8	150	9.21	0	0.34	-142.8
1030	7.80	0.642	16.18	15.2	150	9.21	0	0.32	-143.3
1035	7.80	0.643	16.17	12.7	150	9.21	0	0.32	-143.6
1040	7.79	0.643	16.18	9.3	150	9.21	0	0.31	-143.6

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time 1040 pH 7.79 SC 0.643 Temp 16.18 Turb. 9.3 Flow Rate 150 DTW 9.21 Drawdown 0 DO 0.31 ORP -143.6

Comments: MP-50 408SD CPM=41 11.5/3.5/12/4

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-0W5(16)-6092716 Time 1040 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-DW4(S4)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel G. H. Magarduer Date 9-27-15 Start Time 0840 Weather Sunny, 63°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 18.01 Depth to Product _____ Product Thickness _____
 Total Casing Depth 54 ft Borehole Diameter 4 in. Approx. Pump Depth 52 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 0855 Pump Stopped 1000 Total Gallons 19.8

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0900	6.75	0.748	13.97	20.3	250	18.02	0.01	0.60	-119.1
0905	6.81	0.731	13.94	16.9	250	18.03	0.02	0.53	-125.7
0910	6.95	0.673	13.91	9.8	250	18.03	0.02	0.45	-149.0
0915	7.09	0.611	13.82	4.8	250	18.06	0.05	0.34	-173.7
0920	7.15	0.620	13.94	4.1	250	18.06	0.05	0.34	-180.7
0925	7.23	0.600	14.13	3.6	250	18.06	0.05	0.34	-189.9
0930	7.32	0.586	14.73	3.0	250	18.06	0.05	0.34	-194.9
0935	7.32	0.585	14.84	3.2	250	18.06	0.05	0.34	-195.9
0940	7.31	0.584	14.86	2.4	250	18.06	0.05	0.32	-197.4
0945	7.30	0.583	14.87	2.0	250	18.06	0.05	0.32	-197.7
1000					250	18.06	0.05		

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
0945	7.30	0.583	14.87	2.0	250	18.06	0.05	0.32	-197.7

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-DW4(S4)-GND-716-0150 Time 0950 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: Gas
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-0W4(35)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. H. Heger Date 9-27-16 Start Time 1005 Weather Sunny, 76°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 18.20 Depth to Product _____ Product Thickness _____
 Total Casing Depth 35 ft Borehole Diameter 4 in Approx. Pump Depth 33 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1010 Pump Stopped 1050 Total Gallons 8.0

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1015</u>	<u>6.71</u>	<u>1.783</u>	<u>16.29</u>	<u>9.1</u>	<u>200</u>	<u>18.20</u>	<u>0</u>	<u>0.46</u>	<u>-108.9</u>
<u>1020</u>	<u>6.72</u>	<u>1.797</u>	<u>16.14</u>	<u>9.7</u>	<u>200</u>	<u>18.20</u>	<u>0</u>	<u>0.57</u>	<u>-112.8</u>
<u>1025</u>	<u>6.72</u>	<u>1.803</u>	<u>16.12</u>	<u>10.5</u>	<u>200</u>	<u>18.20</u>	<u>0</u>	<u>0.54</u>	<u>-113.5</u>
<u>1030</u>	<u>6.72</u>	<u>1.819</u>	<u>16.03</u>	<u>9.6</u>	<u>200</u>	<u>18.20</u>	<u>0</u>	<u>0.54</u>	<u>-114.0</u>
<u>1035</u>	<u>6.72</u>	<u>1.835</u>	<u>16.08</u>	<u>8.8</u>	<u>200</u>	<u>18.20</u>	<u>0</u>	<u>0.56</u>	<u>-115.2</u>
<u>1050</u>					<u>200</u>	<u>18.20</u>	<u>0</u>		

Final:
 Time 1035 pH 6.72 SC 1.835 Temp 16.08 Turb. 8.8 Flow Rate 200 DTW 18.20 Drawdown 0 DO 0.55 ORP -115.2

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 290 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-0W4(35) 102716-1040 Time 1040 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: Chlor
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW25(32.6)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Viregarden Date 4-27-16 Start Time 1115 Weather Sunny, 75°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 8.58 Depth-to-Product _____ Product Thickness _____
 Total Casing Depth 32.6 Borehole Diameter 4 in. Approx. Pump Depth 29.0 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1120 Pump Stopped 1210 Total Gallons 2

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1125</u>	<u>6.90</u>	<u>0.883</u>	<u>16.37</u>	<u>13.3</u>	<u>250</u>	<u>8.60</u>	<u>0.02</u>	<u>0.69</u>	<u>-95.4</u>
<u>1130</u>	<u>6.66</u>	<u>0.892</u>	<u>15.74</u>	<u>6.1</u>	<u>250</u>	<u>8.60</u>	<u>0.02</u>	<u>0.42</u>	<u>-92.4</u>
<u>1135</u>	<u>6.68</u>	<u>0.898</u>	<u>15.55</u>	<u>5.3</u>	<u>250</u>	<u>8.60</u>	<u>0.02</u>	<u>0.35</u>	<u>-96.6</u>
<u>1140</u>	<u>6.71</u>	<u>0.909</u>	<u>15.38</u>	<u>3.2</u>	<u>250</u>	<u>8.60</u>	<u>0.02</u>	<u>0.27</u>	<u>-79.8</u>
<u>1145</u>	<u>6.73</u>	<u>0.912</u>	<u>15.33</u>	<u>4.2</u>	<u>250</u>	<u>8.60</u>	<u>0.02</u>	<u>0.24</u>	<u>-100.7</u>
<u>1150</u>	<u>6.73</u>	<u>0.911</u>	<u>15.32</u>	<u>3.0</u>	<u>250</u>	<u>8.60</u>	<u>0.02</u>	<u>0.25</u>	<u>-99.8</u>
<u>1210</u>					<u>250</u>	<u>8.60</u>	<u>0.02</u>		

Final:
 Time 1150 pH 6.73 SC 0.911 Temp 15.32 Turb. 3.0 Flow Rate 250 DTW 8.60 Drawdown 0.02 DO 0.25 ORP -99.8

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.913 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW25(32.6)-6/11/2016-1155 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: Gas
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW25(16.4)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hinegardner Date 9-22-16 Start Time 12:15 Weather Sunny 75°F

MEASUREMENT SUMMARY:

Measuring Point TC Depth to Water 8.55 Depth to Product _____ Product Thickness _____
 Total Casing Depth 16.4 Borehole Diameter 4.12 Approx. Pump Depth 15.0 Feet
 Screen Interval top bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 12:15 Pump Stopped 1:30 Total Gallons 5.0

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1220	7.16	0.851	17.87	30.7	200	8.59	0.04	0.166	-135.1
1225	7.17	0.849	17.72	19.6	150	8.59	0.04	0.48	-144.6
1230	7.19	0.850	17.68	11.5	150	8.59	0.04	0.42	-148.0
1235	7.19	0.850	17.66	7.4	150	8.57	0.02	0.42	-144.7
1240	7.19	0.849	17.66	0.3	150	8.57	0.02	0.39	-144.1
1245	7.20	0.848	17.68	5.6	150	8.57	0.02	0.38	-142.9
1300					150	8.57	0.02		

Final:

Time 1245 pH 7.20 SC 0.848 Temp 17.68 Turb. 5.6 Flow Rate 150 DTW 8.57 Drawdown 0.02 DO 0.38 ORP -142.9

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW25(16.4) Date 9-22-16 Time 12:50 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-OW3(55)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. thegardner Date 9-27-16 Start Time 1335 Weather Sunny 75°F

MEASUREMENT SUMMARY:

Measuring Point DOC Depth to Water 18.09 Depth to Product _____ Product Thickness _____
 Total Casing Depth 55 Borehole Diameter 4in. Approx. Pump Depth 52' Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1350 Pump Stopped 1520 Total Gallons 3.52

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1355	6.61	1.543	16.18	5.6	100	18.09	0	0.79	-110.6
1400	6.51	1.551	15.92	7.0	100	18.09	0	0.65	-107.2
1405	6.56	1.554	15.92	6.0	100	18.09	0	0.72	-112.3
1410	6.60	1.540	16.40	5.6	100	18.09	0	0.39	-114.1
1415	6.64	1.542	16.64	4.5	100	18.09	0	0.38	-115.4
1420	6.66	1.540	16.73	5.6	100	18.09	0	0.41	-117.0
1425	6.68	1.526	16.96	8.2	100	18.09	0	0.41	-120.6
1430	6.68	1.516	17.01	5.1	100	18.09	0	0.37	-121.0
1435	6.68	1.506	17.03	5.3	100	18.09	0	0.32	-120.5
1440	6.68	1.500	17.05	5.1	100	18.09	0	0.32	-120.2
1500					100	18.09	0		

Final:
 Time 1440 pH 6.68 SC 1.500 Temp 17.05 Turb. 5.1 Flow Rate 100 DTW 18.09 Drawdown 0 DO 0.32 ORP -120.2

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-OW3(55)-B01206-1445 Time 1445 VOCs SVOCs PAHs TOC
 Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW24(554)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hinesgardner Date 1-28-16 Start Time 0820 Weather Cloudy, 64°F

MEASUREMENT SUMMARY:

Measuring Point TBC Depth to Water 21.19 Depth to Product _____ Product Thickness _____
 Total Casing Depth 55.4 Borehole Diameter 4in Approx. Pump Depth 51.0 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 0835 Pump Stopped 0942 Total Gallons 10.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0840	7.32	0.718	13.84	0.4	150	21.19	0	3.69	222.4
0845	6.98	0.718	13.50	0.2	150	21.21	0.02	2.44	242.5
0850	6.98	0.732	13.27	0	150	21.21	0.02	0.77	198.1
0855	6.97	0.737	13.19	0	150	21.21	0.02	0.54	110.4
0900	7.00	0.741	13.15	0	150	21.21	0.02	0.44	47.7
0905	7.02	0.742	13.10	0	150	21.21	0.02	0.39	-3.8
0910	7.05	0.742	13.07	0	150	21.21	0.02	0.36	-26.5
0915	7.07	0.741	13.05	0	150	21.21	0.02	0.34	-23.8
0920	7.08	0.741	13.04	0	150	21.21	0.02	0.34	-47.8
0925	7.10	0.740	13.02	0	150	21.21	0.02	0.33	-49.9
0942					150	21.21	0.02		

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
0925	7.10	0.740	13.02	0	150	21.21	0.02	0.33	-49.9

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW24(554)-6092816 Time 0930 VOCs SVOCs PAHs TOC

Total Metals Dissolved Metals BTEX Total Cyanide Free Cyanide

Other List: 609

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



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**GROUNDWATER/SURFACE WATER
SAMPLING FORM**

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW24(24.9)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hinegardner Date 9-28-16 Start Time 0950 Weather Cloudy, 62°F

MEASUREMENT SUMMARY:

Measuring Point 700 Depth to Water 21.18 Depth to Product _____ Product Thickness _____
 Total Casing Depth 24.9 Borehole Diameter 4.5 Approx. Pump Depth 23.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 0955 Pump Stopped 1100 Total Gallons 2.30

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1040	7.08	0.675	14.57	7.5	70	21.18	0	1.83	32.1
1045	7.05	0.672	14.59	5.8	70	21.18	0	1.65	18.6
1050	7.05	0.673	14.50	5.5	70	21.18	0	1.70	-10.6
1055	7.05	0.672	14.36	3.5	70	21.18	0	1.64	-13.1
1058	7.06	0.671	14.31	2.6	70	21.18	0	1.72	-11.9
1035	7.06	0.670	14.30	4.1	70	21.18	0	1.71	-9.3
1058					70	21.18	0		

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 1035 pH 7.06 SC 0.670 Temp 14.30 Turb. 4.1 Flow Rate 70 DTW 21.18 Drawdown 0 DO 1.71 ORP -9.3

Comments: * low flow rate due to 1000 ~~ft~~ DTW versus pump placement

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW24(24.9)-6102816 Time 1040 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 14
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hinggardner Date 9-28-16 Start Time 1110 Weather Cloudy, 63°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 18.75 Depth to Product _____ Product Thickness _____
 Total Casing Depth 45.74 Borehole Diameter 4in. Approx. Pump Depth 42.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1120 Pump Stopped 1220 Total Gallons 6.0L

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1125</u>	<u>7.25</u>	<u>0.801</u>	<u>15.29</u>	<u>6.6</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>2.22</u>	<u>-142.4</u>
<u>1130</u>	<u>7.26</u>	<u>0.817</u>	<u>15.37</u>	<u>4.7</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>4.74</u>	<u>-150.5</u>
<u>1135</u>	<u>7.29</u>	<u>0.825</u>	<u>15.27</u>	<u>2.5</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.81</u>	<u>-155.5</u>
<u>1140</u>	<u>7.32</u>	<u>0.830</u>	<u>15.20</u>	<u>1.9</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.80</u>	<u>-164.1</u>
<u>1145</u>	<u>7.34</u>	<u>0.825</u>	<u>15.09</u>	<u>1.6</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.39</u>	<u>-173.0</u>
<u>1150</u>	<u>7.35</u>	<u>0.816</u>	<u>14.99</u>	<u>1.7</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.38</u>	<u>-177.8</u>
<u>1155</u>	<u>7.35</u>	<u>0.807</u>	<u>14.90</u>	<u>1.6</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.34</u>	<u>-180.1</u>
<u>1200</u>	<u>7.35</u>	<u>0.802</u>	<u>14.89</u>	<u>1.6</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.31</u>	<u>-183.4</u>
<u>1205</u>	<u>7.36</u>	<u>0.801</u>	<u>14.86</u>	<u>1.3</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.31</u>	<u>-187.0</u>
<u>1220</u>					<u>18.95</u>	<u>0.18</u>	<u>200</u>		

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1205</u>	<u>7.36</u>	<u>0.801</u>	<u>14.86</u>	<u>1.3</u>	<u>18.93</u>	<u>0.18</u>	<u>200</u>	<u>0.31</u>	<u>-187.0</u>

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW 14-092816 Time 1210 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gases VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 20(51)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. A. Regan Date 9-28-16 Start Time 12:25 Weather Cloudy 64°F

MEASUREMENT SUMMARY:

Measuring Point 90C Depth to Water 26.40 Depth to Product _____ Product Thickness _____
 Total Casing Depth 51 Borehole Diameter 4 in. Approx. Pump Depth 49.0 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 12:40 Pump Stopped _____ Total Gallons _____

12:55

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
12:55	<u>6.80</u>	<u>0.804</u>	<u>16.74</u>	<u>6.0</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.44</u>	<u>-124.1</u>
<u>13:00</u>	<u>6.80</u>	<u>0.828</u>	<u>16.46</u>	<u>11.1</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.35</u>	<u>-131.5</u>
<u>13:05</u>	<u>6.80</u>	<u>0.827</u>	<u>16.88</u>	<u>11.5</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.34</u>	<u>-132.3</u>
<u>13:10</u>	<u>6.80</u>	<u>0.829</u>	<u>17.04</u>	<u>11.4</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.40</u>	<u>-133.6</u>
<u>13:15</u>	<u>6.80</u>	<u>0.833</u>	<u>17.39</u>	<u>11.2</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.41</u>	<u>-135.8</u>
<u>13:20</u>	<u>6.80</u>	<u>0.834</u>	<u>17.69</u>	<u>8.8</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.39</u>	<u>-135.2</u>
<u>13:25</u>	<u>6.80</u>	<u>0.835</u>	<u>17.68</u>	<u>9.6</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.40</u>	<u>-136.5</u>
<u>13:30</u>	<u>6.80</u>	<u>0.837</u>	<u>17.66</u>	<u>8.2</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.42</u>	<u>-136.4</u>

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>13:30</u>	<u>6.80</u>	<u>0.837</u>	<u>17.66</u>	<u>8.2</u>	<u>200</u>	<u>26.40</u>	<u>0</u>	<u>0.42</u>	<u>-136.4</u>

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0.100 NTUs

Sample Name ATR-MW 20(51)-6080816 Time 13:35 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-~~10~~EB002
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hingardner Date 9/28/16 Start Time 1355 Weather Sunny, 68°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water _____ Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailer

Pump Started _____ Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP

Comments: * collected after mw20(51) + before mw20(35)

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-M EB00260716 Time 1400 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 20(35)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hinegar Date 9-28-16 Start Time 1410 Weather Overcast 68°F

MEASUREMENT SUMMARY:
 Measuring Point 40c Depth to Water 26.40 Depth to Product _____ Product Thickness _____
 Total Casing Depth 35' Borehole Diameter 4in. Approx. Pump Depth 33.8 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:
 Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1420 Pump Stopped 1545 Total Gallons 18

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1430	7.66	0.459	18.69	11.3	200	26.40	0	2.96	-105.1
1435	6.96	0.464	18.34	41.9	200	26.40	0	3.01	-101.5
1440	6.95	0.465	18.29	41.2	200	26.40	0	3.04	-101.4
1445	7.01	0.472	17.83	29.0	200	26.40	0	3.02	-103.0
1450	7.04	0.475	17.72	23.5	200	26.40	0	3.00	-103.8
1455	7.05	0.478	17.71	21.3	200	26.40	0	3.09	-104.2
1500	7.07	0.483	17.59	18.7	200	26.40	0	3.10	-104.2
1505	7.08	0.487	17.50	14.7	200	26.40	0	3.10	-103.4
1510	7.06	0.488	17.48	14.4	200	26.40	0	3.10	-102.7
1515	7.07	0.486	17.47	13.2	200	26.40	0	3.10	-103.4
1545					200	26.40	0		

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:
 Time 1515 pH 7.07 SC 0.486 Temp 17.47 Turb. 13.2 Flow Rate 200 DTW 26.40 Drawdown 0 DO 3.10 ORP -103.4

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 248 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW 20(35) 6092016 Time 1520 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gases VFA
 Other List: _____
 MS/MSD _____ Blind Dup ATR-MW20(35)-6092016 Blind Dup Name _____ TB _____
Goetzl R



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW6C
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-28-16 Start Time 1450 Weather 60°F Overcast

MEASUREMENT SUMMARY:
 Measuring Point: 10C Depth to Water 26.35 Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:
 Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1500 Pump Stopped 1548 Total Gallons 7.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1510	7.49	0.608	16.10	8.6	200	26.35	0	0.47	-127.4
1515	7.46	0.629	15.97	8.7	200	26.35	0	0.27	-127.3
1520	7.46	0.632	16.01	5.7	200	26.35	0	0.26	-127.0
1525	7.57	0.637	15.98	5.4	200	26.35	0	0.22	-126.7
1530	7.59	0.641	15.98	4.8	200	26.35	0	0.20	-126.0
1535	7.59	0.643	15.96	5.8	200	26.35	0	0.18	-125.8
1540	7.59	0.644	15.95	4.0	200	26.35	0	0.18	-125.5

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
1540	7.59	0.644	15.95	4.0	200	26.35	0	0.18	-125.5

Comments: MP-50 CRM=4 75 PSI 11/4

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW6C-6092816 Time 1540 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW82
 Project Number _____ Date 9-28-16 Start Time 1330 (Use: Well name)
 Sampling Personnel SP Weather 60°F Overcast

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 23.35 Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1345 Pump Stopped 1434 Total Gallons 7

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1355	7.39	0.749	16.62	17.6	200	23.35	0	0.59	-141.9
1400	7.36	0.763	16.39	13.5	200	23.35	0	0.35	-150.0
1405	7.36	0.776	16.32	16.7	200	23.35	0	0.29	-151.2
1410	7.33	0.781	16.29	13.2	200	23.35	0	0.26	-152.8
1415	7.34	0.782	16.27	12.1	200	23.35	0	0.25	-153.8
1420	7.36	0.784	16.27	10.2	200	23.35	0	0.23	-154.0
1425	7.36	0.791	16.26	9.2	200	23.35	0	0.23	-154.6

Stabilization Criteria: ±3% ±3% ±10% ±10% ±10% ±10%

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
1425	7.36	0.791	16.26	9.2	200	23.35	0	0.23	-154.6

Comments: MW-50 PSI = 70 11.5/3.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW82-6092816 Time 1425 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW E8001
 Project Number _____ Date 9-28-16 Start Time 1315 Weather _____
 Sampling Personnel _____ (Use: Well name)

MEASUREMENT SUMMARY:

Measuring Point _____ Depth to Water _____ Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailer

Pump Started _____ Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)

Stabilization Criteria: pH $\pm 3\%$ Temp $\pm 3\%$ Turb. ± 10 DO $\pm 10\%$ ORP ± 10

Final:

Time _____ pH _____ SC _____ Temp _____ Turb. _____ Flow Rate _____ DTW _____ Drawdown _____ DO _____ ORP _____

Comments: E8001 collected from BED bladder pump between
092816 & 092816

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration # mV
 SC Reference Solution _____ mS/cm Turbidity Cal. Solution _____ NTUs
 Sample Name ATR-MW E8001-6092816 Time 1325 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW12
 Project Number _____ Date 9-29-16 Start Time 1220 Weather 80°F Overcast
 Sampling Personnel SP (Use: Well name)

MEASUREMENT SUMMARY:
 Measuring Point TOC Depth to Water 24.46 Depth to Product _____ Product Thickness _____
 Total Casing Depth 34.2 Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top bottom Feet

SAMPLING SUMMARY:
 Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started _____ Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1235</u>	<u>6.83</u>	<u>0.608</u>	<u>15.12</u>	<u>88.7</u>				<u>5.17</u>	<u>-79.3</u>
<u>1244</u>	<u>7.19</u>	<u>0.633</u>	<u>14.98</u>	<u>21.3</u>				<u>3.44</u>	<u>-108.4</u>
<u>1252</u>	<u>6.73</u>	<u>0.644</u>	<u>14.94</u>	<u>20.4</u>				<u>4.54</u>	<u>-107.4</u>

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:
 Time 1252 pH 6.73 SC 0.644 Temp 14.94 Turb. 20.4 Flow Rate _____ DTW _____ Drawdown _____ DO 4.54 ORP -107.4

Comments: 3PV = 34.2 - 24.46 x 0.041 x 3 = 3PV = 1.25 gal

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW12-6092816 Time 1255 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW13
 Project Number _____ Date 9-28-1 Start Time 1115 Weather 55°F Rain
 Sampling Personnel 3P (Use: Well name)

MEASUREMENT SUMMARY:

Measuring Point 10C Depth to Water 22.67 Depth to Product _____ Product Thickness _____
 Total Casing Depth 32.1 Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started _____ Pump Stopped _____ Total Gallons _____

Grail
0.5
1.0
1.25

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1133</u>	<u>6.91</u>	<u>0.607</u>	<u>14.24</u>	<u>63.3</u>				<u>3.62</u>	<u>-75.3</u>
<u>1141</u>	<u>6.93</u>	<u>0.607</u>	<u>14.05</u>	<u>100.6</u>				<u>4.74</u>	<u>-102.0</u>
<u>1150</u>	<u>6.98</u>	<u>0.608</u>	<u>14.08</u>	<u>120.7</u>				<u>4.26</u>	<u>-103.6</u>

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 1150 pH 6.90 SC 0.608 Temp 14.08 Turb. 120.7 Flow Rate _____ DTW _____ Drawdown _____ DO 4.26 ORP 103.6

Comments: 3PV = 32.1 - 22.67 x 0.041 x 3 = 1.25 gallons

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW13-6092816 Time 1150 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUNDWATER/SURFACE WATER SAMPLING FORM

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-DWI (28)
Project Number _____ (Use: Well name)
Sampling Personnel SP Date 9-28-16 Start Time 0940 Weather 55°F Part

MEASUREMENT SUMMARY:
Measuring Point TOC Depth to Water 21.20 Depth to Product _____ Product Thickness _____
Total Casing Depth 27.70 Borehole Diameter _____ Approx. Pump Depth 24.5 Feet
Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:
Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
Pump Started 0950 Pump Stopped 1030 Total Gallons 5.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1000</u>	<u>7.02</u>	<u>0.811</u>	<u>13.99</u>	<u>11.7</u>	<u>200</u>	<u>21.22</u>	<u>.02</u>	<u>0.37</u>	<u>-138.9</u>
<u>1005</u>	<u>7.71</u>	<u>0.820</u>	<u>14.02</u>	<u>7.1</u>	<u>200</u>	<u>21.22</u>	<u>.02</u>	<u>0.27</u>	<u>-151.2</u>
<u>1010</u>	<u>7.83</u>	<u>0.824</u>	<u>14.19</u>	<u>5.0</u>	<u>200</u>	<u>21.22</u>	<u>.02</u>	<u>0.73</u>	<u>-156.0</u>
<u>1015</u>	<u>7.87</u>	<u>0.828</u>	<u>14.13</u>	<u>3.6</u>	<u>200</u>	<u>21.22</u>	<u>.02</u>	<u>0.70</u>	<u>-159.4</u>
<u>1020</u>	<u>7.88</u>	<u>0.828</u>	<u>14.11</u>	<u>3.7</u>	<u>200</u>	<u>21.22</u>	<u>.02</u>	<u>0.19</u>	<u>-160.1</u>

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1020</u>	<u>7.88</u>	<u>0.828</u>	<u>14.11</u>	<u>3.7</u>	<u>200</u>	<u>21.22</u>	<u>.02</u>	<u>0.19</u>	<u>-160.1</u>

Comments: MP-50 55 PSI CPM=4 12/3

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
Sample Name ATR-DWI (28)-6092816 Time 1020 VOCs TOC Fe/Mn DHC
Anions Alkalinity Dissolved Gases VFA
Other List: _____
MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-OW1 (39)
 Project Number _____ Date 9-28-16 Start Time 0620 Weather 65°F Rain
 Sampling Personnel SP (Use: Well name)

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 21.20 Depth to Product _____ Product Thickness _____
 Total Casing Depth 3865 Borehole Diameter _____ Approx. Pump Depth 35.5 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 0840 Pump Stopped 0933 Total Gallons 7.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0850	6.60	0.093	14.17	160.1	200	21.20	0	0.87	-130.6
0855	7.09	0.070	14.12	8.7	200	21.20	0	0.52	-139.8
0900	7.10	0.607	14.04	1.5	200	21.20	0	0.29	-142.7
0905	7.10	0.596	14.01	1.7	200	21.20	0	0.25	-140.5
0910	7.94	0.573	14.06	1.2	200	21.20	0	0.22	-143.7
0915	7.78	0.565	14.07	1.0	200	21.20	0	0.21	-143.8
0920	7.90	0.565	14.06	2.0	200	21.20	0	0.20	-142.9

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 0920 pH 7.90 SC 0.565 Temp 14.06 Turb. 2.0 Flow Rate 200 DTW 21.20 Drawdown 0 DO 0.20 ORP -142.9

Comments: MP-50 60 PSE CPM=4 11.5/3.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-OW1(39)-6092816 Time 0920 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD ATR-OW1(39)-6092816 MS Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW E8003
 Project Number _____ Date _____ Start Time _____ Weather _____
 Sampling Personnel _____ (Use: Well name)

MEASUREMENT SUMMARY:

Measuring Point _____ Depth to Water _____ Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailer

Pump Started _____ Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)

Stabilization Criteria: pH ±3% Temp ±3% Turb. ±10 DO ±10% ORP ±10

Final:
 Time pH SC Temp Turb. Flow Rate DTW Drawdown DO ORP

Comments: Collected from disposable bailer prior to pug/sample MW-67

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration _____ mV
 SC Reference Solution _____ mS/cm Turbidity Cal. Solution _____ NTUs

Sample Name ATR-MW E8003-6092916 Time 0845 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW PM-2
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Honeygood Date 2-29-16 Start Time 1515 Weather Sunny, 70°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 13.77 Depth to Product _____ Product Thickness _____
 Total Casing Depth 29.28 Borehole Diameter 4 in. Approx. Pump Depth 24 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1525 Pump Stopped 1700 Total Gallons 2.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1535	6.50	0.778	20.17	64.8	100	13.85	0.08	1.07	-90.7
1540	6.51	0.776	19.57	70.3	100	13.85	0.08	0.75	-93.3
1545	6.52	0.774	19.12	61.4	100	13.85	0.08	0.46	-92.7
1550	6.52	0.774	19.01	58.8	100	13.85	0.08	0.43	-94.2
1555	6.52	0.712	18.97	57.1	100	13.85	0.08	0.37	-100.2
1600	6.51	0.677	18.93	45.6	100	13.85	0.08	0.30	-101.6
1605	6.52	0.690	18.90	39.6	100	13.85	0.08	0.50	-103.5
1610	6.53	0.692	18.96	31.8	100	13.85	0.08	0.36	-104.4
1615	6.53	0.710	19.10	31.0	100	13.85	0.08	0.35	-104.5
1620	6.53	0.784	18.76	21.3	100	13.85	0.08	0.35	-104.9
1625	6.53	0.695	18.75	22.4	100	13.85	0.08	0.33	-105.0
1630	6.52	0.680	18.71	22.5	100	13.85	0.08	0.38	-104.9
1635	6.53	0.677	18.74	20.9	100	13.85	0.08	0.35	-104.2
1700					100	13.85	0.08		

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 1638 pH 6.53 SC 0.677 Temp 18.74 Turb. 20.9 Flow Rate 100 DTW 13.85 Drawdown 0.08 DO 0.35 ORP -104.2

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 2413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW PM2-6092916 Time 1640 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 81(27)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Wingardner Date 9-29-16 Start Time 1400 Weather Overcast, 73°F

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 13.97 Depth-to-Product _____ Product Thickness _____
 Total Casing Depth 27 Borehole Diameter 4 inches Approx. Pump Depth 24' Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailer

Pump Started 1410 Pump Stopped 1510 Total Gallons 8.4L

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1420</u>	<u>6.05</u>	<u>0.738</u>	<u>12.02</u>	<u>6.2</u>	<u>150</u>	<u>14.19</u>	<u>0.22</u>	<u>2.84</u>	<u>-80.2</u>
<u>1425</u>	<u>5.83</u>	<u>0.743</u>	<u>18.50</u>	<u>2.5</u>	<u>150</u>	<u>13.90</u>	<u>-0.07</u>	<u>1.72</u>	<u>-71.4</u>
<u>1430</u>	<u>5.87</u>	<u>0.757</u>	<u>18.32</u>	<u>0.9</u>	<u>150</u>	<u>13.97</u>	<u>0</u>	<u>1.78</u>	<u>-71.0</u>
<u>1435</u>	<u>5.87</u>	<u>0.766</u>	<u>18.19</u>	<u>3.2</u>	<u>150</u>	<u>13.97</u>	<u>0</u>	<u>1.80</u>	<u>-69.2</u>
<u>1440</u>	<u>5.87</u>	<u>0.771</u>	<u>18.07</u>	<u>3.1</u>	<u>150</u>	<u>13.97</u>	<u>0</u>	<u>1.79</u>	<u>-66.2</u>
<u>1445</u>	<u>5.86</u>	<u>0.773</u>	<u>18.05</u>	<u>7.1</u>	<u>150</u>	<u>13.97</u>	<u>0</u>	<u>1.75</u>	<u>-65.9</u>
<u>1450</u>	<u>5.86</u>	<u>0.776</u>	<u>18.03</u>	<u>8.4</u>	<u>150</u>	<u>13.97</u>	<u>0</u>	<u>1.73</u>	<u>-64.8</u>
<u>1510</u>					<u>150</u>	<u>13.97</u>	<u>0</u>		

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time 1450 pH 5.86 SC 0.776 Temp 18.03 Turb. 8.4 Flow Rate 150 DTW 13.97 Drawdown 0 DO 1.73 ORP -64.8

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW 81(27) - G090916 Time 1455 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gases VFA

Other List: _____

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 76
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. Hines Date 9-29-16 Start Time 0830 Weather Indoor

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 25.04 Depth to Product _____ Product Thickness _____
 Total Casing Depth 30' Borehole Diameter 4 in. Approx. Pump Depth 29' Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 0900 Pump Stopped 1030 Total Gallons 1.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0900	6.02	0.883	19.84	658.9	100	25.04	0	4.07	-7.8
0915	6.04	0.887	19.70	559.4	100	25.04	0	1.53	-34.4
0920	6.07	0.899	19.48	498.4	100	25.04	0	1.88	-44.0
0925	6.10	0.906	19.34	378.5	100	25.04	0	2.78	-50.8
0930	6.12	0.922	19.22	333.9	100	25.04	0	4.40	-57.1
0935	6.13	0.926	19.20	298.8	100	25.04	0	2.51	-57.3
0940	6.14	0.933	19.09	238.1	100	25.04	0	1.92	-58.9
0945	6.14	0.943	19.06	209.6	100	25.04	0	1.92	-59.6
0950	6.15	0.949	19.07	188.5	100	25.04	0	4.42	-62.7
0955	6.16	0.956	19.05	170.8	100	25.04	0	3.75	-60.1
1000	6.15	0.964	18.99	140.8	100	25.04	0	2.99	-58.8
1005	6.15	0.966	19.01	137.6	100	25.04	0	2.97	-58.3
1010	6.15	0.972	19.00	135.1	100	25.04	0	2.95	-57.7
1030					100	25.04	0		

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 1010 pH 6.15 SC 0.972 Temp 19.00 Turb. 135.1 Flow Rate 100 DTW 25.04 Drawdown 0 DO 2.95 ORP -57.9

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.913 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW 76/092916 Time 1015 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 77
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. H. Hargender Date 9-29-16 Start Time 10:25 Weather Indoors

MEASUREMENT SUMMARY:

Measuring Point 70c Depth to Water 25.27 Depth to Product _____ Product Thickness _____
 Total Casing Depth 41' Borehole Diameter 4 in. Approx. Pump Depth 39' Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1100 Pump Stopped 1200 Total Gallons 1.0

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1110</u>	<u>7.41</u>	<u>20.28</u>	<u>0.298</u>	<u>2.1</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>3.58</u>	<u>-40.1</u>
<u>1115</u>	<u>7.41</u>	<u>20.00</u>	<u>0.299</u>	<u>2.1</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>4.37</u>	<u>-43.2</u>
<u>1120</u>	<u>7.43</u>	<u>19.75</u>	<u>0.296</u>	<u>5.2</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>4.28</u>	<u>-61.3</u>
<u>1125</u>	<u>7.44</u>	<u>19.65</u>	<u>0.296</u>	<u>3.3</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>4.22</u>	<u>-71.8</u>
<u>1130</u>	<u>7.45</u>	<u>19.60</u>	<u>0.295</u>	<u>4.6</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>4.27</u>	<u>-74.9</u>
<u>1135</u>	<u>7.47</u>	<u>19.61</u>	<u>0.295</u>	<u>4.8</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>4.29</u>	<u>-76.6</u>
<u>1150</u>					<u>100</u>	<u>25.27</u>	<u>0</u>		

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1135</u>	<u>7.47</u>	<u>19.61</u>	<u>0.295</u>	<u>4.8</u>	<u>100</u>	<u>25.27</u>	<u>0</u>	<u>4.29</u>	<u>-76.6</u>

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 290 mV
 SC Reference Solution 4413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW 77-6052916 Time 1140 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 78
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L Honeyard Date 9-29-16 Start Time 12:15 Weather Indoors

MEASUREMENT SUMMARY:

Measuring Point 90C Depth to Water 25.24 Depth to Product _____ Product Thickness _____
 Total Casing Depth 35' Borehole Diameter 4 1/2" Approx. Pump Depth 3'3" Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 12:25 Pump Stopped 13:25 Total Gallons 1.20

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>12:40</u>	<u>6.38</u>	<u>1.067</u>	<u>19.66</u>	<u>39.2</u>	<u>120</u>	<u>25.24</u>	<u>0</u>	<u>3.42</u>	<u>-29.4</u>
<u>12:45</u>	<u>6.34</u>	<u>1.074</u>	<u>19.03</u>	<u>27.5</u>	<u>120</u>	<u>25.24</u>	<u>0</u>	<u>2.03</u>	<u>-34.7</u>
<u>12:50</u>	<u>6.32</u>	<u>1.073</u>	<u>18.86</u>	<u>26.6</u>	<u>120</u>	<u>25.24</u>	<u>0</u>	<u>2.74</u>	<u>-37.0</u>
<u>12:55</u>	<u>6.33</u>	<u>1.071</u>	<u>18.82</u>	<u>18.6</u>	<u>120</u>	<u>25.24</u>	<u>0</u>	<u>2.71</u>	<u>-38.9</u>
<u>13:00</u>	<u>6.31</u>	<u>1.067</u>	<u>18.80</u>	<u>9.2</u>	<u>120</u>	<u>25.24</u>	<u>0</u>	<u>2.70</u>	<u>-36.5</u>
<u>13:25</u>					<u>120</u>	<u>25.24</u>	<u>0</u>		

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time 13:00 pH 6.31 SC 1.067 Temp 18.80 Turb. 9.2 Flow Rate 120 DTW 25.24 Drawdown 0 DO 2.70 ORP -36.5

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW 78-6092116 Time 13:05 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



**GROUNDWATER/SURFACE WATER
SAMPLING FORM**

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW-89(28)
 Project Number _____ Date 9-29-16 Start Time 1530 (Use: Well name)
 Sampling Personnel SP Weather 70° F Sunny

MEASUREMENT SUMMARY:
 Measuring Point TOC Depth to Water 1357 Depth to Product _____ Product Thickness _____
 Total Casing Depth 28 Borehole Diameter _____ Approx. Pump Depth 85 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:
 Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1545 Pump Stopped 1633 Total Gallons 7

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1555	7.04	0.466	16.24	107.6	200	13.57	0	0.22	-58.9
1600	7.08	0.470	16.25	58.7	200	13.57	0	0.19	-67.6
1605	7.09	0.471	16.26	43.6	200	13.57	0	0.18	-71.4
1610	7.12	0.471	16.26	22.6	200	13.57	0	0.15	-79.8
1615	7.13	0.471	16.24	15.1	200	13.57	0	0.14	-82.6
1620	7.14	0.471	16.24	12.6	200	13.57	0	0.13	-84.7
1625	7.14	0.472	16.23	9.6	200	13.57	0	0.12	-87.1

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
1625	7.14	0.472	16.23	9.6	200	13.57	0	0.12	-87.1

Comments: MP-50 55 PSE CPM=4 11.5/3.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW-89(28)-G092916 Time 1625 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses 2-NO VFA

Other List: _____

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW PM3
 Project Number _____ (Use: Well name)
 Sampling Personnel SR Date 9-29-16 Start Time 1425 Weather 70F Sunny

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 24.00 Depth to Product _____ Product Thickness _____
 Total Casing Depth _____ Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started 1435 Pump Stopped 1515 Total Gallons 5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1445</u>	<u>5.76</u>	<u>0.963</u>	<u>16.51</u>	<u>282.6</u>	<u>150</u>	<u>24.20</u>	<u>.20</u>	<u>1.51</u>	<u>54.5</u>
<u>1450</u>	<u>5.76</u>	<u>0.962</u>	<u>16.35</u>	<u>300.0</u>	<u>150</u>	<u>24.20</u>	<u>.20</u>	<u>0.46</u>	<u>48.7</u>
<u>1455</u>	<u>5.70</u>	<u>0.952</u>	<u>16.47</u>	<u>299.7</u>	<u>150</u>	<u>24.20</u>	<u>.20</u>	<u>0.38</u>	<u>43.8</u>
<u>1500</u>	<u>5.69</u>	<u>0.950</u>	<u>16.43</u>	<u>316.6</u>	<u>150</u>	<u>24.20</u>	<u>.20</u>	<u>0.29</u>	<u>42.1</u>
<u>1505</u>	<u>5.68</u>	<u>0.948</u>	<u>16.45</u>	<u>311.6</u>	<u>150</u>	<u>24.20</u>	<u>.20</u>	<u>0.25</u>	<u>40.0</u>

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

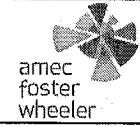
Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
<u>1505</u>	<u>5.68</u>	<u>0.948</u>	<u>16.45</u>	<u>311.6</u>	<u>150</u>	<u>24.20</u>	<u>.20</u>	<u>0.25</u>	<u>40.0</u>

Comments: MP-50 GORSE CAM-4 11/4 Turbidity will not stabilize.
Purge water white. High concentration bio-amendment

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW PM3-6042916 Time 1505 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW62
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-29-16 Start Time 1315 Weather 70°F Sunny

MEASUREMENT SUMMARY:

Measuring Point: 70C Depth to Water 26.72 Depth to Product _____ Product Thickness _____
 Total Casing Depth 36 Borehole Diameter _____ Approx. Pump Depth 33 Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 1325 Pump Stopped 1407 Total Gallons 6

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1335	7.41	0.556	15.94	2.1	200	26.72	0	0.41	-138.9
1340	7.40	0.552	15.95	3.3	200	26.72	0	0.32	-140.9
1345	7.39	0.540	15.75	6.0	200	26.72	0	0.23	-151.3
1350	7.39	0.536	15.76	1.0	200	26.72	0	0.20	-153.9
1355	7.39	0.536	15.75	1.1	200	26.72	0	0.19	-156.0
1400	7.40	0.535	15.72	1.3	200	26.72	0	0.17	-157.5

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time	pH	SC	Temp	Turb.	Flow Rate	DTW	Drawdown	DO	ORP
1400	7.40	0.535	15.72	1.3	200	26.72	0	0.17	-157.5

Comments: MP-50 GS PSE CPM=4 11.5/3.5

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW62-6892916 Time 1400 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUNDWATER/SURFACE WATER SAMPLING FORM

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW⁷²
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-29-16 Start Time 1155 Weather _____

MEASUREMENT SUMMARY:

Measuring Point 100 Depth to Water 25.75 Depth to Product _____ Product Thickness _____
 Total Casing Depth 32.5 Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started _____ Pump Stopped _____ Total Gallons _____

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
<u>1215</u>	<u>6.67</u>	<u>1.351</u>	<u>17.19</u>	<u>108.6</u>				<u>4.75</u>	<u>-35.4</u>
<u>1225</u>	<u>6.68</u>	<u>1.506</u>	<u>17.41</u>	<u>126.7</u>				<u>5.76</u>	<u>-30.8</u>
<u>1235</u>	<u>6.70</u>	<u>1.535</u>	<u>17.32</u>	<u>135.0</u>				<u>6.25</u>	<u>-28.8</u>

Gal
0.5
1.0
1.5

Stabilization Criteria: $\pm 3\%$ $\pm 3\%$ ± 10 $\pm 10\%$ ± 10

Final:

Time _____ pH _____ SC _____ Temp _____ Turb. _____ Flow Rate _____ DTW _____ Drawdown _____ DO _____ ORP _____

Comments: $3PV = 32.5 - 27.75 \times 0.092 \times 3 = 1.5 \text{ gal}$

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 940 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW⁷²-6092416 Time 1235 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA

Other List: _____

MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW68
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-29-16 Start Time 1055 Weather _____

MEASUREMENT SUMMARY:

Measuring Point TOC Depth to Water 25.27 Depth to Product _____ Product Thickness _____
 Total Casing Depth 31.8 Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started _____ Pump Stopped _____ Total Gallons _____

Gal
1
1.5
2

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1112	6.85	1.142	17.09	253.2				4.38	-77.8
1118	6.95	1.111	17.01	276.4				5.15	-71.2
1124	6.73	1.160	16.97	390.2				3.56	-55.6

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:

Time 1124 pH 6.73 SC 1.160 Temp 16.97 Turb. 390.2 Flow Rate _____ DTW _____ Drawdown _____ DO 3.56 ORP -55.6

Comments: 3PV = 31.8 - 25.27 x 0.092 x 3 = 2gal

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW68-6092A16 Time 1125 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 71
 Project Number _____ (Use: Well name)
 Sampling Personnel _____ Date _____ Start Time 1005 Weather _____

MEASUREMENT SUMMARY:

Measuring Point: TOC Depth to Water ~~10~~ 24.98 Depth to Product _____ Product Thickness _____
 Total Casing Depth 32.6 Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval _____ top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor

Pump Started _____ Pump Stopped _____ Total Gallons _____

Gral
1
1.5
2.25

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
1019	6.16	1.657	16.69	513.3				6.00	7.8
1025	6.26	1.751	16.54	28.0				5.02	-30.8
1030	6.12	1.964	16.37	27.1				5.60	-13.7

Stabilization Criteria: ±3% ±3% ±10 ±10%

Final:

Time 1030 pH 6.12 SC 1.964 Temp 16.37 Turb. 27.1 Flow Rate _____ DTW _____ Drawdown _____ DO 5.60 ORP -13.7

Comments: 3PV = 32.6 - 24.98 x .092 x 3 = 2.25 gal

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs

Sample Name ATR-MW71-6092916 Time 1030 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gases VFA

Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____

GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW67
 Project Number _____ (Use: Well name)
 Sampling Personnel SP Date 9-24-16 Start Time 0910 Weather 58°F Overcast

MEASUREMENT SUMMARY:
 Measuring Point: TOC Depth to Water 25.35 Depth to Product _____ Product Thickness _____
 Total Casing Depth 78.3 Borehole Diameter _____ Approx. Pump Depth _____ Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:
 Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started _____ Pump Stopped _____ Total Gallons _____

Gal
 0.5
 1.0
 1.5

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0925	6.55	0.850	17.41	985.5				4.92	-3.6
0932	7.75	0.922	17.11	983.2				5.54	-99.0
0937	6.64	0.925	17.12	983.5				4.65	-89.6

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:
 Time 0937 pH 6.64 SC 0.925 Temp 17.12 Turb. 983.5 Flow Rate _____ DTW _____ Drawdown _____ DO 4.65 ORP -89.6

Comments: 3PV = 30.3 - 25.35 X .092 X 3 = 3PV = 1.5 gal

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW67-G092416 Time 0940 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup _____ Blind Dup Name _____ TB _____



GROUND-WATER/SURFACE WATER SAMPLING FORM

Project Location TFS Rochester Surface Water Groundwater Sample Identification ATR-MW 59 (29)
 Project Number 3359-15-1040 (Use: Well name)
 Sampling Personnel L. H. Hines Date 9-30-16 Start Time 0825 Weather Overcast, 68°F

MEASUREMENT SUMMARY:

Measuring Point 70c Depth to Water 15.28 Depth to Product _____ Product Thickness _____
 Total Casing Depth 29' Borehole Diameter 4in. Approx. Pump Depth 27' Feet
 Screen Interval top _____ bottom _____ Feet

SAMPLING SUMMARY:

Sampling Method: Grab Composite Grundfos Bladder Pump Peristaltic Pump Bailor
 Pump Started 0840 Pump Stopped 0945 Total Gallons 6.2L

Time (24-hr)	pH (S.U.)	SC (mS/cm)	Temp (°C)	Turb. (NTU)	Flow Rate (ml/min)	DTW (ft)	Drawdown (ft)	DO (mg/L)	ORP (mV)
0850	6.37	1.328	17.14	5.5	100	15.28	0	2.48	-61.0
0855	6.41	1.329	17.04	7.2	100	15.28	0	2.32	-70.1
0900	6.44	1.332	16.92	4.2	100	15.28	0	2.31	-74.4
0905	6.44	1.334	16.83	2.5	100	15.28	0	2.20	-75.1
0910	6.46	1.336	16.77	4.1	100	15.28	0	2.24	-75.6
0915	6.45	1.340	16.70	6.1	100	15.28	0	2.20	-73.3
0920	6.44	1.345	16.65	6.6	100	15.28	0	2.21	-72.9
0925	6.42	1.350	16.64	9.4	100	15.28	0	2.23	-70.1
0945					100	15.28	0		

Stabilization Criteria: ±3% ±3% ±10 ±10% ±10

Final:
 Time 0925 pH 6.42 SC 1.350 Temp 16.64 Turb. 1.1 Flow Rate 100 DTW 15.28 Drawdown 0 DO 2.23 ORP -70.1

Comments: _____

Calibration: pH Calibration Buffers: 4 7 10 ORP Calibration 240 mV
 SC Reference Solution 1.413 mS/cm Turbidity Cal. Solution 0/100 NTUs
 Sample Name ATR-MW 59(29) - G093016 Time 0930 VOCs TOC Fe/Mn DHC
 Anions Alkalinity Dissolved Gasses VFA
 Other List: _____
 MS/MSD _____ Blind Dup ATR-MW 59(29) - G093016 Name _____ TB _____



Textron, Inc.
TORX Facility Remediation
Report of Performance Monitoring

APPENDIX B

LABORATORY REPORTS AND DATA VALIDATION REPORTS



20-Oct-2016

Paul Stork
AMEC Foster Wheeler
521 Byers Road, Suite 204
Miamisburg, OH 45342

Re: **TFS (3359151040)**

Work Order: **1610056**

Dear Paul,

ALS Environmental received 50 samples on 01-Oct-2016 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 144.

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

Sincerely,

A handwritten signature in black ink that reads "Joseph Ribar".

Electronically approved by: Joseph Ribar

Joseph Ribar
Project Manager



Certificate No: IN: C-MI-08

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental ALS

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Work Order: 1610056

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1610056-01	ATR-MW82-G092816	Water		9/28/2016 14:25	10/1/2016 09:30	<input type="checkbox"/>
1610056-02	ATR-EB001-G092816	Water		9/28/2016 13:25	10/1/2016 09:30	<input type="checkbox"/>
1610056-03	ATR-MW12-G092816	Water		9/28/2016 12:55	10/1/2016 09:30	<input type="checkbox"/>
1610056-04	ATR-MW13-G092816	Water		9/28/2016 11:50	10/1/2016 09:30	<input type="checkbox"/>
1610056-05	ATR-OW1(28)-G092816	Water		9/28/2016 10:20	10/1/2016 09:30	<input type="checkbox"/>
1610056-06	ATR-OW1(39)-G092816	Water		9/28/2016 09:20	10/1/2016 09:30	<input type="checkbox"/>
1610056-07	ATR-PM2-G092916	Water		9/29/2016 16:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-08	ATR-MW81(27)-G092916	Water		9/29/2016 14:55	10/1/2016 09:30	<input type="checkbox"/>
1610056-09	ATR-OW2(33)-G092716	Water		9/27/2016 17:00	10/1/2016 09:30	<input type="checkbox"/>
1610056-10	ATR-OW2(53)-G092716	Water		9/27/2016 15:35	10/1/2016 09:30	<input type="checkbox"/>
1610056-11	ATR-MW15-G092716	Water		9/27/2016 13:55	10/1/2016 09:30	<input type="checkbox"/>
1610056-12	ATR-MW25(45.2)-G092716	Water		9/27/2016 11:55	10/1/2016 09:30	<input type="checkbox"/>
1610056-13	ATR-OW5(16)-G092716	Water		9/27/2016 10:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-14	ATR-OW4(54)-G092716	Water		9/27/2016 09:50	10/1/2016 09:30	<input type="checkbox"/>
1610056-15	ATR-OW4(35)-G092716	Water		9/27/2016 10:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-16	ATR-MW25(32.6)-G092716	Water		9/27/2016 11:55	10/1/2016 09:30	<input type="checkbox"/>
1610056-17	ATR-MW25(16.4)-G092716	Water		9/27/2016 12:50	10/1/2016 09:30	<input type="checkbox"/>
1610056-18	ATR-OW3(55)-G092716	Water		9/27/2016 14:45	10/1/2016 09:30	<input type="checkbox"/>
1610056-19	ATR-OW3(35)-G092716	Water		9/27/2016 16:25	10/1/2016 09:30	<input type="checkbox"/>
1610056-20	ATR-MW16-G092616	Water		9/26/2016 14:20	10/1/2016 09:30	<input type="checkbox"/>
1610056-21	ATR-MW24(55.4)-G092816	Water		9/28/2016 09:30	10/1/2016 09:30	<input type="checkbox"/>
1610056-22	ATR-MW24(24.9)-G092816	Water		9/28/2016 10:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-23	ATR-MW14-G092816	Water		9/28/2016 12:10	10/1/2016 09:30	<input type="checkbox"/>
1610056-24	ATR-MW20(51)-G092816	Water		9/28/2016 13:35	10/1/2016 09:30	<input type="checkbox"/>
1610056-25	ATR-EB002-G092816	Water		9/28/2016 14:00	10/1/2016 09:30	<input type="checkbox"/>
1610056-26	ATR-MW20(35)-G092816	Water		9/28/2016 15:20	10/1/2016 09:30	<input type="checkbox"/>
1610056-27	ATR-MW20(35)-G092816R	Water		9/28/2016 15:20	10/1/2016 09:30	<input type="checkbox"/>
1610056-28	ATR-MW6C-G092816	Water		9/28/2016 15:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-29	ATR-MW17-G092616	Water		9/26/2016 12:50	10/1/2016 09:30	<input type="checkbox"/>
1610056-30	ATR-MW26(58.8)-G092616	Water		9/26/2016 17:00	10/1/2016 09:30	<input type="checkbox"/>
1610056-31	ATR-MW26(28.8)-G092616	Water		9/26/2016 16:05	10/1/2016 09:30	<input type="checkbox"/>
1610056-32	ATR-MW26(17.5)-G092616	Water		9/26/2016 15:15	10/1/2016 09:30	<input type="checkbox"/>
1610056-33	ATR-ZVI2(17.5)-G092616	Water		9/26/2016 13:05	10/1/2016 09:30	<input type="checkbox"/>
1610056-34	ATR-ZVI2(32.5)-G092616	Water		9/26/2016 14:05	10/1/2016 09:30	<input type="checkbox"/>
1610056-35	ATR-OW5(35)-G092616	Water		9/26/2016 16:50	10/1/2016 09:30	<input type="checkbox"/>
1610056-36	ATR-OW5(45)-G092616	Water		9/26/2016 15:35	10/1/2016 09:30	<input type="checkbox"/>
1610056-37	ATR-MW76-G092916	Water		9/29/2016 10:15	10/1/2016 09:30	<input type="checkbox"/>
1610056-38	ATR-MW77-G092916	Water		9/29/2016 11:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-39	ATR-MW78-G092916	Water		9/29/2016 13:05	10/1/2016 09:30	<input type="checkbox"/>

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Work Order: 1610056

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1610056-40	ATR-MW89(28)-G092916	Water		9/29/2016 16:25	10/1/2016 09:30	<input type="checkbox"/>
1610056-41	ATR-PM3-G092916	Water		9/29/2016 15:05	10/1/2016 09:30	<input type="checkbox"/>
1610056-42	ATR-MW62-G092916	Water		9/29/2016 14:00	10/1/2016 09:30	<input type="checkbox"/>
1610056-43	ATR-MW72-G092916	Water		9/29/2016 12:35	10/1/2016 09:30	<input type="checkbox"/>
1610056-44	ATR-MW68-G092916	Water		9/29/2016 11:25	10/1/2016 09:30	<input type="checkbox"/>
1610056-45	ATR-MW71-G092916	Water		9/29/2016 10:30	10/1/2016 09:30	<input type="checkbox"/>
1610056-46	ATR-MW67-G092916	Water		9/29/2016 09:40	10/1/2016 09:30	<input type="checkbox"/>
1610056-47	ATR-EB003-G092916	Water		9/29/2016 08:45	10/1/2016 09:30	<input type="checkbox"/>
1610056-48	ATR-MW59(29)-G093016	Water		9/30/2016 09:30	10/1/2016 09:30	<input type="checkbox"/>
1610056-49	ATR-MW59(29)-G093016R	Water		9/30/2016 09:30	10/1/2016 09:30	<input type="checkbox"/>
1610056-50	ATR-TB001-G093016	Water		9/30/2016	10/1/2016 09:30	<input type="checkbox"/>

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Work Order: 1610056

Case Narrative

Samples for the above noted Work Order were received on 10/01/2016. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:

Batch R197414, Method 8260, Sample 1610056-09A MS: The MS/MSD recoveries were below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: trans-1,3-Dichloropropene

Batch R197486, Method 8260, Sample 1610056-09A MS: The MS/MSD recoveries were below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Styrene

Batch R197486, Method 8260, Sample 1610056-09A MSD: Surrogate was out high in the MSD, Parent sample and MS/MSD will reun due to carryover in parent and MS/MSD samples.

Batch R197486, Method 8260, Sample 1610056-09A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be considered estimated for this analyte: Bromomethane

Batch R197486, Method 8260, Sample 1610056-46A: Verification of sample preservation indicated a pH >2

Batch R197654, Method 8260, Sample 1610056-09A MS: The MS recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: Chloromethane, n-Propylbenzene, and Styrene

Batch R197654, Method 8260, Sample 1610056-09A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Work Order: 1610056

Case Narrative

considered estimated for this analyte: Chloromethane

Batch R197659, Method 8260, Sample 1610056-12A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be considered estimated for this analyte: Chloromethane

Batch R197659, Method 8260, Sample 1610056-46A: Verification of sample preservation indicated a pH >2.

No other deviations or anomalies were noted.

Wet Chemistry:

Batch R198324A, Method 9060, Sample 1610056-31B MS: The MS/MSD recoveries were above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte.

Batch R198324A, Method 9060, Sample 1610056-31B MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be considered estimated for this analyte.

No other deviations or anomalies were noted.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW82-G092816
Collection Date: 9/28/2016 02:25 PM

Work Order: 1610056
Lab ID: 1610056-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
2-Butanone	36		5.0	µg/L	1	10/5/2016 04:53 PM
2-Hexanone	ND		5.0	µg/L	1	10/5/2016 04:53 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Acetone	ND		10	µg/L	1	10/5/2016 04:53 PM
Benzene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Bromoform	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Bromomethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Carbon disulfide	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Chlorobenzene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Chloroethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Chloroform	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Chloromethane	1.0		1.0	µg/L	1	10/5/2016 04:53 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Ethylbenzene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
m,p-Xylene	ND		2.0	µg/L	1	10/5/2016 04:53 PM
Methylene chloride	ND		5.0	µg/L	1	10/5/2016 04:53 PM
o-Xylene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Styrene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Toluene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Trichloroethene	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Vinyl chloride	ND		1.0	µg/L	1	10/5/2016 04:53 PM
Xylenes, Total	ND		3.0	µg/L	1	10/5/2016 04:53 PM
Surr: 1,2-Dichloroethane-d4	95.2		75-120	%REC	1	10/5/2016 04:53 PM
Surr: 4-Bromofluorobenzene	103		80-110	%REC	1	10/5/2016 04:53 PM
Surr: Dibromofluoromethane	94.4		85-115	%REC	1	10/5/2016 04:53 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW82-G092816

Collection Date: 9/28/2016 02:25 PM

Work Order: 1610056

Lab ID: 1610056-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	94.1		85-110	%REC	1	10/5/2016 04:53 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	35		10	mg/L	20	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-EB001-G092816
Collection Date: 9/28/2016 01:25 PM

Work Order: 1610056
Lab ID: 1610056-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
2-Butanone	ND		5.0	µg/L	1	10/5/2016 05:19 PM
2-Hexanone	ND		5.0	µg/L	1	10/5/2016 05:19 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Acetone	ND		10	µg/L	1	10/5/2016 05:19 PM
Benzene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Bromoform	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Bromomethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Carbon disulfide	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Chlorobenzene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Chloroethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Chloroform	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Chloromethane	1.4		1.0	µg/L	1	10/5/2016 05:19 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Ethylbenzene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
m,p-Xylene	ND		2.0	µg/L	1	10/5/2016 05:19 PM
Methylene chloride	ND		5.0	µg/L	1	10/5/2016 05:19 PM
o-Xylene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Styrene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Toluene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Trichloroethene	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Vinyl chloride	ND		1.0	µg/L	1	10/5/2016 05:19 PM
Xylenes, Total	ND		3.0	µg/L	1	10/5/2016 05:19 PM
Surr: 1,2-Dichloroethane-d4	95.2		75-120	%REC	1	10/5/2016 05:19 PM
Surr: 4-Bromofluorobenzene	104		80-110	%REC	1	10/5/2016 05:19 PM
Surr: Dibromofluoromethane	93.3		85-115	%REC	1	10/5/2016 05:19 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-EB001-G092816

Collection Date: 9/28/2016 01:25 PM

Work Order: 1610056

Lab ID: 1610056-02

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	93.0		85-110	%REC	1	10/5/2016 05:19 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	0.99		0.50	mg/L	1	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW12-G092816
Collection Date: 9/28/2016 12:55 PM

Work Order: 1610056
Lab ID: 1610056-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 04:37 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 04:37 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Acetone	ND		10	µg/L	1	10/8/2016 04:37 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Chloromethane	1.9		1.0	µg/L	1	10/8/2016 04:37 AM
cis-1,2-Dichloroethene	260		10	µg/L	10	10/8/2016 08:42 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 04:37 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 04:37 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
trans-1,2-Dichloroethene	1.6		1.0	µg/L	1	10/8/2016 04:37 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 04:37 AM
Vinyl chloride	270		10	µg/L	10	10/8/2016 08:42 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 04:37 AM
Surr: 1,2-Dichloroethane-d4	99.6		75-120	%REC	1	10/8/2016 04:37 AM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	10	10/8/2016 08:42 PM
Surr: 4-Bromofluorobenzene	97.4		80-110	%REC	1	10/8/2016 04:37 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW12-G092816
Collection Date: 9/28/2016 12:55 PM

Work Order: 1610056
Lab ID: 1610056-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	96.8		80-110	%REC	10	10/8/2016 08:42 PM
Surr: Dibromofluoromethane	100		85-115	%REC	1	10/8/2016 04:37 AM
Surr: Dibromofluoromethane	97.6		85-115	%REC	10	10/8/2016 08:42 PM
Surr: Toluene-d8	102		85-110	%REC	10	10/8/2016 08:42 PM
Surr: Toluene-d8	102		85-110	%REC	1	10/8/2016 04:37 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	37		10	mg/L	20	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW13-G092816
Collection Date: 9/28/2016 11:50 AM

Work Order: 1610056
Lab ID: 1610056-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 05:56 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 05:56 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Acetone	ND		10	µg/L	1	10/8/2016 05:56 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Chloromethane	2.7		1.0	µg/L	1	10/8/2016 05:56 AM
cis-1,2-Dichloroethene	150		5.0	µg/L	5	10/7/2016 01:32 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 05:56 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 05:56 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 05:56 AM
Vinyl chloride	29		1.0	µg/L	1	10/8/2016 05:56 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 05:56 AM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	1	10/8/2016 05:56 AM
Surr: 1,2-Dichloroethane-d4	92.5		75-120	%REC	5	10/7/2016 01:32 AM
Surr: 4-Bromofluorobenzene	95.7		80-110	%REC	1	10/8/2016 05:56 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW13-G092816
Collection Date: 9/28/2016 11:50 AM

Work Order: 1610056
Lab ID: 1610056-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	104		80-110	%REC	5	10/7/2016 01:32 AM
Surr: Dibromofluoromethane	99.0		85-115	%REC	1	10/8/2016 05:56 AM
Surr: Dibromofluoromethane	91.9		85-115	%REC	5	10/7/2016 01:32 AM
Surr: Toluene-d8	89.0		85-110	%REC	5	10/7/2016 01:32 AM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 05:56 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	11		1.0	mg/L	2	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW1(28)-G092816
Collection Date: 9/28/2016 10:20 AM

Work Order: 1610056
Lab ID: 1610056-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
2-Butanone	6.8		5.0	µg/L	1	10/6/2016 10:28 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 10:28 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Acetone	ND		10	µg/L	1	10/6/2016 10:28 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Chloromethane	2.2		1.0	µg/L	1	10/6/2016 10:28 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 10:28 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 10:28 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 10:28 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 10:28 PM
Surr: 1,2-Dichloroethane-d4	91.9		75-120	%REC	1	10/6/2016 10:28 PM
Surr: 4-Bromofluorobenzene	105		80-110	%REC	1	10/6/2016 10:28 PM
Surr: Dibromofluoromethane	91.5		85-115	%REC	1	10/6/2016 10:28 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW1(28)-G092816
Collection Date: 9/28/2016 10:20 AM

Work Order: 1610056
Lab ID: 1610056-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	89.8		85-110	%REC	1	10/6/2016 10:28 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	12		2.0	mg/L	4	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW1(39)-G092816
Collection Date: 9/28/2016 09:20 AM

Work Order: 1610056
Lab ID: 1610056-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
2-Butanone	ND		5.0	µg/L	1	10/5/2016 07:05 PM
2-Hexanone	ND		5.0	µg/L	1	10/5/2016 07:05 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Acetone	ND		10	µg/L	1	10/5/2016 07:05 PM
Benzene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Bromoform	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Bromomethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Carbon disulfide	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Chlorobenzene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Chloroethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Chloroform	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Chloromethane	2.6		1.0	µg/L	1	10/5/2016 07:05 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Ethylbenzene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
m,p-Xylene	ND		2.0	µg/L	1	10/5/2016 07:05 PM
Methylene chloride	ND		5.0	µg/L	1	10/5/2016 07:05 PM
o-Xylene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Styrene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Toluene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Trichloroethene	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Vinyl chloride	ND		1.0	µg/L	1	10/5/2016 07:05 PM
Xylenes, Total	ND		3.0	µg/L	1	10/5/2016 07:05 PM
Surr: 1,2-Dichloroethane-d4	95.1		75-120	%REC	1	10/5/2016 07:05 PM
Surr: 4-Bromofluorobenzene	102		80-110	%REC	1	10/5/2016 07:05 PM
Surr: Dibromofluoromethane	95.0		85-115	%REC	1	10/5/2016 07:05 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW1(39)-G092816
Collection Date: 9/28/2016 09:20 AM

Work Order: 1610056
Lab ID: 1610056-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	92.2		85-110	%REC	1	10/5/2016 07:05 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	5.9		2.0	mg/L	4	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Work Order: 1610056

Sample ID: ATR-PM2-G092916

Lab ID: 1610056-07

Collection Date: 9/29/2016 04:40 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 05:03 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 05:03 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Acetone	ND		10	µg/L	1	10/8/2016 05:03 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
cis-1,2-Dichloroethene	9.8		1.0	µg/L	1	10/8/2016 05:03 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Ethylbenzene	6.8		1.0	µg/L	1	10/8/2016 05:03 AM
m,p-Xylene	7.0		2.0	µg/L	1	10/8/2016 05:03 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 05:03 AM
o-Xylene	1.9		1.0	µg/L	1	10/8/2016 05:03 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Toluene	3.7		1.0	µg/L	1	10/8/2016 05:03 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 05:03 AM
Vinyl chloride	180		5.0	µg/L	5	10/8/2016 03:29 PM
Xylenes, Total	8.9		3.0	µg/L	1	10/8/2016 05:03 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 05:03 AM
Surr: 1,2-Dichloroethane-d4	99.7		75-120	%REC	5	10/8/2016 03:29 PM
Surr: 4-Bromofluorobenzene	97.0		80-110	%REC	1	10/8/2016 05:03 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-PM2-G092916

Collection Date: 9/29/2016 04:40 PM

Work Order: 1610056

Lab ID: 1610056-07

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	5	10/8/2016 03:29 PM
Surr: Dibromofluoromethane	99.8		85-115	%REC	1	10/8/2016 05:03 AM
Surr: Dibromofluoromethane	96.6		85-115	%REC	5	10/8/2016 03:29 PM
Surr: Toluene-d8	100		85-110	%REC	5	10/8/2016 03:29 PM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 05:03 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	12		10	mg/L	20	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW81(27)-G092916
Collection Date: 9/29/2016 02:55 PM

Work Order: 1610056
Lab ID: 1610056-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		50	µg/L	50	10/8/2016 08:32 AM
1,1,2,2-Tetrachloroethane	ND		50	µg/L	50	10/8/2016 08:32 AM
1,1,2-Trichloroethane	ND		50	µg/L	50	10/8/2016 08:32 AM
1,1-Dichloroethane	ND		50	µg/L	50	10/8/2016 08:32 AM
1,1-Dichloroethene	ND		50	µg/L	50	10/8/2016 08:32 AM
1,2-Dichloroethane	ND		50	µg/L	50	10/8/2016 08:32 AM
1,2-Dichloropropane	ND		50	µg/L	50	10/8/2016 08:32 AM
2-Butanone	ND		250	µg/L	50	10/8/2016 08:32 AM
2-Hexanone	ND		250	µg/L	50	10/8/2016 08:32 AM
4-Methyl-2-pentanone	ND		50	µg/L	50	10/8/2016 08:32 AM
Acetone	ND		500	µg/L	50	10/8/2016 08:32 AM
Benzene	ND		50	µg/L	50	10/8/2016 08:32 AM
Bromodichloromethane	ND		50	µg/L	50	10/8/2016 08:32 AM
Bromoform	ND		50	µg/L	50	10/8/2016 08:32 AM
Bromomethane	ND		50	µg/L	50	10/8/2016 08:32 AM
Carbon disulfide	ND		50	µg/L	50	10/8/2016 08:32 AM
Carbon tetrachloride	ND		50	µg/L	50	10/8/2016 08:32 AM
Chlorobenzene	ND		50	µg/L	50	10/8/2016 08:32 AM
Chloroethane	52		50	µg/L	50	10/8/2016 08:32 AM
Chloroform	ND		50	µg/L	50	10/8/2016 08:32 AM
Chloromethane	ND		50	µg/L	50	10/8/2016 08:32 AM
cis-1,2-Dichloroethene	13,000		1,000	µg/L	1000	10/5/2016 07:57 PM
cis-1,3-Dichloropropene	ND		50	µg/L	50	10/8/2016 08:32 AM
Dibromochloromethane	ND		50	µg/L	50	10/8/2016 08:32 AM
Ethylbenzene	ND		50	µg/L	50	10/8/2016 08:32 AM
m,p-Xylene	ND		100	µg/L	50	10/8/2016 08:32 AM
Methylene chloride	ND		250	µg/L	50	10/8/2016 08:32 AM
o-Xylene	ND		50	µg/L	50	10/8/2016 08:32 AM
Styrene	ND		50	µg/L	50	10/8/2016 08:32 AM
Tetrachloroethene	ND		50	µg/L	50	10/8/2016 08:32 AM
Toluene	ND		50	µg/L	50	10/8/2016 08:32 AM
trans-1,2-Dichloroethene	81		50	µg/L	50	10/8/2016 08:32 AM
trans-1,3-Dichloropropene	ND		50	µg/L	50	10/8/2016 08:32 AM
Trichloroethene	ND		50	µg/L	50	10/8/2016 08:32 AM
Vinyl chloride	20,000		1,000	µg/L	1000	10/5/2016 07:57 PM
Xylenes, Total	ND		150	µg/L	50	10/8/2016 08:32 AM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	50	10/8/2016 08:32 AM
Surr: 1,2-Dichloroethane-d4	93.5		75-120	%REC	1000	10/5/2016 07:57 PM
Surr: 4-Bromofluorobenzene	96.1		80-110	%REC	50	10/8/2016 08:32 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW81(27)-G092916
Collection Date: 9/29/2016 02:55 PM

Work Order: 1610056
Lab ID: 1610056-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	104		80-110	%REC	1000	10/5/2016 07:57 PM
Surr: Dibromofluoromethane	98.9		85-115	%REC	50	10/8/2016 08:32 AM
Surr: Dibromofluoromethane	94.7		85-115	%REC	1000	10/5/2016 07:57 PM
Surr: Toluene-d8	93.3		85-110	%REC	1000	10/5/2016 07:57 PM
Surr: Toluene-d8	99.6		85-110	%REC	50	10/8/2016 08:32 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	140		50	mg/L	100	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW2(33)-G092716
Collection Date: 9/27/2016 05:00 PM

Work Order: 1610056
Lab ID: 1610056-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 05:30 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 05:30 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Acetone	ND		10	µg/L	1	10/8/2016 05:30 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
cis-1,2-Dichloroethene	54		1.0	µg/L	1	10/8/2016 05:30 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 05:30 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 05:30 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 05:30 AM
Vinyl chloride	120		5.0	µg/L	5	10/8/2016 02:00 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 05:30 AM
Surr: 1,2-Dichloroethane-d4	100		75-120	%REC	5	10/8/2016 02:00 AM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	1	10/8/2016 05:30 AM
Surr: 4-Bromofluorobenzene	96.4		80-110	%REC	5	10/8/2016 02:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW2(33)-G092716
Collection Date: 9/27/2016 05:00 PM

Work Order: 1610056
Lab ID: 1610056-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	1	10/8/2016 05:30 AM
Surr: Dibromofluoromethane	97.0		85-115	%REC	5	10/8/2016 02:00 AM
Surr: Dibromofluoromethane	99.0		85-115	%REC	1	10/8/2016 05:30 AM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 05:30 AM
Surr: Toluene-d8	101		85-110	%REC	5	10/8/2016 02:00 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	6.5		0.50	mg/L	1	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW2(53)-G092716
Collection Date: 9/27/2016 03:35 PM

Work Order: 1610056
Lab ID: 1610056-10
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
2-Butanone	9.2		5.0	µg/L	1	10/6/2016 10:55 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 10:55 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Acetone	ND		10	µg/L	1	10/6/2016 10:55 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Chloromethane	1.7		1.0	µg/L	1	10/6/2016 10:55 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 10:55 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 10:55 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 10:55 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 10:55 PM
Surr: 1,2-Dichloroethane-d4	91.8		75-120	%REC	1	10/6/2016 10:55 PM
Surr: 4-Bromofluorobenzene	104		80-110	%REC	1	10/6/2016 10:55 PM
Surr: Dibromofluoromethane	91.0		85-115	%REC	1	10/6/2016 10:55 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW2(53)-G092716
Collection Date: 9/27/2016 03:35 PM

Work Order: 1610056
Lab ID: 1610056-10
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	90.2		85-110	%REC	1	10/6/2016 10:55 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	81		50	mg/L	100	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW15-G092716
Collection Date: 9/27/2016 01:55 PM

Work Order: 1610056
Lab ID: 1610056-11
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
1,1,2-Trichloroethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
1,1-Dichloroethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
1,1-Dichloroethene	15		5.0	µg/L	5	10/8/2016 06:22 AM
1,2-Dichloroethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
1,2-Dichloropropane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
2-Butanone	490		25	µg/L	5	10/8/2016 06:22 AM
2-Hexanone	ND		25	µg/L	5	10/8/2016 06:22 AM
4-Methyl-2-pentanone	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Acetone	ND		50	µg/L	5	10/8/2016 06:22 AM
Benzene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Bromodichloromethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Bromoform	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Bromomethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Carbon disulfide	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Carbon tetrachloride	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Chlorobenzene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Chloroethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Chloroform	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Chloromethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
cis-1,2-Dichloroethene	3,700		50	µg/L	50	10/5/2016 08:49 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Dibromochloromethane	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Ethylbenzene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
m,p-Xylene	ND		10	µg/L	5	10/8/2016 06:22 AM
Methylene chloride	ND		25	µg/L	5	10/8/2016 06:22 AM
o-Xylene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Styrene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Tetrachloroethene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Toluene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
trans-1,2-Dichloroethene	140		5.0	µg/L	5	10/8/2016 06:22 AM
trans-1,3-Dichloropropene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Trichloroethene	ND		5.0	µg/L	5	10/8/2016 06:22 AM
Vinyl chloride	1,200		50	µg/L	50	10/5/2016 08:49 PM
Xylenes, Total	ND		15	µg/L	5	10/8/2016 06:22 AM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	5	10/8/2016 06:22 AM
Surr: 1,2-Dichloroethane-d4	96.2		75-120	%REC	50	10/5/2016 08:49 PM
Surr: 4-Bromofluorobenzene	96.1		80-110	%REC	5	10/8/2016 06:22 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW15-G092716
Collection Date: 9/27/2016 01:55 PM

Work Order: 1610056
Lab ID: 1610056-11
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	104		80-110	%REC	50	10/5/2016 08:49 PM
Surr: Dibromofluoromethane	100		85-115	%REC	5	10/8/2016 06:22 AM
Surr: Dibromofluoromethane	93.2		85-115	%REC	50	10/5/2016 08:49 PM
Surr: Toluene-d8	92.0		85-110	%REC	50	10/5/2016 08:49 PM
Surr: Toluene-d8	100		85-110	%REC	5	10/8/2016 06:22 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	760		50	mg/L	100	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW25(45.2)-G092716
Collection Date: 9/27/2016 11:55 AM

Work Order: 1610056
Lab ID: 1610056-12
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		10	µg/L	10	10/5/2016 09:15 PM
1,1,2,2-Tetrachloroethane	ND		10	µg/L	10	10/5/2016 09:15 PM
1,1,2-Trichloroethane	ND		10	µg/L	10	10/5/2016 09:15 PM
1,1-Dichloroethane	ND		10	µg/L	10	10/5/2016 09:15 PM
1,1-Dichloroethene	ND		10	µg/L	10	10/5/2016 09:15 PM
1,2-Dichloroethane	ND		10	µg/L	10	10/5/2016 09:15 PM
1,2-Dichloropropane	ND		10	µg/L	10	10/5/2016 09:15 PM
2-Butanone	1,000		100	µg/L	20	10/8/2016 03:55 PM
2-Hexanone	ND		50	µg/L	10	10/5/2016 09:15 PM
4-Methyl-2-pentanone	ND		10	µg/L	10	10/5/2016 09:15 PM
Acetone	ND		100	µg/L	10	10/5/2016 09:15 PM
Benzene	ND		10	µg/L	10	10/5/2016 09:15 PM
Bromodichloromethane	ND		10	µg/L	10	10/5/2016 09:15 PM
Bromoform	ND		10	µg/L	10	10/5/2016 09:15 PM
Bromomethane	ND		10	µg/L	10	10/5/2016 09:15 PM
Carbon disulfide	ND		10	µg/L	10	10/5/2016 09:15 PM
Carbon tetrachloride	ND		10	µg/L	10	10/5/2016 09:15 PM
Chlorobenzene	ND		10	µg/L	10	10/5/2016 09:15 PM
Chloroethane	ND		10	µg/L	10	10/5/2016 09:15 PM
Chloroform	ND		10	µg/L	10	10/5/2016 09:15 PM
Chloromethane	ND		10	µg/L	10	10/5/2016 09:15 PM
cis-1,2-Dichloroethene	190		10	µg/L	10	10/5/2016 09:15 PM
cis-1,3-Dichloropropene	ND		10	µg/L	10	10/5/2016 09:15 PM
Dibromochloromethane	ND		10	µg/L	10	10/5/2016 09:15 PM
Ethylbenzene	ND		10	µg/L	10	10/5/2016 09:15 PM
m,p-Xylene	ND		20	µg/L	10	10/5/2016 09:15 PM
Methylene chloride	ND		50	µg/L	10	10/5/2016 09:15 PM
o-Xylene	ND		10	µg/L	10	10/5/2016 09:15 PM
Styrene	ND		10	µg/L	10	10/5/2016 09:15 PM
Tetrachloroethene	ND		10	µg/L	10	10/5/2016 09:15 PM
Toluene	ND		10	µg/L	10	10/5/2016 09:15 PM
trans-1,2-Dichloroethene	ND		10	µg/L	10	10/5/2016 09:15 PM
trans-1,3-Dichloropropene	ND		10	µg/L	10	10/5/2016 09:15 PM
Trichloroethene	ND		10	µg/L	10	10/5/2016 09:15 PM
Vinyl chloride	480		10	µg/L	10	10/5/2016 09:15 PM
Xylenes, Total	ND		30	µg/L	10	10/5/2016 09:15 PM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	20	10/8/2016 03:55 PM
Surr: 1,2-Dichloroethane-d4	94.9		75-120	%REC	10	10/5/2016 09:15 PM
Surr: 4-Bromofluorobenzene	95.8		80-110	%REC	20	10/8/2016 03:55 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW25(45.2)-G092716
Collection Date: 9/27/2016 11:55 AM

Work Order: 1610056
Lab ID: 1610056-12
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	105		80-110	%REC	10	10/5/2016 09:15 PM
Surr: Dibromofluoromethane	98.3		85-115	%REC	20	10/8/2016 03:55 PM
Surr: Dibromofluoromethane	92.6		85-115	%REC	10	10/5/2016 09:15 PM
Surr: Toluene-d8	93.2		85-110	%REC	10	10/5/2016 09:15 PM
Surr: Toluene-d8	100		85-110	%REC	20	10/8/2016 03:55 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	920		120	mg/L	250	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW5(16)-G092716
Collection Date: 9/27/2016 10:40 AM

Work Order: 1610056
Lab ID: 1610056-13
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 11:21 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 11:21 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Acetone	ND		10	µg/L	1	10/6/2016 11:21 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
cis-1,2-Dichloroethene	48		1.0	µg/L	1	10/6/2016 11:21 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 11:21 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 11:21 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 11:21 PM
Vinyl chloride	49		1.0	µg/L	1	10/6/2016 11:21 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 11:21 PM
Surr: 1,2-Dichloroethane-d4	93.4		75-120	%REC	1	10/6/2016 11:21 PM
Surr: 4-Bromofluorobenzene	105		80-110	%REC	1	10/6/2016 11:21 PM
Surr: Dibromofluoromethane	94.2		85-115	%REC	1	10/6/2016 11:21 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW5(16)-G092716
Collection Date: 9/27/2016 10:40 AM

Work Order: 1610056
Lab ID: 1610056-13
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	89.8		85-110	%REC	1	10/6/2016 11:21 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	11		10	mg/L	20	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW4(54)-G092716
Collection Date: 9/27/2016 09:50 AM

Work Order: 1610056
Lab ID: 1610056-14
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
2-Butanone	ND		5.0	µg/L	1	10/5/2016 10:08 PM
2-Hexanone	ND		5.0	µg/L	1	10/5/2016 10:08 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Acetone	ND		10	µg/L	1	10/5/2016 10:08 PM
Benzene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Bromoform	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Bromomethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Carbon disulfide	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Chlorobenzene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Chloroethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Chloroform	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Chloromethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Ethylbenzene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
m,p-Xylene	ND		2.0	µg/L	1	10/5/2016 10:08 PM
Methylene chloride	ND		5.0	µg/L	1	10/5/2016 10:08 PM
o-Xylene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Styrene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Toluene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Trichloroethene	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Vinyl chloride	ND		1.0	µg/L	1	10/5/2016 10:08 PM
Xylenes, Total	ND		3.0	µg/L	1	10/5/2016 10:08 PM
Surr: 1,2-Dichloroethane-d4	95.0		75-120	%REC	1	10/5/2016 10:08 PM
Surr: 4-Bromofluorobenzene	105		80-110	%REC	1	10/5/2016 10:08 PM
Surr: Dibromofluoromethane	92.0		85-115	%REC	1	10/5/2016 10:08 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW4(54)-G092716
Collection Date: 9/27/2016 09:50 AM

Work Order: 1610056
Lab ID: 1610056-14
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	92.4		85-110	%REC	1	10/5/2016 10:08 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	39		10	mg/L	20	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW4(35)-G092716
Collection Date: 9/27/2016 10:40 AM

Work Order: 1610056
Lab ID: 1610056-15
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: AK
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
2-Butanone	230		100	µg/L	20	10/5/2016 10:34 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 06:48 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Acetone	12		10	µg/L	1	10/8/2016 06:48 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
cis-1,2-Dichloroethene	53		1.0	µg/L	1	10/8/2016 06:48 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 06:48 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 06:48 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
trans-1,2-Dichloroethene	3.0		1.0	µg/L	1	10/8/2016 06:48 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 06:48 AM
Vinyl chloride	240		20	µg/L	20	10/5/2016 10:34 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 06:48 AM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	1	10/8/2016 06:48 AM
Surr: 1,2-Dichloroethane-d4	93.8		75-120	%REC	20	10/5/2016 10:34 PM
Surr: 4-Bromofluorobenzene	96.1		80-110	%REC	1	10/8/2016 06:48 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW4(35)-G092716
Collection Date: 9/27/2016 10:40 AM

Work Order: 1610056
Lab ID: 1610056-15
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	106		80-110	%REC	20	10/5/2016 10:34 PM
Surr: Dibromofluoromethane	100		85-115	%REC	1	10/8/2016 06:48 AM
Surr: Dibromofluoromethane	91.6		85-115	%REC	20	10/5/2016 10:34 PM
Surr: Toluene-d8	92.6		85-110	%REC	20	10/5/2016 10:34 PM
Surr: Toluene-d8	100		85-110	%REC	1	10/8/2016 06:48 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	430		250	mg/L	500	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW25(32.6)-G092716
Collection Date: 9/27/2016 11:55 AM

Work Order: 1610056
Lab ID: 1610056-16
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
2-Butanone	12		5.0	µg/L	1	10/6/2016 11:47 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 11:47 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Acetone	ND		10	µg/L	1	10/6/2016 11:47 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 11:47 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 11:47 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 11:47 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 11:47 PM
Surr: 1,2-Dichloroethane-d4	91.8		75-120	%REC	1	10/6/2016 11:47 PM
Surr: 4-Bromofluorobenzene	106		80-110	%REC	1	10/6/2016 11:47 PM
Surr: Dibromofluoromethane	92.1		85-115	%REC	1	10/6/2016 11:47 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW25(32.6)-G092716
Collection Date: 9/27/2016 11:55 AM

Work Order: 1610056
Lab ID: 1610056-16
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	90.2		85-110	%REC	1	10/6/2016 11:47 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	150		50	mg/L	100	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW25(16.4)-G092716
Collection Date: 9/27/2016 12:50 PM

Work Order: 1610056
Lab ID: 1610056-17
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
2-Butanone	17		5.0	µg/L	1	10/7/2016 12:14 PM
2-Hexanone	ND		5.0	µg/L	1	10/7/2016 12:14 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Acetone	ND		10	µg/L	1	10/7/2016 12:14 PM
Benzene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Bromoform	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Bromomethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Carbon disulfide	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Chlorobenzene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Chloroethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Chloroform	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Chloromethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
cis-1,2-Dichloroethene	6.4		1.0	µg/L	1	10/7/2016 12:14 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Ethylbenzene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
m,p-Xylene	ND		2.0	µg/L	1	10/7/2016 12:14 PM
Methylene chloride	ND		5.0	µg/L	1	10/7/2016 12:14 PM
o-Xylene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Styrene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Toluene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Trichloroethene	ND		1.0	µg/L	1	10/7/2016 12:14 PM
Vinyl chloride	6.0		1.0	µg/L	1	10/7/2016 12:14 PM
Xylenes, Total	ND		3.0	µg/L	1	10/7/2016 12:14 PM
Surr: 1,2-Dichloroethane-d4	92.4		75-120	%REC	1	10/7/2016 12:14 PM
Surr: 4-Bromofluorobenzene	108		80-110	%REC	1	10/7/2016 12:14 PM
Surr: Dibromofluoromethane	93.6		85-115	%REC	1	10/7/2016 12:14 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Work Order: 1610056

Sample ID: ATR-MW25(16.4)-G092716

Lab ID: 1610056-17

Collection Date: 9/27/2016 12:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	90.2		85-110	%REC	1	10/7/2016 12:14 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	49		10	mg/L	20	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW3(55)-G092716
Collection Date: 9/27/2016 02:45 PM

Work Order: 1610056
Lab ID: 1610056-18
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
2-Butanone	210		25	µg/L	5	10/5/2016 11:53 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 08:58 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Acetone	12		10	µg/L	1	10/8/2016 08:58 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
cis-1,2-Dichloroethene	370		5.0	µg/L	5	10/5/2016 11:53 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 08:58 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 08:58 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
trans-1,2-Dichloroethene	17		1.0	µg/L	1	10/8/2016 08:58 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 08:58 AM
Vinyl chloride	290		5.0	µg/L	5	10/5/2016 11:53 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 08:58 AM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	1	10/8/2016 08:58 AM
Surr: 1,2-Dichloroethane-d4	95.0		75-120	%REC	5	10/5/2016 11:53 PM
Surr: 4-Bromofluorobenzene	96.4		80-110	%REC	1	10/8/2016 08:58 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW3(55)-G092716
Collection Date: 9/27/2016 02:45 PM

Work Order: 1610056
Lab ID: 1610056-18
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	103		80-110	%REC	5	10/5/2016 11:53 PM
Surr: Dibromofluoromethane	102		85-115	%REC	1	10/8/2016 08:58 AM
Surr: Dibromofluoromethane	92.8		85-115	%REC	5	10/5/2016 11:53 PM
Surr: Toluene-d8	92.2		85-110	%REC	5	10/5/2016 11:53 PM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 08:58 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	310		250	mg/L	500	10/14/2016 12:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW3(35)-G092716
Collection Date: 9/27/2016 04:25 PM

Work Order: 1610056
Lab ID: 1610056-19
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 02:26 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 02:26 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Acetone	ND		10	µg/L	1	10/8/2016 02:26 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 02:26 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 02:26 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 02:26 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 02:26 AM
Surr: 1,2-Dichloroethane-d4	99.6		75-120	%REC	1	10/8/2016 02:26 AM
Surr: 4-Bromofluorobenzene	96.0		80-110	%REC	1	10/8/2016 02:26 AM
Surr: Dibromofluoromethane	98.1		85-115	%REC	1	10/8/2016 02:26 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW3(35)-G092716
Collection Date: 9/27/2016 04:25 PM

Work Order: 1610056
Lab ID: 1610056-19
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	101		85-110	%REC	1	10/8/2016 02:26 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	3.9		0.50	mg/L	1	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW16-G092616
Collection Date: 9/26/2016 02:20 PM

Work Order: 1610056
Lab ID: 1610056-20
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: AK
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
2-Butanone	89		5.0	µg/L	1	10/8/2016 07:40 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 07:40 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Acetone	ND		10	µg/L	1	10/8/2016 07:40 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Chloromethane	1.4		1.0	µg/L	1	10/8/2016 07:40 AM
cis-1,2-Dichloroethene	100		10	µg/L	10	10/6/2016 05:07 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 07:40 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 07:40 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 07:40 AM
Vinyl chloride	200		10	µg/L	10	10/6/2016 05:07 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 07:40 AM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	1	10/8/2016 07:40 AM
Surr: 1,2-Dichloroethane-d4	95.1		75-120	%REC	10	10/6/2016 05:07 AM
Surr: 4-Bromofluorobenzene	96.4		80-110	%REC	1	10/8/2016 07:40 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW16-G092616
Collection Date: 9/26/2016 02:20 PM

Work Order: 1610056
Lab ID: 1610056-20
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	104		80-110	%REC	10	10/6/2016 05:07 AM
Surr: Dibromofluoromethane	100		85-115	%REC	1	10/8/2016 07:40 AM
Surr: Dibromofluoromethane	90.6		85-115	%REC	10	10/6/2016 05:07 AM
Surr: Toluene-d8	92.5		85-110	%REC	10	10/6/2016 05:07 AM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 07:40 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	190		10	mg/L	20	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW24(55.4)-G092816
Collection Date: 9/28/2016 09:30 AM

Work Order: 1610056
Lab ID: 1610056-21
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 02:52 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 02:52 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Acetone	ND		10	µg/L	1	10/8/2016 02:52 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
cis-1,2-Dichloroethene	46		1.0	µg/L	1	10/8/2016 02:52 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 02:52 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 02:52 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
trans-1,2-Dichloroethene	2.1		1.0	µg/L	1	10/8/2016 02:52 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Trichloroethene	72		5.0	µg/L	5	10/8/2016 08:16 PM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 02:52 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 02:52 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 02:52 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	5	10/8/2016 08:16 PM
Surr: 4-Bromofluorobenzene	97.8		80-110	%REC	1	10/8/2016 02:52 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW24(55.4)-G092816
Collection Date: 9/28/2016 09:30 AM

Work Order: 1610056
Lab ID: 1610056-21
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	5	10/8/2016 08:16 PM
Surr: Dibromofluoromethane	97.8		85-115	%REC	1	10/8/2016 02:52 AM
Surr: Dibromofluoromethane	97.2		85-115	%REC	5	10/8/2016 08:16 PM
Surr: Toluene-d8	102		85-110	%REC	5	10/8/2016 08:16 PM
Surr: Toluene-d8	102		85-110	%REC	1	10/8/2016 02:52 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	3.1		0.50	mg/L	1	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW24(24.9)-G092816
Collection Date: 9/28/2016 10:40 AM

Work Order: 1610056
Lab ID: 1610056-22
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 05:59 AM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 05:59 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Acetone	ND		10	µg/L	1	10/6/2016 05:59 AM
Benzene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Bromoform	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Chloroform	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 05:59 AM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 05:59 AM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Styrene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Toluene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 05:59 AM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 05:59 AM
Surr: 1,2-Dichloroethane-d4	92.9		75-120	%REC	1	10/6/2016 05:59 AM
Surr: 4-Bromofluorobenzene	104		80-110	%REC	1	10/6/2016 05:59 AM
Surr: Dibromofluoromethane	93.6		85-115	%REC	1	10/6/2016 05:59 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW24(24.9)-G092816
Collection Date: 9/28/2016 10:40 AM

Work Order: 1610056
Lab ID: 1610056-22
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	93.6		85-110	%REC	1	10/6/2016 05:59 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	2.8		2.0	mg/L	4	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
 Project: TFS (3359151040)
 Sample ID: ATR-MW14-G092816
 Collection Date: 9/28/2016 12:10 PM

Work Order: 1610056
 Lab ID: 1610056-23
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
2-Butanone	56		5.0	µg/L	1	10/8/2016 03:18 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 03:18 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Acetone	ND		10	µg/L	1	10/8/2016 03:18 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
cis-1,2-Dichloroethene	2.0		1.0	µg/L	1	10/8/2016 03:18 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 03:18 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 03:18 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 03:18 AM
Vinyl chloride	2.3		1.0	µg/L	1	10/8/2016 03:18 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 03:18 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 03:18 AM
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	1	10/8/2016 03:18 AM
Surr: Dibromofluoromethane	101		85-115	%REC	1	10/8/2016 03:18 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW14-G092816

Collection Date: 9/28/2016 12:10 PM

Work Order: 1610056

Lab ID: 1610056-23

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	102		85-110	%REC	1	10/8/2016 03:18 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	120		10	mg/L	20	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW20(51)-G092816
Collection Date: 9/28/2016 01:35 PM

Work Order: 1610056
Lab ID: 1610056-24
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 03:44 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 03:44 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Acetone	ND		10	µg/L	1	10/8/2016 03:44 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 03:44 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 03:44 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 03:44 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 03:44 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 03:44 AM
Surr: 4-Bromofluorobenzene	98.8		80-110	%REC	1	10/8/2016 03:44 AM
Surr: Dibromofluoromethane	99.6		85-115	%REC	1	10/8/2016 03:44 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW20(51)-G092816
Collection Date: 9/28/2016 01:35 PM

Work Order: 1610056
Lab ID: 1610056-24
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	102		85-110	%REC	1	10/8/2016 03:44 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	21		5.0	mg/L	10	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-EB002-G092816
Collection Date: 9/28/2016 02:00 PM

Work Order: 1610056
Lab ID: 1610056-25
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 07:18 AM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 07:18 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Acetone	ND		10	µg/L	1	10/6/2016 07:18 AM
Benzene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Bromoform	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Chloroform	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 07:18 AM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 07:18 AM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Styrene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Toluene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 07:18 AM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 07:18 AM
Surr: 1,2-Dichloroethane-d4	95.4		75-120	%REC	1	10/6/2016 07:18 AM
Surr: 4-Bromofluorobenzene	105		80-110	%REC	1	10/6/2016 07:18 AM
Surr: Dibromofluoromethane	93.0		85-115	%REC	1	10/6/2016 07:18 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-EB002-G092816

Collection Date: 9/28/2016 02:00 PM

Work Order: 1610056

Lab ID: 1610056-25

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	91.9		85-110	%REC	1	10/6/2016 07:18 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	26		12	mg/L	25	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW20(35)-G092816
Collection Date: 9/28/2016 03:20 PM

Work Order: 1610056
Lab ID: 1610056-26
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 07:44 AM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 07:44 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Acetone	ND		10	µg/L	1	10/6/2016 07:44 AM
Benzene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Bromoform	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Chloroform	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 07:44 AM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 07:44 AM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Styrene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Toluene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 07:44 AM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 07:44 AM
Surr: 1,2-Dichloroethane-d4	93.6		75-120	%REC	1	10/6/2016 07:44 AM
Surr: 4-Bromofluorobenzene	103		80-110	%REC	1	10/6/2016 07:44 AM
Surr: Dibromofluoromethane	91.5		85-115	%REC	1	10/6/2016 07:44 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW20(35)-G092816
Collection Date: 9/28/2016 03:20 PM

Work Order: 1610056
Lab ID: 1610056-26
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	91.9		85-110	%REC	1	10/6/2016 07:44 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	15		5.0	mg/L	10	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW20(35)-G092816R
Collection Date: 9/28/2016 03:20 PM

Work Order: 1610056
Lab ID: 1610056-27
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 08:11 AM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 08:11 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Acetone	ND		10	µg/L	1	10/6/2016 08:11 AM
Benzene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Bromoform	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Chloroform	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 08:11 AM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 08:11 AM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Styrene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Toluene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 08:11 AM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 08:11 AM
Surr: 1,2-Dichloroethane-d4	94.6		75-120	%REC	1	10/6/2016 08:11 AM
Surr: 4-Bromofluorobenzene	106		80-110	%REC	1	10/6/2016 08:11 AM
Surr: Dibromofluoromethane	92.9		85-115	%REC	1	10/6/2016 08:11 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW20(35)-G092816R
Collection Date: 9/28/2016 03:20 PM

Work Order: 1610056
Lab ID: 1610056-27
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	92.8		85-110	%REC	1	10/6/2016 08:11 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	16		10	mg/L	20	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW6C-G092816
Collection Date: 9/28/2016 03:40 PM

Work Order: 1610056
Lab ID: 1610056-28
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 10:16 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 10:16 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Acetone	ND		10	µg/L	1	10/8/2016 10:16 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
cis-1,2-Dichloroethene	280		20	µg/L	20	10/6/2016 08:37 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 10:16 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 10:16 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
trans-1,2-Dichloroethene	1.8		1.0	µg/L	1	10/8/2016 10:16 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 10:16 AM
Trichloroethene	1.8		1.0	µg/L	1	10/8/2016 10:16 AM
Vinyl chloride	360		20	µg/L	20	10/6/2016 08:37 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 10:16 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 10:16 AM
Surr: 1,2-Dichloroethane-d4	92.8		75-120	%REC	20	10/6/2016 08:37 AM
Surr: 4-Bromofluorobenzene	95.3		80-110	%REC	1	10/8/2016 10:16 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW6C-G092816
Collection Date: 9/28/2016 03:40 PM

Work Order: 1610056
Lab ID: 1610056-28
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	106		80-110	%REC	20	10/6/2016 08:37 AM
Surr: Dibromofluoromethane	99.2		85-115	%REC	1	10/8/2016 10:16 AM
Surr: Dibromofluoromethane	93.0		85-115	%REC	20	10/6/2016 08:37 AM
Surr: Toluene-d8	91.8		85-110	%REC	20	10/6/2016 08:37 AM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 10:16 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	3.3		0.50	mg/L	1	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW17-G092616
Collection Date: 9/26/2016 12:50 PM

Work Order: 1610056
Lab ID: 1610056-29
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 09:50 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 09:50 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Acetone	ND		10	µg/L	1	10/8/2016 09:50 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
cis-1,2-Dichloroethene	36		1.0	µg/L	1	10/8/2016 09:50 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 09:50 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 09:50 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
trans-1,2-Dichloroethene	1.5		1.0	µg/L	1	10/8/2016 09:50 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Trichloroethene	170		5.0	µg/L	5	10/6/2016 09:03 AM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 09:50 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 09:50 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 09:50 AM
Surr: 1,2-Dichloroethane-d4	93.4		75-120	%REC	5	10/6/2016 09:03 AM
Surr: 4-Bromofluorobenzene	98.0		80-110	%REC	1	10/8/2016 09:50 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW17-G092616
Collection Date: 9/26/2016 12:50 PM

Work Order: 1610056
Lab ID: 1610056-29
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	104		80-110	%REC	5	10/6/2016 09:03 AM
Surr: Dibromofluoromethane	98.2		85-115	%REC	1	10/8/2016 09:50 AM
Surr: Dibromofluoromethane	93.1		85-115	%REC	5	10/6/2016 09:03 AM
Surr: Toluene-d8	91.5		85-110	%REC	5	10/6/2016 09:03 AM
Surr: Toluene-d8	100		85-110	%REC	1	10/8/2016 09:50 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	2.2		0.50	mg/L	1	10/15/2016 03:57 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW26(58.8)-G092616
Collection Date: 9/26/2016 05:00 PM

Work Order: 1610056
Lab ID: 1610056-30
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: BG
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
2-Butanone	91		5.0	µg/L	1	10/6/2016 09:29 AM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 09:29 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Acetone	14		10	µg/L	1	10/6/2016 09:29 AM
Benzene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Bromoform	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Chloroform	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
cis-1,2-Dichloroethene	14		1.0	µg/L	1	10/6/2016 09:29 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 09:29 AM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 09:29 AM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Styrene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Toluene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
trans-1,2-Dichloroethene	2.3		1.0	µg/L	1	10/6/2016 09:29 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 09:29 AM
Vinyl chloride	43		1.0	µg/L	1	10/6/2016 09:29 AM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 09:29 AM
Surr: 1,2-Dichloroethane-d4	94.4		75-120	%REC	1	10/6/2016 09:29 AM
Surr: 4-Bromofluorobenzene	105		80-110	%REC	1	10/6/2016 09:29 AM
Surr: Dibromofluoromethane	94.0		85-115	%REC	1	10/6/2016 09:29 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW26(58.8)-G092616
Collection Date: 9/26/2016 05:00 PM

Work Order: 1610056
Lab ID: 1610056-30
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	92.4		85-110	%REC	1	10/6/2016 09:29 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	98		5.0	mg/L	10	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW26(28.8)-G092616
Collection Date: 9/26/2016 04:05 PM

Work Order: 1610056
Lab ID: 1610056-31
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 09:56 AM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 09:56 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Acetone	ND		10	µg/L	1	10/6/2016 09:56 AM
Benzene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Bromoform	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Chloroform	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 09:56 AM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 09:56 AM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Styrene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Toluene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 09:56 AM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 09:56 AM
Surr: 1,2-Dichloroethane-d4	91.8		75-120	%REC	1	10/6/2016 09:56 AM
Surr: 4-Bromofluorobenzene	104		80-110	%REC	1	10/6/2016 09:56 AM
Surr: Dibromofluoromethane	92.6		85-115	%REC	1	10/6/2016 09:56 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW26(28.8)-G092616
Collection Date: 9/26/2016 04:05 PM

Work Order: 1610056
Lab ID: 1610056-31
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	93.6		85-110	%REC	1	10/6/2016 09:56 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	3.5		0.50	mg/L	1	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW26(17.5)-G092616
Collection Date: 9/26/2016 03:15 PM

Work Order: 1610056
Lab ID: 1610056-32
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
2-Butanone	7.3		5.0	µg/L	1	10/8/2016 04:22 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 04:22 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Acetone	ND		10	µg/L	1	10/8/2016 04:22 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 04:22 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 04:22 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 04:22 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 04:22 PM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	1	10/8/2016 04:22 PM
Surr: 4-Bromofluorobenzene	98.6		80-110	%REC	1	10/8/2016 04:22 PM
Surr: Dibromofluoromethane	98.6		85-115	%REC	1	10/8/2016 04:22 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW26(17.5)-G092616
Collection Date: 9/26/2016 03:15 PM

Work Order: 1610056
Lab ID: 1610056-32
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	101		85-110	%REC	1	10/8/2016 04:22 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	13		10	mg/L	20	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-ZVI2(17.5)-G092616
Collection Date: 9/26/2016 01:05 PM

Work Order: 1610056
Lab ID: 1610056-33
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 04:48 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 04:48 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Acetone	ND		10	µg/L	1	10/8/2016 04:48 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 04:48 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 04:48 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 04:48 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 04:48 PM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 04:48 PM
Surr: 4-Bromofluorobenzene	96.6		80-110	%REC	1	10/8/2016 04:48 PM
Surr: Dibromofluoromethane	97.6		85-115	%REC	1	10/8/2016 04:48 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-ZVI2(17.5)-G092616
Collection Date: 9/26/2016 01:05 PM

Work Order: 1610056
Lab ID: 1610056-33
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	101		85-110	%REC	1	10/8/2016 04:48 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	8.2		5.0	mg/L	10	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-ZVI2(32.5)-G092616
Collection Date: 9/26/2016 02:05 PM

Work Order: 1610056
Lab ID: 1610056-34
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 05:14 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 05:14 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Acetone	ND		10	µg/L	1	10/8/2016 05:14 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
cis-1,2-Dichloroethene	5.9		1.0	µg/L	1	10/8/2016 05:14 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 05:14 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 05:14 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 05:14 PM
Vinyl chloride	51		1.0	µg/L	1	10/8/2016 05:14 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 05:14 PM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	1	10/8/2016 05:14 PM
Surr: 4-Bromofluorobenzene	97.3		80-110	%REC	1	10/8/2016 05:14 PM
Surr: Dibromofluoromethane	99.8		85-115	%REC	1	10/8/2016 05:14 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-ZVI2(32.5)-G092616
Collection Date: 9/26/2016 02:05 PM

Work Order: 1610056
Lab ID: 1610056-34
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	102		85-110	%REC	1	10/8/2016 05:14 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	18		2.0	mg/L	4	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW5(35)-G092616
Collection Date: 9/26/2016 04:50 PM

Work Order: 1610056
Lab ID: 1610056-35
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
2-Butanone	11		5.0	µg/L	1	10/8/2016 05:40 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 05:40 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Acetone	ND		10	µg/L	1	10/8/2016 05:40 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 05:40 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 05:40 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Vinyl chloride	ND		1.0	µg/L	1	10/8/2016 05:40 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 05:40 PM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 05:40 PM
Surr: 4-Bromofluorobenzene	96.4		80-110	%REC	1	10/8/2016 05:40 PM
Surr: Dibromofluoromethane	98.1		85-115	%REC	1	10/8/2016 05:40 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW5(35)-G092616
Collection Date: 9/26/2016 04:50 PM

Work Order: 1610056
Lab ID: 1610056-35
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	101		85-110	%REC	1	10/8/2016 05:40 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	130		20	mg/L	40	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW5(45)-G092616
Collection Date: 9/26/2016 03:35 PM

Work Order: 1610056
Lab ID: 1610056-36
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
2-Butanone	79		5.0	µg/L	1	10/8/2016 09:24 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 09:24 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Acetone	ND		10	µg/L	1	10/8/2016 09:24 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Chloromethane	1.3		1.0	µg/L	1	10/8/2016 09:24 AM
cis-1,2-Dichloroethene	180		5.0	µg/L	5	10/8/2016 06:06 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 09:24 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 09:24 AM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Toluene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
trans-1,2-Dichloroethene	1.1		1.0	µg/L	1	10/8/2016 09:24 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 09:24 AM
Vinyl chloride	140		5.0	µg/L	5	10/8/2016 06:06 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 09:24 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 09:24 AM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	5	10/8/2016 06:06 PM
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	1	10/8/2016 09:24 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-OW5(45)-G092616
Collection Date: 9/26/2016 03:35 PM

Work Order: 1610056
Lab ID: 1610056-36
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	99.0		80-110	%REC	5	10/8/2016 06:06 PM
Surr: Dibromofluoromethane	99.0		85-115	%REC	1	10/8/2016 09:24 AM
Surr: Dibromofluoromethane	98.4		85-115	%REC	5	10/8/2016 06:06 PM
Surr: Toluene-d8	103		85-110	%REC	5	10/8/2016 06:06 PM
Surr: Toluene-d8	101		85-110	%REC	1	10/8/2016 09:24 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	220		50	mg/L	100	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW76-G092916
Collection Date: 9/29/2016 10:15 AM

Work Order: 1610056
Lab ID: 1610056-37
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		50	µg/L	50	10/8/2016 09:34 PM
1,1,2,2-Tetrachloroethane	ND		50	µg/L	50	10/8/2016 09:34 PM
1,1,2-Trichloroethane	ND		50	µg/L	50	10/8/2016 09:34 PM
1,1-Dichloroethane	ND		50	µg/L	50	10/8/2016 09:34 PM
1,1-Dichloroethene	ND		50	µg/L	50	10/8/2016 09:34 PM
1,2-Dichloroethane	ND		50	µg/L	50	10/8/2016 09:34 PM
1,2-Dichloropropane	ND		50	µg/L	50	10/8/2016 09:34 PM
2-Butanone	ND		250	µg/L	50	10/8/2016 09:34 PM
2-Hexanone	ND		250	µg/L	50	10/8/2016 09:34 PM
4-Methyl-2-pentanone	ND		50	µg/L	50	10/8/2016 09:34 PM
Acetone	ND		500	µg/L	50	10/8/2016 09:34 PM
Benzene	ND		50	µg/L	50	10/8/2016 09:34 PM
Bromodichloromethane	ND		50	µg/L	50	10/8/2016 09:34 PM
Bromoform	ND		50	µg/L	50	10/8/2016 09:34 PM
Bromomethane	ND		50	µg/L	50	10/8/2016 09:34 PM
Carbon disulfide	ND		50	µg/L	50	10/8/2016 09:34 PM
Carbon tetrachloride	ND		50	µg/L	50	10/8/2016 09:34 PM
Chlorobenzene	ND		50	µg/L	50	10/8/2016 09:34 PM
Chloroethane	ND		50	µg/L	50	10/8/2016 09:34 PM
Chloroform	ND		50	µg/L	50	10/8/2016 09:34 PM
Chloromethane	ND		50	µg/L	50	10/8/2016 09:34 PM
cis-1,2-Dichloroethene	9,000		500	µg/L	500	10/6/2016 12:33 PM
cis-1,3-Dichloropropene	ND		50	µg/L	50	10/8/2016 09:34 PM
Dibromochloromethane	ND		50	µg/L	50	10/8/2016 09:34 PM
Ethylbenzene	ND		50	µg/L	50	10/8/2016 09:34 PM
m,p-Xylene	ND		100	µg/L	50	10/8/2016 09:34 PM
Methylene chloride	ND		250	µg/L	50	10/8/2016 09:34 PM
o-Xylene	ND		50	µg/L	50	10/8/2016 09:34 PM
Styrene	ND		50	µg/L	50	10/8/2016 09:34 PM
Tetrachloroethene	ND		50	µg/L	50	10/8/2016 09:34 PM
Toluene	ND		50	µg/L	50	10/8/2016 09:34 PM
trans-1,2-Dichloroethene	64		50	µg/L	50	10/8/2016 09:34 PM
trans-1,3-Dichloropropene	ND		50	µg/L	50	10/8/2016 09:34 PM
Trichloroethene	ND		50	µg/L	50	10/8/2016 09:34 PM
Vinyl chloride	18,000		500	µg/L	500	10/6/2016 12:33 PM
Xylenes, Total	ND		150	µg/L	50	10/8/2016 09:34 PM
Surr: 1,2-Dichloroethane-d4	100		75-120	%REC	50	10/8/2016 09:34 PM
Surr: 1,2-Dichloroethane-d4	94.4		75-120	%REC	500	10/6/2016 12:33 PM
Surr: 4-Bromofluorobenzene	97.2		80-110	%REC	50	10/8/2016 09:34 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Work Order: 1610056

Sample ID: ATR-MW76-G092916

Lab ID: 1610056-37

Collection Date: 9/29/2016 10:15 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	107		80-110	%REC	500	10/6/2016 12:33 PM
Surr: Dibromofluoromethane	98.3		85-115	%REC	50	10/8/2016 09:34 PM
Surr: Dibromofluoromethane	93.0		85-115	%REC	500	10/6/2016 12:33 PM
Surr: Toluene-d8	91.7		85-110	%REC	500	10/6/2016 12:33 PM
Surr: Toluene-d8	100		85-110	%REC	50	10/8/2016 09:34 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	170		50	mg/L	100	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW77-G092916
Collection Date: 9/29/2016 11:40 AM

Work Order: 1610056
Lab ID: 1610056-38
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 01:00 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 01:00 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Acetone	ND		10	µg/L	1	10/6/2016 01:00 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
cis-1,2-Dichloroethene	1.2		1.0	µg/L	1	10/6/2016 01:00 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 01:00 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 01:00 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 01:00 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 01:00 PM
Surr: 1,2-Dichloroethane-d4	94.4		75-120	%REC	1	10/6/2016 01:00 PM
Surr: 4-Bromofluorobenzene	103		80-110	%REC	1	10/6/2016 01:00 PM
Surr: Dibromofluoromethane	93.0		85-115	%REC	1	10/6/2016 01:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW77-G092916

Collection Date: 9/29/2016 11:40 AM

Work Order: 1610056

Lab ID: 1610056-38

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	92.0		85-110	%REC	1	10/6/2016 01:00 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: JJG
Organic Carbon, Total	3.5		0.50	mg/L	1	10/16/2016 05:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW78-G092916
Collection Date: 9/29/2016 01:05 PM

Work Order: 1610056
Lab ID: 1610056-39
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
2-Butanone	91		5.0	µg/L	1	10/6/2016 06:07 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 06:07 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Acetone	20		10	µg/L	1	10/6/2016 06:07 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
cis-1,2-Dichloroethene	1.5		1.0	µg/L	1	10/6/2016 06:07 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 06:07 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 06:07 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 06:07 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 06:07 PM
Surr: 1,2-Dichloroethane-d4	94.9		75-120	%REC	1	10/6/2016 06:07 PM
Surr: 4-Bromofluorobenzene	107		80-110	%REC	1	10/6/2016 06:07 PM
Surr: Dibromofluoromethane	94.2		85-115	%REC	1	10/6/2016 06:07 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW78-G092916

Collection Date: 9/29/2016 01:05 PM

Work Order: 1610056

Lab ID: 1610056-39

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	91.8		85-110	%REC	1	10/6/2016 06:07 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	240		50	mg/L	100	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW89(28)-G092916
Collection Date: 9/29/2016 04:25 PM

Work Order: 1610056
Lab ID: 1610056-40
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 09:08 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 09:08 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Acetone	ND		10	µg/L	1	10/8/2016 09:08 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Ethylbenzene	1.2		1.0	µg/L	1	10/8/2016 09:08 PM
m,p-Xylene	2.4		2.0	µg/L	1	10/8/2016 09:08 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 09:08 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 09:08 PM
Vinyl chloride	1.0		1.0	µg/L	1	10/8/2016 09:08 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 09:08 PM
Surr: 1,2-Dichloroethane-d4	100		75-120	%REC	1	10/8/2016 09:08 PM
Surr: 4-Bromofluorobenzene	97.9		80-110	%REC	1	10/8/2016 09:08 PM
Surr: Dibromofluoromethane	97.0		85-115	%REC	1	10/8/2016 09:08 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW89(28)-G092916
Collection Date: 9/29/2016 04:25 PM

Work Order: 1610056
Lab ID: 1610056-40
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	102		85-110	%REC	1	10/8/2016 09:08 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	11		2.5	mg/L	5	10/18/2016 04:38 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Work Order: 1610056

Sample ID: ATR-PM3-G092916

Lab ID: 1610056-41

Collection Date: 9/29/2016 03:05 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		100	µg/L	100	10/8/2016 10:00 PM
1,1,2,2-Tetrachloroethane	ND		100	µg/L	100	10/8/2016 10:00 PM
1,1,2-Trichloroethane	ND		100	µg/L	100	10/8/2016 10:00 PM
1,1-Dichloroethane	ND		100	µg/L	100	10/8/2016 10:00 PM
1,1-Dichloroethene	ND		100	µg/L	100	10/8/2016 10:00 PM
1,2-Dichloroethane	ND		100	µg/L	100	10/8/2016 10:00 PM
1,2-Dichloropropane	ND		100	µg/L	100	10/8/2016 10:00 PM
2-Butanone	ND		500	µg/L	100	10/8/2016 10:00 PM
2-Hexanone	ND		500	µg/L	100	10/8/2016 10:00 PM
4-Methyl-2-pentanone	ND		100	µg/L	100	10/8/2016 10:00 PM
Acetone	ND		1,000	µg/L	100	10/8/2016 10:00 PM
Benzene	ND		100	µg/L	100	10/8/2016 10:00 PM
Bromodichloromethane	ND		100	µg/L	100	10/8/2016 10:00 PM
Bromoform	ND		100	µg/L	100	10/8/2016 10:00 PM
Bromomethane	ND		100	µg/L	100	10/8/2016 10:00 PM
Carbon disulfide	ND		100	µg/L	100	10/8/2016 10:00 PM
Carbon tetrachloride	ND		100	µg/L	100	10/8/2016 10:00 PM
Chlorobenzene	ND		100	µg/L	100	10/8/2016 10:00 PM
Chloroethane	ND		100	µg/L	100	10/8/2016 10:00 PM
Chloroform	ND		100	µg/L	100	10/8/2016 10:00 PM
Chloromethane	ND		100	µg/L	100	10/8/2016 10:00 PM
cis-1,2-Dichloroethene	9,200		100	µg/L	100	10/8/2016 10:00 PM
cis-1,3-Dichloropropene	ND		100	µg/L	100	10/8/2016 10:00 PM
Dibromochloromethane	ND		100	µg/L	100	10/8/2016 10:00 PM
Ethylbenzene	ND		100	µg/L	100	10/8/2016 10:00 PM
m,p-Xylene	ND		200	µg/L	100	10/8/2016 10:00 PM
Methylene chloride	ND		500	µg/L	100	10/8/2016 10:00 PM
o-Xylene	ND		100	µg/L	100	10/8/2016 10:00 PM
Styrene	ND		100	µg/L	100	10/8/2016 10:00 PM
Tetrachloroethene	ND		100	µg/L	100	10/8/2016 10:00 PM
Toluene	ND		100	µg/L	100	10/8/2016 10:00 PM
trans-1,2-Dichloroethene	110		100	µg/L	100	10/8/2016 10:00 PM
trans-1,3-Dichloropropene	ND		100	µg/L	100	10/8/2016 10:00 PM
Trichloroethene	ND		100	µg/L	100	10/8/2016 10:00 PM
Vinyl chloride	34,000		500	µg/L	500	10/6/2016 06:59 PM
Xylenes, Total	ND		300	µg/L	100	10/8/2016 10:00 PM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	100	10/8/2016 10:00 PM
Surr: 1,2-Dichloroethane-d4	93.0		75-120	%REC	500	10/6/2016 06:59 PM
Surr: 4-Bromofluorobenzene	97.9		80-110	%REC	100	10/8/2016 10:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-PM3-G092916

Collection Date: 9/29/2016 03:05 PM

Work Order: 1610056

Lab ID: 1610056-41

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	107		80-110	%REC	500	10/6/2016 06:59 PM
Surr: Dibromofluoromethane	98.9		85-115	%REC	100	10/8/2016 10:00 PM
Surr: Dibromofluoromethane	92.7		85-115	%REC	500	10/6/2016 06:59 PM
Surr: Toluene-d8	90.5		85-110	%REC	500	10/6/2016 06:59 PM
Surr: Toluene-d8	101		85-110	%REC	100	10/8/2016 10:00 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	800		500	mg/L	1000	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW62-G092916
Collection Date: 9/29/2016 02:00 PM

Work Order: 1610056
Lab ID: 1610056-42
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 07:26 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 07:26 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Acetone	ND		10	µg/L	1	10/6/2016 07:26 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
cis-1,2-Dichloroethene	1.7		1.0	µg/L	1	10/6/2016 07:26 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 07:26 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 07:26 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 07:26 PM
Vinyl chloride	7.1		1.0	µg/L	1	10/6/2016 07:26 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 07:26 PM
Surr: 1,2-Dichloroethane-d4	91.6		75-120	%REC	1	10/6/2016 07:26 PM
Surr: 4-Bromofluorobenzene	103		80-110	%REC	1	10/6/2016 07:26 PM
Surr: Dibromofluoromethane	94.0		85-115	%REC	1	10/6/2016 07:26 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW62-G092916

Collection Date: 9/29/2016 02:00 PM

Work Order: 1610056

Lab ID: 1610056-42

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	90.4		85-110	%REC	1	10/6/2016 07:26 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	35		5.0	mg/L	10	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW72-G092916
Collection Date: 9/29/2016 12:35 PM

Work Order: 1610056
Lab ID: 1610056-43
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
2-Butanone	26		5.0	µg/L	1	10/6/2016 07:52 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 07:52 PM
4-Methyl-2-pentanone	1.2		1.0	µg/L	1	10/6/2016 07:52 PM
Acetone	56		10	µg/L	1	10/6/2016 07:52 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Carbon disulfide	2.9		1.0	µg/L	1	10/6/2016 07:52 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
cis-1,2-Dichloroethene	11		1.0	µg/L	1	10/6/2016 07:52 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 07:52 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 07:52 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Toluene	20		1.0	µg/L	1	10/6/2016 07:52 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 07:52 PM
Vinyl chloride	40		1.0	µg/L	1	10/6/2016 07:52 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 07:52 PM
Surr: 1,2-Dichloroethane-d4	92.7		75-120	%REC	1	10/6/2016 07:52 PM
Surr: 4-Bromofluorobenzene	107		80-110	%REC	1	10/6/2016 07:52 PM
Surr: Dibromofluoromethane	94.3		85-115	%REC	1	10/6/2016 07:52 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW72-G092916

Collection Date: 9/29/2016 12:35 PM

Work Order: 1610056

Lab ID: 1610056-43

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	91.2		85-110	%REC	1	10/6/2016 07:52 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	380		50	mg/L	100	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW68-G092916
Collection Date: 9/29/2016 11:25 AM

Work Order: 1610056
Lab ID: 1610056-44
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B			Analyst: AK
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
1,1-Dichloroethene	1.1		1.0	µg/L	1	10/8/2016 10:26 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
2-Butanone	35		5.0	µg/L	1	10/8/2016 10:26 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 10:26 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Acetone	89		10	µg/L	1	10/8/2016 10:26 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
cis-1,2-Dichloroethene	200		10	µg/L	10	10/6/2016 08:18 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 10:26 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 10:26 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
trans-1,2-Dichloroethene	2.1		1.0	µg/L	1	10/8/2016 10:26 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 10:26 PM
Vinyl chloride	420		10	µg/L	10	10/6/2016 08:18 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 10:26 PM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 10:26 PM
Surr: 1,2-Dichloroethane-d4	92.0		75-120	%REC	10	10/6/2016 08:18 PM
Surr: 4-Bromofluorobenzene	97.6		80-110	%REC	1	10/8/2016 10:26 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
 Project: TFS (3359151040)
 Sample ID: ATR-MW68-G092916
 Collection Date: 9/29/2016 11:25 AM

Work Order: 1610056
 Lab ID: 1610056-44
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	104		80-110	%REC	10	10/6/2016 08:18 PM
Surr: Dibromofluoromethane	99.8		85-115	%REC	1	10/8/2016 10:26 PM
Surr: Dibromofluoromethane	92.0		85-115	%REC	10	10/6/2016 08:18 PM
Surr: Toluene-d8	90.1		85-110	%REC	10	10/6/2016 08:18 PM
Surr: Toluene-d8	102		85-110	%REC	1	10/8/2016 10:26 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	160		120	mg/L	250	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW71-G092916
Collection Date: 9/29/2016 10:30 AM

Work Order: 1610056
Lab ID: 1610056-45
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
2-Butanone	35		5.0	µg/L	1	10/8/2016 06:58 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 06:58 PM
4-Methyl-2-pentanone	4.0		1.0	µg/L	1	10/8/2016 06:58 PM
Acetone	94		10	µg/L	1	10/8/2016 06:58 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
cis-1,2-Dichloroethene	8.8		1.0	µg/L	1	10/8/2016 06:58 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 06:58 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 06:58 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Toluene	38		1.0	µg/L	1	10/8/2016 06:58 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 06:58 PM
Vinyl chloride	140		5.0	µg/L	5	10/9/2016 10:33 AM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 06:58 PM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 06:58 PM
Surr: 1,2-Dichloroethane-d4	103		75-120	%REC	5	10/9/2016 10:33 AM
Surr: 4-Bromofluorobenzene	99.4		80-110	%REC	1	10/8/2016 06:58 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW71-G092916
Collection Date: 9/29/2016 10:30 AM

Work Order: 1610056
Lab ID: 1610056-45
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	98.9		80-110	%REC	5	10/9/2016 10:33 AM
Surr: Dibromofluoromethane	95.3		85-115	%REC	1	10/8/2016 06:58 PM
Surr: Dibromofluoromethane	99.0		85-115	%REC	5	10/9/2016 10:33 AM
Surr: Toluene-d8	100		85-110	%REC	5	10/9/2016 10:33 AM
Surr: Toluene-d8	102		85-110	%REC	1	10/8/2016 06:58 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	660		100	mg/L	200	10/18/2016 04:38 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW67-G092916
Collection Date: 9/29/2016 09:40 AM

Work Order: 1610056
Lab ID: 1610056-46
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
2-Butanone	ND		5.0	µg/L	1	10/8/2016 07:24 PM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 07:24 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Acetone	ND		10	µg/L	1	10/8/2016 07:24 PM
Benzene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Bromoform	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Chloroform	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
cis-1,2-Dichloroethene	66		1.0	µg/L	1	10/8/2016 07:24 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Ethylbenzene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
m,p-Xylene	ND		2.0	µg/L	1	10/8/2016 07:24 PM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 07:24 PM
o-Xylene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Styrene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Toluene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 07:24 PM
Vinyl chloride	35		1.0	µg/L	1	10/8/2016 07:24 PM
Xylenes, Total	ND		3.0	µg/L	1	10/8/2016 07:24 PM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 07:24 PM
Surr: 4-Bromofluorobenzene	97.8		80-110	%REC	1	10/8/2016 07:24 PM
Surr: Dibromofluoromethane	99.6		85-115	%REC	1	10/8/2016 07:24 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-MW67-G092916

Collection Date: 9/29/2016 09:40 AM

Work Order: 1610056

Lab ID: 1610056-46

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	100		85-110	%REC	1	10/8/2016 07:24 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	68		10	mg/L	20	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-EB003-G092916
Collection Date: 9/29/2016 08:45 AM

Work Order: 1610056
Lab ID: 1610056-47
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 05:41 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 05:41 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Acetone	ND		10	µg/L	1	10/6/2016 05:41 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Chloromethane	1.6		1.0	µg/L	1	10/6/2016 05:41 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 05:41 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 05:41 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 05:41 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 05:41 PM
Surr: 1,2-Dichloroethane-d4	95.8		75-120	%REC	1	10/6/2016 05:41 PM
Surr: 4-Bromofluorobenzene	106		80-110	%REC	1	10/6/2016 05:41 PM
Surr: Dibromofluoromethane	93.2		85-115	%REC	1	10/6/2016 05:41 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-EB003-G092916

Collection Date: 9/29/2016 08:45 AM

Work Order: 1610056

Lab ID: 1610056-47

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	89.7		85-110	%REC	1	10/6/2016 05:41 PM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	1.8		0.50	mg/L	1	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW59(29)-G093016
Collection Date: 9/30/2016 09:30 AM

Work Order: 1610056
Lab ID: 1610056-48
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
2-Butanone	16		5.0	µg/L	1	10/8/2016 08:06 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 08:06 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Acetone	ND		10	µg/L	1	10/8/2016 08:06 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
cis-1,2-Dichloroethene	11		1.0	µg/L	1	10/8/2016 08:06 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Ethylbenzene	3.4		1.0	µg/L	1	10/8/2016 08:06 AM
m,p-Xylene	5.5		2.0	µg/L	1	10/8/2016 08:06 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 08:06 AM
o-Xylene	3.4		1.0	µg/L	1	10/8/2016 08:06 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Toluene	14		1.0	µg/L	1	10/8/2016 08:06 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 08:06 AM
Vinyl chloride	340		5.0	µg/L	5	10/8/2016 04:11 AM
Xylenes, Total	8.9		3.0	µg/L	1	10/8/2016 08:06 AM
Surr: 1,2-Dichloroethane-d4	99.8		75-120	%REC	5	10/8/2016 04:11 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	1	10/8/2016 08:06 AM
Surr: 4-Bromofluorobenzene	96.9		80-110	%REC	5	10/8/2016 04:11 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW59(29)-G093016
Collection Date: 9/30/2016 09:30 AM

Work Order: 1610056
Lab ID: 1610056-48
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.7		80-110	%REC	1	10/8/2016 08:06 AM
Surr: Dibromofluoromethane	97.8		85-115	%REC	5	10/8/2016 04:11 AM
Surr: Dibromofluoromethane	97.2		85-115	%REC	1	10/8/2016 08:06 AM
Surr: Toluene-d8	102		85-110	%REC	1	10/8/2016 08:06 AM
Surr: Toluene-d8	101		85-110	%REC	5	10/8/2016 04:11 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	140		10	mg/L	20	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
 Project: TFS (3359151040)
 Sample ID: ATR-MW59(29)-G093016R
 Collection Date: 9/30/2016 09:30 AM

Work Order: 1610056
 Lab ID: 1610056-49
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: AK	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
2-Butanone	13		5.0	µg/L	1	10/8/2016 07:14 AM
2-Hexanone	ND		5.0	µg/L	1	10/8/2016 07:14 AM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Acetone	ND		10	µg/L	1	10/8/2016 07:14 AM
Benzene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Bromodichloromethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Bromoform	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Bromomethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Carbon disulfide	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Carbon tetrachloride	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Chlorobenzene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Chloroethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Chloroform	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Chloromethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
cis-1,2-Dichloroethene	13		1.0	µg/L	1	10/8/2016 07:14 AM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Dibromochloromethane	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Ethylbenzene	3.1		1.0	µg/L	1	10/8/2016 07:14 AM
m,p-Xylene	5.2		2.0	µg/L	1	10/8/2016 07:14 AM
Methylene chloride	ND		5.0	µg/L	1	10/8/2016 07:14 AM
o-Xylene	3.0		1.0	µg/L	1	10/8/2016 07:14 AM
Styrene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Tetrachloroethene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Toluene	14		1.0	µg/L	1	10/8/2016 07:14 AM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Trichloroethene	ND		1.0	µg/L	1	10/8/2016 07:14 AM
Vinyl chloride	320		5.0	µg/L	5	10/8/2016 07:50 PM
Xylenes, Total	8.2		3.0	µg/L	1	10/8/2016 07:14 AM
Surr: 1,2-Dichloroethane-d4	102		75-120	%REC	1	10/8/2016 07:14 AM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	5	10/8/2016 07:50 PM
Surr: 4-Bromofluorobenzene	98.0		80-110	%REC	1	10/8/2016 07:14 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-MW59(29)-G093016R
Collection Date: 9/30/2016 09:30 AM

Work Order: 1610056
Lab ID: 1610056-49
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	98.4		80-110	%REC	5	10/8/2016 07:50 PM
Surr: Dibromofluoromethane	99.3		85-115	%REC	1	10/8/2016 07:14 AM
Surr: Dibromofluoromethane	97.2		85-115	%REC	5	10/8/2016 07:50 PM
Surr: Toluene-d8	101		85-110	%REC	5	10/8/2016 07:50 PM
Surr: Toluene-d8	99.6		85-110	%REC	1	10/8/2016 07:14 AM
ORGANIC CARBON, TOTAL			SW9060A			Analyst: ED
Organic Carbon, Total	120		10	mg/L	20	10/17/2016 10:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
Sample ID: ATR-TB001-G093016
Collection Date: 9/30/2016

Work Order: 1610056
Lab ID: 1610056-50
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Analyst: BG	
1,1,1-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
1,1,2,2-Tetrachloroethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
1,1,2-Trichloroethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
1,1-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
1,1-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
1,2-Dichloroethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
1,2-Dichloropropane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
2-Butanone	ND		5.0	µg/L	1	10/6/2016 05:15 PM
2-Hexanone	ND		5.0	µg/L	1	10/6/2016 05:15 PM
4-Methyl-2-pentanone	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Acetone	ND		10	µg/L	1	10/6/2016 05:15 PM
Benzene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Bromodichloromethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Bromoform	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Bromomethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Carbon disulfide	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Carbon tetrachloride	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Chlorobenzene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Chloroethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Chloroform	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Chloromethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
cis-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
cis-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Dibromochloromethane	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Ethylbenzene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
m,p-Xylene	ND		2.0	µg/L	1	10/6/2016 05:15 PM
Methylene chloride	ND		5.0	µg/L	1	10/6/2016 05:15 PM
o-Xylene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Styrene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Tetrachloroethene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Toluene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
trans-1,2-Dichloroethene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
trans-1,3-Dichloropropene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Trichloroethene	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Vinyl chloride	ND		1.0	µg/L	1	10/6/2016 05:15 PM
Xylenes, Total	ND		3.0	µg/L	1	10/6/2016 05:15 PM
Surr: 1,2-Dichloroethane-d4	94.5		75-120	%REC	1	10/6/2016 05:15 PM
Surr: 4-Bromofluorobenzene	105		80-110	%REC	1	10/6/2016 05:15 PM
Surr: Dibromofluoromethane	93.8		85-115	%REC	1	10/6/2016 05:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Oct-16

Client: AMEC Foster Wheeler

Project: TFS (3359151040)

Sample ID: ATR-TB001-G093016

Collection Date: 9/30/2016

Work Order: 1610056

Lab ID: 1610056-50

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: Toluene-d8</i>	91.8		85-110	%REC	1	10/6/2016 05:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: AMEC Foster Wheeler
Project: TFS (3359151040)
WorkOrder: 1610056

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

Client: AMEC Foster Wheeler
Work Order: 1610056
Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197391** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: VBK1-161005-R197391				Units: µg/L		Analysis Date: 10/5/2016 04:27 PM		
Client ID:		Run ID: VMS6_161005A		SeqNo: 4069091		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Benzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylene chloride	ND	5.0								
o-Xylene	ND	1.0								
Styrene	ND	1.0								
Tetrachloroethene	ND	1.0								
Toluene	ND	1.0								
trans-1,2-Dichloroethene	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
Trichloroethene	ND	1.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>18.68</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>93.4</i>	<i>75-120</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.9</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>104</i>	<i>80-110</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>18.37</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>91.8</i>	<i>85-115</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>18.65</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>93.2</i>	<i>85-110</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197391 Instrument ID VMS6 Method: SW8260B

LCS		Sample ID: VLCSW1-161005-R197391				Units: µg/L		Analysis Date: 10/5/2016 03:34 PM		
Client ID:		Run ID: VMS6_161005A			SeqNo: 4069090		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.64	1.0	20	0	93.2	75-130	0			
1,1,2,2-Tetrachloroethane	16.98	1.0	20	0	84.9	75-130	0			
1,1,2-Trichloroethane	17.31	1.0	20	0	86.6	75-125	0			
1,1-Dichloroethane	20.04	1.0	20	0	100	75-133	0			
1,1-Dichloroethene	21.89	1.0	20	0	109	70-145	0			
1,2-Dichloroethane	19.57	1.0	20	0	97.8	78-125	0			
1,2-Dichloropropane	17.8	1.0	20	0	89	75-125	0			
2-Butanone	16.52	5.0	20	0	82.6	55-150	0			
2-Hexanone	15.12	5.0	20	0	75.6	60-135	0			
4-Methyl-2-pentanone	21	1.0	20	0	105	77-178	0			
Acetone	18.11	10	20	0	90.6	60-160	0			
Benzene	19.88	1.0	20	0	99.4	85-125	0			
Bromodichloromethane	17.99	1.0	20	0	90	75-125	0			
Bromoform	14.32	1.0	20	0	71.6	60-125	0			
Bromomethane	20.78	1.0	20	0	104	30-185	0			
Carbon disulfide	19.63	1.0	20	0	98.2	60-165	0			
Carbon tetrachloride	19.16	1.0	20	0	95.8	65-140	0			
Chlorobenzene	18.2	1.0	20	0	91	80-120	0			
Chloroethane	21.34	1.0	20	0	107	50-140	0			
Chloroform	19.54	1.0	20	0	97.7	80-130	0			
Chloromethane	20.03	1.0	20	0	100	50-130	0			
cis-1,2-Dichloroethene	20.72	1.0	20	0	104	75-134	0			
cis-1,3-Dichloropropene	18.78	1.0	20	0	93.9	70-130	0			
Dibromochloromethane	15.43	1.0	20	0	77.2	60-115	0			
Ethylbenzene	19.03	1.0	20	0	95.2	85-125	0			
m,p-Xylene	38	2.0	40	0	95	75-130	0			
Methylene chloride	20.35	5.0	20	0	102	75-140	0			
o-Xylene	18.82	1.0	20	0	94.1	80-125	0			
Styrene	19.42	1.0	20	0	97.1	85-125	0			
Tetrachloroethene	18.06	1.0	20	0	90.3	77-138	0			
Toluene	18	1.0	20	0	90	85-125	0			
trans-1,2-Dichloroethene	20.5	1.0	20	0	102	80-140	0			
trans-1,3-Dichloropropene	16.98	1.0	20	0	84.9	72-120	0			
Trichloroethene	19.25	1.0	20	0	96.2	84-130	0			
Vinyl chloride	21.25	1.0	20	0	106	50-136	0			
Xylenes, Total	56.82	3.0	60	0	94.7	80-126	0			
Surr: 1,2-Dichloroethane-d4	19.06	0	20	0	95.3	75-120	0			
Surr: 4-Bromofluorobenzene	20.95	0	20	0	105	80-110	0			
Surr: Dibromofluoromethane	19.59	0	20	0	98	85-115	0			
Surr: Toluene-d8	18.76	0	20	0	93.8	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197391 Instrument ID VMS6 Method: SW8260B

MS		Sample ID: 1610056-06A MS				Units: µg/L		Analysis Date: 10/6/2016 12:45 PM		
Client ID: ATR-OW1(39)-G092816		Run ID: VMS6_161005A			SeqNo: 4069111		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.88	1.0	20	0	94.4	75-130	0			
1,1,2,2-Tetrachloroethane	17.28	1.0	20	0	86.4	75-130	0			
1,1,2-Trichloroethane	17.86	1.0	20	0	89.3	75-125	0			
1,1-Dichloroethane	20.71	1.0	20	0	104	75-133	0			
1,1-Dichloroethene	22.7	1.0	20	0	114	70-145	0			
1,2-Dichloroethane	20.24	1.0	20	0	101	78-125	0			
1,2-Dichloropropane	18.06	1.0	20	0	90.3	75-125	0			
2-Butanone	17.42	5.0	20	0	87.1	55-150	0			
2-Hexanone	17.03	5.0	20	0	85.2	60-135	0			
4-Methyl-2-pentanone	21.01	1.0	20	0	105	77-178	0			
Acetone	22.06	10	20	0	110	60-160	0			
Benzene	20.57	1.0	20	0	103	85-125	0			
Bromodichloromethane	17.31	1.0	20	0	86.6	75-125	0			
Bromoform	13.36	1.0	20	0	66.8	60-125	0			
Bromomethane	10.96	1.0	20	0	54.8	30-185	0			
Carbon disulfide	19.5	1.0	20	0.23	96.4	60-165	0			
Carbon tetrachloride	19.58	1.0	20	0	97.9	65-140	0			
Chlorobenzene	18.71	1.0	20	0	93.6	80-120	0			
Chloroethane	25.87	1.0	20	0	129	50-140	0			
Chloroform	20.29	1.0	20	0	101	80-130	0			
Chloromethane	14.61	1.0	20	2.55	60.3	50-130	0			
cis-1,2-Dichloroethene	21.02	1.0	20	0	105	75-134	0			
cis-1,3-Dichloropropene	17.57	1.0	20	0	87.8	70-130	0			
Dibromochloromethane	14.68	1.0	20	0	73.4	60-115	0			
Ethylbenzene	20.05	1.0	20	0	100	85-125	0			
m,p-Xylene	39.81	2.0	40	0	99.5	75-130	0			
Methylene chloride	21.24	5.0	20	0	106	75-140	0			
o-Xylene	19.54	1.0	20	0	97.7	80-125	0			
Styrene	19.77	1.0	20	0	98.8	85-125	0			
Tetrachloroethene	18.87	1.0	20	0	94.4	77-138	0			
Toluene	18.9	1.0	20	0	94.5	85-125	0			
trans-1,2-Dichloroethene	21.39	1.0	20	0	107	80-140	0			
trans-1,3-Dichloropropene	15.8	1.0	20	0	79	72-120	0			
Trichloroethene	19.82	1.0	20	0	99.1	84-130	0			
Vinyl chloride	21.07	1.0	20	0	105	50-136	0			
Xylenes, Total	59.35	3.0	60	0	98.9	80-126	0			
Surr: 1,2-Dichloroethane-d4	18.69	0	20	0	93.4	75-120	0			
Surr: 4-Bromofluorobenzene	21.33	0	20	0	107	80-110	0			
Surr: Dibromofluoromethane	19.13	0	20	0	95.6	85-115	0			
Surr: Toluene-d8	18.66	0	20	0	93.3	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197391 Instrument ID VMS6 Method: SW8260B

MSD		Sample ID: 1610056-06A MSD				Units: µg/L		Analysis Date: 10/6/2016 01:11 AM		
Client ID: ATR-OW1(39)-G092816		Run ID: VMS6_161005A				SeqNo: 4069109		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.85	1.0	20	0	94.2	75-130	18.88	0.159	30	
1,1,2,2-Tetrachloroethane	17.24	1.0	20	0	86.2	75-130	17.28	0.232	30	
1,1,2-Trichloroethane	17.79	1.0	20	0	89	75-125	17.86	0.393	30	
1,1-Dichloroethane	20.48	1.0	20	0	102	75-133	20.71	1.12	30	
1,1-Dichloroethene	22.33	1.0	20	0	112	70-145	22.7	1.64	30	
1,2-Dichloroethane	19.84	1.0	20	0	99.2	78-125	20.24	2	30	
1,2-Dichloropropane	18.1	1.0	20	0	90.5	75-125	18.06	0.221	30	
2-Butanone	17.58	5.0	20	0	87.9	55-150	17.42	0.914	30	
2-Hexanone	16.32	5.0	20	0	81.6	60-135	17.03	4.26	30	
4-Methyl-2-pentanone	21.21	1.0	20	0	106	77-178	21.01	0.947	30	
Acetone	21.73	10	20	0	109	60-160	22.06	1.51	30	
Benzene	20.41	1.0	20	0	102	85-125	20.57	0.781	30	
Bromodichloromethane	17.74	1.0	20	0	88.7	75-125	17.31	2.45	30	
Bromoform	13.63	1.0	20	0	68.2	60-125	13.36	2	30	
Bromomethane	12.29	1.0	20	0	61.4	30-185	10.96	11.4	30	
Carbon disulfide	19.46	1.0	20	0.23	96.2	60-165	19.5	0.205	30	
Carbon tetrachloride	19.83	1.0	20	0	99.2	65-140	19.58	1.27	30	
Chlorobenzene	18.77	1.0	20	0	93.8	80-120	18.71	0.32	30	
Chloroethane	26.68	1.0	20	0	133	50-140	25.87	3.08	30	
Chloroform	20.3	1.0	20	0	102	80-130	20.29	0.0493	30	
Chloromethane	16.9	1.0	20	2.55	71.8	50-130	14.61	14.5	30	
cis-1,2-Dichloroethene	20.94	1.0	20	0	105	75-134	21.02	0.381	30	
cis-1,3-Dichloropropene	17.67	1.0	20	0	88.4	70-130	17.57	0.568	30	
Dibromochloromethane	14.84	1.0	20	0	74.2	60-115	14.68	1.08	30	
Ethylbenzene	19.71	1.0	20	0	98.6	85-125	20.05	1.71	30	
m,p-Xylene	39.44	2.0	40	0	98.6	75-130	39.81	0.934	30	
Methylene chloride	21.01	5.0	20	0	105	75-140	21.24	1.09	30	
o-Xylene	19.32	1.0	20	0	96.6	80-125	19.54	1.13	30	
Styrene	19.79	1.0	20	0	99	85-125	19.77	0.101	30	
Tetrachloroethene	18.72	1.0	20	0	93.6	77-138	18.87	0.798	30	
Toluene	18.65	1.0	20	0	93.2	85-125	18.9	1.33	30	
trans-1,2-Dichloroethene	21.04	1.0	20	0	105	80-140	21.39	1.65	30	
trans-1,3-Dichloropropene	15.91	1.0	20	0	79.6	72-120	15.8	0.694	30	
Trichloroethene	19.74	1.0	20	0	98.7	84-130	19.82	0.404	30	
Vinyl chloride	20.84	1.0	20	0	104	50-136	21.07	1.1	30	
Xylenes, Total	58.76	3.0	60	0	97.9	80-126	59.35	0.999	30	
Surr: 1,2-Dichloroethane-d4	18.7	0	20	0	93.5	75-120	18.69	0.0535	30	
Surr: 4-Bromofluorobenzene	21.21	0	20	0	106	80-110	21.33	0.564	30	
Surr: Dibromofluoromethane	19.54	0	20	0	97.7	85-115	19.13	2.12	30	
Surr: Toluene-d8	18.52	0	20	0	92.6	85-110	18.66	0.753	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
Work Order: 1610056
Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197391** Instrument ID **VMS6** Method: **SW8260B**

The following samples were analyzed in this batch:

1610056-01A	1610056-02A	1610056-03A
1610056-04A	1610056-05A	1610056-06A
1610056-07A	1610056-08A	1610056-10A
1610056-11A	1610056-12A	1610056-13A
1610056-14A	1610056-15A	1610056-16A
1610056-17A	1610056-18A	1610056-19A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197414 Instrument ID VMS6 Method: SW8260B

MBLK		Sample ID: VBLKW2-161005-R197414				Units: µg/L		Analysis Date: 10/6/2016 04:15 AM		
Client ID:		Run ID: VMS6_161005B			SeqNo: 4069958		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Benzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylene chloride	ND	5.0								
o-Xylene	ND	1.0								
Styrene	ND	1.0								
Tetrachloroethene	ND	1.0								
Toluene	ND	1.0								
trans-1,2-Dichloroethene	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
Trichloroethene	ND	1.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	18.74	0	20	0	93.7	75-120	0			
Surr: 4-Bromofluorobenzene	20.61	0	20	0	103	80-110	0			
Surr: Dibromofluoromethane	18.21	0	20	0	91	85-115	0			
Surr: Toluene-d8	18.25	0	20	0	91.2	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197414 Instrument ID VMS6 Method: SW8260B

LCS		Sample ID: VLCSW2-161005-R197414				Units: µg/L		Analysis Date: 10/6/2016 03:22 AM		
Client ID:		Run ID: VMS6_161005B			SeqNo: 4069957		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.16	1.0	20	0	90.8	75-130	0			
1,1,2,2-Tetrachloroethane	17.1	1.0	20	0	85.5	75-130	0			
1,1,2-Trichloroethane	17.09	1.0	20	0	85.4	75-125	0			
1,1-Dichloroethane	19.65	1.0	20	0	98.2	75-133	0			
1,1-Dichloroethene	20.62	1.0	20	0	103	70-145	0			
1,2-Dichloroethane	19.31	1.0	20	0	96.6	78-125	0			
1,2-Dichloropropane	17.54	1.0	20	0	87.7	75-125	0			
2-Butanone	17.2	5.0	20	0	86	55-150	0			
2-Hexanone	15.12	5.0	20	0	75.6	60-135	0			
4-Methyl-2-pentanone	21.62	1.0	20	0	108	77-178	0			
Acetone	22.46	10	20	0	112	60-160	0			
Benzene	19.39	1.0	20	0	97	85-125	0			
Bromodichloromethane	17.57	1.0	20	0	87.8	75-125	0			
Bromoform	14.63	1.0	20	0	73.2	60-125	0			
Bromomethane	18.47	1.0	20	0	92.4	30-185	0			
Carbon disulfide	18.42	1.0	20	0	92.1	60-165	0			
Carbon tetrachloride	18.14	1.0	20	0	90.7	65-140	0			
Chlorobenzene	17.76	1.0	20	0	88.8	80-120	0			
Chloroethane	21.57	1.0	20	0	108	50-140	0			
Chloroform	19.56	1.0	20	0	97.8	80-130	0			
Chloromethane	18.94	1.0	20	0	94.7	50-130	0			
cis-1,2-Dichloroethene	18.96	1.0	20	0	94.8	75-134	0			
cis-1,3-Dichloropropene	17.29	1.0	20	0	86.4	70-130	0			
Dibromochloromethane	15.53	1.0	20	0	77.6	60-115	0			
Ethylbenzene	18.61	1.0	20	0	93	85-125	0			
m,p-Xylene	37.2	2.0	40	0	93	75-130	0			
Methylene chloride	19.73	5.0	20	0	98.6	75-140	0			
o-Xylene	18.71	1.0	20	0	93.6	80-125	0			
Styrene	18.99	1.0	20	0	95	85-125	0			
Tetrachloroethene	17.29	1.0	20	0	86.4	77-138	0			
Toluene	17.65	1.0	20	0	88.2	85-125	0			
trans-1,2-Dichloroethene	19.45	1.0	20	0	97.2	80-140	0			
trans-1,3-Dichloropropene	15.78	1.0	20	0	78.9	72-120	0			
Trichloroethene	18.59	1.0	20	0	93	84-130	0			
Vinyl chloride	20.04	1.0	20	0	100	50-136	0			
Xylenes, Total	55.91	3.0	60	0	93.2	80-126	0			
Surr: 1,2-Dichloroethane-d4	18.93	0	20	0	94.6	75-120	0			
Surr: 4-Bromofluorobenzene	21.07	0	20	0	105	80-110	0			
Surr: Dibromofluoromethane	19.09	0	20	0	95.4	85-115	0			
Surr: Toluene-d8	18.53	0	20	0	92.6	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197414 Instrument ID VMS6 Method: SW8260B

MS		Sample ID: 1610056-09A MS				Units: µg/L		Analysis Date: 10/6/2016 01:26 PM		
Client ID: ATR-OW2(33)-G092716		Run ID: VMS6_161005B		SeqNo: 4070067		Prep Date:		DF: 50		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	931.5	50	1000	0	93.2	75-130	0			
1,1,2,2-Tetrachloroethane	825.5	50	1000	0	82.6	75-130	0			
1,1,2-Trichloroethane	864	50	1000	0	86.4	75-125	0			
1,1-Dichloroethane	1012	50	1000	0	101	75-133	0			
1,1-Dichloroethene	1098	50	1000	0	110	70-145	0			
1,2-Dichloroethane	979.5	50	1000	0	98	78-125	0			
1,2-Dichloropropane	914	50	1000	0	91.4	75-125	0			
2-Butanone	827.5	250	1000	0	82.8	55-150	0			
2-Hexanone	733	250	1000	0	73.3	60-135	0			
4-Methyl-2-pentanone	968.5	50	1000	0	96.8	77-178	0			
Acetone	1040	500	1000	0	104	60-160	0			
Benzene	1020	50	1000	0	102	85-125	0			
Bromodichloromethane	866	50	1000	0	86.6	75-125	0			
Bromoform	634	50	1000	0	63.4	60-125	0			
Bromomethane	654	50	1000	0	65.4	30-185	0			
Carbon disulfide	919	50	1000	0	91.9	60-165	0			
Carbon tetrachloride	978	50	1000	0	97.8	65-140	0			
Chlorobenzene	901	50	1000	0	90.1	80-120	0			
Chloroethane	1098	50	1000	0	110	50-140	0			
Chloroform	1002	50	1000	0	100	80-130	0			
Chloromethane	737.5	50	1000	0	73.8	50-130	0			
cis-1,2-Dichloroethene	1033	50	1000	49.5	98.4	75-134	0			
cis-1,3-Dichloropropene	816	50	1000	0	81.6	70-130	0			
Dibromochloromethane	716	50	1000	0	71.6	60-115	0			
Ethylbenzene	960.5	50	1000	0	96	85-125	0			
m,p-Xylene	1917	100	2000	0	95.8	75-130	0			
Methylene chloride	1007	250	1000	0	101	75-140	0			
o-Xylene	948	50	1000	0	94.8	80-125	0			
Styrene	964	50	1000	0	96.4	85-125	0			
Tetrachloroethene	905	50	1000	0	90.5	77-138	0			
Toluene	900	50	1000	0	90	85-125	0			
trans-1,2-Dichloroethene	1034	50	1000	0	103	80-140	0			
trans-1,3-Dichloropropene	716	50	1000	0	71.6	72-120	0			S
Trichloroethene	974.5	50	1000	0	97.4	84-130	0			
Vinyl chloride	1124	50	1000	128.5	99.5	50-136	0			
Xylenes, Total	2865	150	3000	0	95.5	80-126	0			
Surr: 1,2-Dichloroethane-d4	958	0	1000	0	95.8	75-120	0			
Surr: 4-Bromofluorobenzene	1064	0	1000	0	106	80-110	0			
Surr: Dibromofluoromethane	955.5	0	1000	0	95.6	85-115	0			
Surr: Toluene-d8	922.5	0	1000	0	92.2	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197414 Instrument ID VMS6 Method: SW8260B

MSD		Sample ID: 1610056-09A MSD				Units: µg/L		Analysis Date: 10/6/2016 01:52 PM		
Client ID: ATR-OW2(33)-G092716		Run ID: VMS6_161005B				SeqNo: 4070068		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	885.5	50	1000	0	88.6	75-130	931.5	5.06	30	
1,1,2,2-Tetrachloroethane	825	50	1000	0	82.5	75-130	825.5	0.0606	30	
1,1,2-Trichloroethane	827.5	50	1000	0	82.8	75-125	864	4.32	30	
1,1-Dichloroethane	971.5	50	1000	0	97.2	75-133	1012	4.08	30	
1,1-Dichloroethene	1042	50	1000	0	104	70-145	1098	5.28	30	
1,2-Dichloroethane	959.5	50	1000	0	96	78-125	979.5	2.06	30	
1,2-Dichloropropane	894.5	50	1000	0	89.4	75-125	914	2.16	30	
2-Butanone	882	250	1000	0	88.2	55-150	827.5	6.38	30	
2-Hexanone	760.5	250	1000	0	76	60-135	733	3.68	30	
4-Methyl-2-pentanone	995.5	50	1000	0	99.6	77-178	968.5	2.75	30	
Acetone	1104	500	1000	0	110	60-160	1040	6.02	30	
Benzene	960.5	50	1000	0	96	85-125	1020	5.96	30	
Bromodichloromethane	820.5	50	1000	0	82	75-125	866	5.4	30	
Bromoform	633	50	1000	0	63.3	60-125	634	0.158	30	
Bromomethane	652	50	1000	0	65.2	30-185	654	0.306	30	
Carbon disulfide	896	50	1000	0	89.6	60-165	919	2.53	30	
Carbon tetrachloride	924	50	1000	0	92.4	65-140	978	5.68	30	
Chlorobenzene	862.5	50	1000	0	86.2	80-120	901	4.37	30	
Chloroethane	1016	50	1000	0	102	50-140	1098	7.8	30	
Chloroform	986.5	50	1000	0	98.6	80-130	1002	1.56	30	
Chloromethane	672.5	50	1000	0	67.2	50-130	737.5	9.22	30	
cis-1,2-Dichloroethene	995	50	1000	49.5	94.6	75-134	1033	3.75	30	
cis-1,3-Dichloropropene	788.5	50	1000	0	78.8	70-130	816	3.43	30	
Dibromochloromethane	713	50	1000	0	71.3	60-115	716	0.42	30	
Ethylbenzene	910.5	50	1000	0	91	85-125	960.5	5.34	30	
m,p-Xylene	1812	100	2000	0	90.6	75-130	1917	5.66	30	
Methylene chloride	993.5	250	1000	0	99.4	75-140	1007	1.35	30	
o-Xylene	895	50	1000	0	89.5	80-125	948	5.75	30	
Styrene	911	50	1000	0	91.1	85-125	964	5.65	30	
Tetrachloroethene	855	50	1000	0	85.5	77-138	905	5.68	30	
Toluene	869.5	50	1000	0	87	85-125	900	3.45	30	
trans-1,2-Dichloroethene	1000	50	1000	0	100	80-140	1034	3.29	30	
trans-1,3-Dichloropropene	684.5	50	1000	0	68.4	72-120	716	4.5	30	S
Trichloroethene	916.5	50	1000	0	91.6	84-130	974.5	6.13	30	
Vinyl chloride	1097	50	1000	128.5	96.8	50-136	1124	2.39	30	
Xylenes, Total	2706	150	3000	0	90.2	80-126	2865	5.69	30	
Surr: 1,2-Dichloroethane-d4	951	0	1000	0	95.1	75-120	958	0.733	30	
Surr: 4-Bromofluorobenzene	1065	0	1000	0	106	80-110	1064	0.0939	30	
Surr: Dibromofluoromethane	965.5	0	1000	0	96.6	85-115	955.5	1.04	30	
Surr: Toluene-d8	909.5	0	1000	0	91	85-110	922.5	1.42	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
Work Order: 1610056
Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197414** Instrument ID **VMS6** Method: **SW8260B**

The following samples were analyzed in this batch:

1610056-09A	1610056-20A	1610056-21A
1610056-22A	1610056-23A	1610056-24A
1610056-25A	1610056-26A	1610056-27A
1610056-28A	1610056-29A	1610056-30A
1610056-31A	1610056-32A	1610056-33A
1610056-34A	1610056-35A	1610056-36A
1610056-37A	1610056-38A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197486** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: VBLKW1-161006-R197486				Units: µg/L		Analysis Date: 10/6/2016 04:49 PM		
Client ID:		Run ID: VMS6_161006A			SeqNo: 4071626		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Benzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylene chloride	ND	5.0								
o-Xylene	ND	1.0								
Styrene	ND	1.0								
Tetrachloroethene	ND	1.0								
Toluene	ND	1.0								
trans-1,2-Dichloroethene	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
Trichloroethene	ND	1.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>18.86</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94.3</i>	<i>75-120</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.97</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>105</i>	<i>80-110</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>18.81</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94</i>	<i>85-115</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>18.41</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>92</i>	<i>85-110</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197486 Instrument ID VMS6 Method: SW8260B

LCS		Sample ID: VLCSW1-161006-R197486				Units: µg/L		Analysis Date: 10/6/2016 03:57 PM		
Client ID:		Run ID: VMS6_161006A			SeqNo: 4071625		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.24	1.0	20	0	96.2	75-130	0			
1,1,2,2-Tetrachloroethane	18.44	1.0	20	0	92.2	75-130	0			
1,1,2-Trichloroethane	18.54	1.0	20	0	92.7	75-125	0			
1,1-Dichloroethane	21.24	1.0	20	0	106	75-133	0			
1,1-Dichloroethene	22.63	1.0	20	0	113	70-145	0			
1,2-Dichloroethane	21.34	1.0	20	0	107	78-125	0			
1,2-Dichloropropane	19.06	1.0	20	0	95.3	75-125	0			
2-Butanone	19.97	5.0	20	0	99.8	55-150	0			
2-Hexanone	17.43	5.0	20	0	87.2	60-135	0			
4-Methyl-2-pentanone	23.66	1.0	20	0	118	77-178	0			
Acetone	23.01	10	20	0	115	60-160	0			
Benzene	20.91	1.0	20	0	105	85-125	0			
Bromodichloromethane	18.86	1.0	20	0	94.3	75-125	0			
Bromoform	14.76	1.0	20	0	73.8	60-125	0			
Bromomethane	17.65	1.0	20	0	88.2	30-185	0			
Carbon disulfide	20.36	1.0	20	0	102	60-165	0			
Carbon tetrachloride	19.79	1.0	20	0	99	65-140	0			
Chlorobenzene	19.17	1.0	20	0	95.8	80-120	0			
Chloroethane	22.14	1.0	20	0	111	50-140	0			
Chloroform	21.08	1.0	20	0	105	80-130	0			
Chloromethane	17.84	1.0	20	0	89.2	50-130	0			
cis-1,2-Dichloroethene	22.05	1.0	20	0	110	75-134	0			
cis-1,3-Dichloropropene	19.74	1.0	20	0	98.7	70-130	0			
Dibromochloromethane	16.27	1.0	20	0	81.4	60-115	0			
Ethylbenzene	19.67	1.0	20	0	98.4	85-125	0			
m,p-Xylene	39.6	2.0	40	0	99	75-130	0			
Methylene chloride	21.92	5.0	20	0	110	75-140	0			
o-Xylene	19.79	1.0	20	0	99	80-125	0			
Styrene	20.21	1.0	20	0	101	85-125	0			
Tetrachloroethene	18.74	1.0	20	0	93.7	77-138	0			
Toluene	18.76	1.0	20	0	93.8	85-125	0			
trans-1,2-Dichloroethene	21.92	1.0	20	0	110	80-140	0			
trans-1,3-Dichloropropene	17.58	1.0	20	0	87.9	72-120	0			
Trichloroethene	19.89	1.0	20	0	99.4	84-130	0			
Vinyl chloride	21.5	1.0	20	0	108	50-136	0			
Xylenes, Total	59.39	3.0	60	0	99	80-126	0			
Surr: 1,2-Dichloroethane-d4	18.84	0	20	0	94.2	75-120	0			
Surr: 4-Bromofluorobenzene	21.26	0	20	0	106	80-110	0			
Surr: Dibromofluoromethane	19.09	0	20	0	95.4	85-115	0			
Surr: Toluene-d8	18.63	0	20	0	93.2	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197486 Instrument ID VMS6 Method: SW8260B

MS		Sample ID: 1610056-09A MS				Units: µg/L		Analysis Date: 10/7/2016 01:58 AM		
Client ID: ATR-OW2(33)-G092716		Run ID: VMS6_161006A			SeqNo: 4071645		Prep Date:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	957.5	50	1000	0	95.8	75-130	0			
1,1,2,2-Tetrachloroethane	866	50	1000	0	86.6	75-130	0			
1,1,2-Trichloroethane	867.5	50	1000	0	86.8	75-125	0			
1,1-Dichloroethane	1046	50	1000	0	105	75-133	0			
1,1-Dichloroethene	1120	50	1000	0	112	70-145	0			
1,2-Dichloroethane	1034	50	1000	0	103	78-125	0			
1,2-Dichloropropane	940	50	1000	0	94	75-125	0			
2-Butanone	922	250	1000	0	92.2	55-150	0			
2-Hexanone	777.5	250	1000	0	77.8	60-135	0			
4-Methyl-2-pentanone	1038	50	1000	0	104	77-178	0			
Acetone	935	500	1000	0	93.5	60-160	0			
Benzene	1040	50	1000	0	104	85-125	0			
Bromodichloromethane	877	50	1000	0	87.7	75-125	0			
Bromoform	674	50	1000	0	67.4	60-125	0			
Bromomethane	419.5	50	1000	0	42	30-185	0			
Carbon disulfide	964	50	1000	0	96.4	60-165	0			
Carbon tetrachloride	973.5	50	1000	0	97.4	65-140	0			
Chlorobenzene	918	50	1000	0	91.8	80-120	0			
Chloroethane	1225	50	1000	0	122	50-140	0			
Chloroform	1030	50	1000	0	103	80-130	0			
Chloromethane	741	50	1000	0	74.1	50-130	0			
cis-1,2-Dichloroethene	1104	50	1000	55	105	75-134	0			
cis-1,3-Dichloropropene	909.5	50	1000	0	91	70-130	0			
Dibromochloromethane	725.5	50	1000	0	72.6	60-115	0			
Ethylbenzene	971	50	1000	0	97.1	85-125	0			
m,p-Xylene	1961	100	2000	0	98	75-130	0			
Methylene chloride	1072	250	1000	0	107	75-140	0			
o-Xylene	968	50	1000	0	96.8	80-125	0			
Styrene	1296	50	1000	2126	-82.9	85-125	0			S
Tetrachloroethene	911	50	1000	0	91.1	77-138	0			
Toluene	912	50	1000	0	91.2	85-125	0			
trans-1,2-Dichloroethene	1076	50	1000	0	108	80-140	0			
trans-1,3-Dichloropropene	777.5	50	1000	0	77.8	72-120	0			
Trichloroethene	989.5	50	1000	0	99	84-130	0			
Vinyl chloride	1130	50	1000	124.5	101	50-136	0			
Xylenes, Total	2929	150	3000	0	97.6	80-126	0			
Surr: 1,2-Dichloroethane-d4	949.5	0	1000	0	95	75-120	0			
Surr: 4-Bromofluorobenzene	1092	0	1000	0	109	80-110	0			
Surr: Dibromofluoromethane	964.5	0	1000	0	96.4	85-115	0			
Surr: Toluene-d8	900.5	0	1000	0	90	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197486 Instrument ID VMS6 Method: SW8260B

MSD		Sample ID: 1610056-09A MSD				Units: µg/L		Analysis Date: 10/7/2016 02:24 AM		
Client ID: ATR-OW2(33)-G092716		Run ID: VMS6_161006A				SeqNo: 4071646		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	948.5	50	1000	0	94.8	75-130	957.5	0.944	30	
1,1,2,2-Tetrachloroethane	881.5	50	1000	0	88.2	75-130	866	1.77	30	
1,1,2-Trichloroethane	868	50	1000	0	86.8	75-125	867.5	0.0576	30	
1,1-Dichloroethane	1070	50	1000	0	107	75-133	1046	2.27	30	
1,1-Dichloroethene	1162	50	1000	0	116	70-145	1120	3.59	30	
1,2-Dichloroethane	1018	50	1000	0	102	78-125	1034	1.46	30	
1,2-Dichloropropane	959	50	1000	0	95.9	75-125	940	2	30	
2-Butanone	947	250	1000	0	94.7	55-150	922	2.68	30	
2-Hexanone	820.5	250	1000	0	82	60-135	777.5	5.38	30	
4-Methyl-2-pentanone	1060	50	1000	0	106	77-178	1038	2.05	30	
Acetone	1052	500	1000	0	105	60-160	935	11.8	30	
Benzene	1025	50	1000	0	102	85-125	1040	1.4	30	
Bromodichloromethane	906.5	50	1000	0	90.6	75-125	877	3.31	30	
Bromoform	667	50	1000	0	66.7	60-125	674	1.04	30	
Bromomethane	589	50	1000	0	58.9	30-185	419.5	33.6	30	R
Carbon disulfide	999.5	50	1000	0	100	60-165	964	3.62	30	
Carbon tetrachloride	980	50	1000	0	98	65-140	973.5	0.665	30	
Chlorobenzene	917	50	1000	0	91.7	80-120	918	0.109	30	
Chloroethane	1168	50	1000	0	117	50-140	1225	4.76	30	
Chloroform	1034	50	1000	0	103	80-130	1030	0.339	30	
Chloromethane	743.5	50	1000	0	74.4	50-130	741	0.337	30	
cis-1,2-Dichloroethene	1129	50	1000	55	107	75-134	1104	2.28	30	
cis-1,3-Dichloropropene	893	50	1000	0	89.3	70-130	909.5	1.83	30	
Dibromochloromethane	732	50	1000	0	73.2	60-115	725.5	0.892	30	
Ethylbenzene	964	50	1000	0	96.4	85-125	971	0.724	30	
m,p-Xylene	1942	100	2000	0	97.1	75-130	1961	0.974	30	
Methylene chloride	1082	250	1000	0	108	75-140	1072	0.929	30	
o-Xylene	956.5	50	1000	0	95.6	80-125	968	1.2	30	
Styrene	1536	50	1000	2126	-58.9	85-125	1296	16.9	30	S
Tetrachloroethene	902.5	50	1000	0	90.2	77-138	911	0.937	30	
Toluene	901.5	50	1000	0	90.2	85-125	912	1.16	30	
trans-1,2-Dichloroethene	1098	50	1000	0	110	80-140	1076	2.02	30	
trans-1,3-Dichloropropene	778.5	50	1000	0	77.8	72-120	777.5	0.129	30	
Trichloroethene	980	50	1000	0	98	84-130	989.5	0.965	30	
Vinyl chloride	1168	50	1000	124.5	104	50-136	1130	3.31	30	
Xylenes, Total	2898	150	3000	0	96.6	80-126	2929	1.05	30	
Surr: 1,2-Dichloroethane-d4	923	0	1000	0	92.3	75-120	949.5	2.83	30	
Surr: 4-Bromofluorobenzene	1102	0	1000	0	110	80-110	1092	0.866	30	S
Surr: Dibromofluoromethane	945	0	1000	0	94.5	85-115	964.5	2.04	30	
Surr: Toluene-d8	906.5	0	1000	0	90.6	85-110	900.5	0.664	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
Work Order: 1610056
Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197486** Instrument ID **VMS6** Method: **SW8260B**

The following samples were analyzed in this batch:

1610056-04A	1610056-05A	1610056-07A
1610056-09A	1610056-10A	1610056-13A
1610056-16A	1610056-17A	1610056-39A
1610056-40A	1610056-41A	1610056-42A
1610056-43A	1610056-44A	1610056-45A
1610056-46A	1610056-47A	1610056-48A
1610056-49A	1610056-50A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197654** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: VBLKW2-161007-R197654				Units: µg/L		Analysis Date: 10/8/2016 01:33 AM		
Client ID:		Run ID: VMS6_161007A			SeqNo: 4073421		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Benzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylene chloride	ND	5.0								
o-Xylene	ND	1.0								
Styrene	ND	1.0								
Tetrachloroethene	ND	1.0								
Toluene	ND	1.0								
trans-1,2-Dichloroethene	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
Trichloroethene	ND	1.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.44</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>75-120</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.25</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.2</i>	<i>80-110</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>19.86</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.3</i>	<i>85-115</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>20.21</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>85-110</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197654 Instrument ID VMS6 Method: SW8260B

LCS		Sample ID: VLCSW1-161007-R197654				Units: µg/L		Analysis Date: 10/8/2016 12:41 PM		
Client ID:		Run ID: VMS6_161007A			SeqNo: 4073444		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.33	1.0	20	0	112	75-130	0			
1,1,2,2-Tetrachloroethane	24.4	1.0	20	0	122	75-130	0			
1,1,2-Trichloroethane	23.16	1.0	20	0	116	75-125	0			
1,1-Dichloroethane	21.87	1.0	20	0	109	75-133	0			
1,1-Dichloroethene	22.49	1.0	20	0	112	70-145	0			
1,2-Dichloroethane	21.36	1.0	20	0	107	78-125	0			
1,2-Dichloropropane	21.1	1.0	20	0	106	75-125	0			
2-Butanone	18.56	5.0	20	0	92.8	55-150	0			
2-Hexanone	19.01	5.0	20	0	95	60-135	0			
4-Methyl-2-pentanone	28.24	1.0	20	0	141	77-178	0			
Acetone	21.27	10	20	0	106	60-160	0			
Benzene	22.06	1.0	20	0	110	85-125	0			
Bromodichloromethane	23.08	1.0	20	0	115	75-125	0			
Bromoform	21.77	1.0	20	0	109	60-125	0			
Bromomethane	22.09	1.0	20	0	110	30-185	0			
Carbon disulfide	21.55	1.0	20	0	108	60-165	0			
Carbon tetrachloride	21.21	1.0	20	0	106	65-140	0			
Chlorobenzene	22	1.0	20	0	110	80-120	0			
Chloroethane	18.13	1.0	20	0	90.6	50-140	0			
Chloroform	21.52	1.0	20	0	108	80-130	0			
Chloromethane	24.6	1.0	20	0	123	50-130	0			
cis-1,2-Dichloroethene	21.09	1.0	20	0	105	75-134	0			
cis-1,3-Dichloropropene	22.56	1.0	20	0	113	70-130	0			
Dibromochloromethane	18.95	1.0	20	0	94.8	60-115	0			
Ethylbenzene	22.96	1.0	20	0	115	85-125	0			
m,p-Xylene	46.33	2.0	40	0	116	75-130	0			
Methylene chloride	20.34	5.0	20	0	102	75-140	0			
o-Xylene	23.15	1.0	20	0	116	80-125	0			
Styrene	24.43	1.0	20	0	122	85-125	0			
Tetrachloroethene	22.28	1.0	20	0	111	77-138	0			
Toluene	22.38	1.0	20	0	112	85-125	0			
trans-1,2-Dichloroethene	21.56	1.0	20	0	108	80-140	0			
trans-1,3-Dichloropropene	21.6	1.0	20	0	108	72-120	0			
Trichloroethene	22.2	1.0	20	0	111	84-130	0			
Vinyl chloride	19.99	1.0	20	0	100	50-136	0			
Xylenes, Total	69.48	3.0	60	0	116	80-126	0			
Surr: 1,2-Dichloroethane-d4	20.48	0	20	0	102	75-120	0			
Surr: 4-Bromofluorobenzene	20.12	0	20	0	101	80-110	0			
Surr: Dibromofluoromethane	20.64	0	20	0	103	85-115	0			
Surr: Toluene-d8	20.07	0	20	0	100	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197654 Instrument ID VMS6 Method: SW8260B

MS		Sample ID: 1610056-09A MS				Units: µg/L		Analysis Date: 10/8/2016 10:42 AM		
Client ID: ATR-OW2(33)-G092716		Run ID: VMS6_161007A				SeqNo: 4073442		Prep Date:		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	114.6	5.0	100	0	115	75-130	0			
1,1,2,2-Tetrachloroethane	123	5.0	100	0	123	75-130	0			
1,1,2-Trichloroethane	114.2	5.0	100	0	114	75-125	0			
1,1-Dichloroethane	117.9	5.0	100	0	118	75-133	0			
1,1-Dichloroethene	122	5.0	100	0	122	70-145	0			
1,2-Dichloroethane	106.5	5.0	100	0	106	78-125	0			
1,2-Dichloropropane	107.3	5.0	100	0	107	75-125	0			
2-Butanone	97.45	25	100	0	97.4	55-150	0			
2-Hexanone	97.7	25	100	0	97.7	60-135	0			
4-Methyl-2-pentanone	140.8	5.0	100	0	141	77-178	0			
Acetone	113.6	50	100	0	114	60-160	0			
Benzene	114.3	5.0	100	0	114	85-125	0			
Bromodichloromethane	115.4	5.0	100	0	115	75-125	0			
Bromoform	107.3	5.0	100	0	107	60-125	0			
Bromomethane	42.05	5.0	100	0	42	30-185	0			
Carbon disulfide	114.2	5.0	100	0	114	60-165	0			
Carbon tetrachloride	113.6	5.0	100	0	114	65-140	0			
Chlorobenzene	114.2	5.0	100	0	114	80-120	0			
Chloroethane	115.4	5.0	100	0	115	50-140	0			
Chloroform	112.6	5.0	100	0	113	80-130	0			
Chloromethane	135	5.0	100	0	135	50-130	0			S
cis-1,2-Dichloroethene	163.6	5.0	100	55.6	108	75-134	0			
cis-1,3-Dichloropropene	107	5.0	100	0	107	70-130	0			
Dibromochloromethane	94.4	5.0	100	0	94.4	60-115	0			
Ethylbenzene	120.8	5.0	100	0	121	85-125	0			
m,p-Xylene	243.7	10	200	0	122	75-130	0			
Methylene chloride	108	25	100	3.35	105	75-140	0			
o-Xylene	121.2	5.0	100	0	121	80-125	0			
Styrene	125.2	5.0	100	0	125	85-125	0			S
Tetrachloroethene	115.9	5.0	100	0	116	77-138	0			
Toluene	116.8	5.0	100	0	117	85-125	0			
trans-1,2-Dichloroethene	114.3	5.0	100	0	114	80-140	0			
trans-1,3-Dichloropropene	105	5.0	100	0	105	72-120	0			
Trichloroethene	113.8	5.0	100	0	114	84-130	0			
Vinyl chloride	232.2	5.0	100	120.1	112	50-136	0			
Xylenes, Total	364.9	15	300	0	122	80-126	0			
Surr: 1,2-Dichloroethane-d4	102.1	0	100	0	102	75-120	0			
Surr: 4-Bromofluorobenzene	100	0	100	0	100	80-110	0			
Surr: Dibromofluoromethane	102	0	100	0	102	85-115	0			
Surr: Toluene-d8	101.3	0	100	0	101	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197654 Instrument ID VMS6 Method: SW8260B

MSD		Sample ID: 1610056-09A MSD				Units: µg/L		Analysis Date: 10/8/2016 11:08 AM		
Client ID: ATR-OW2(33)-G092716		Run ID: VMS6_161007A				SeqNo: 4073443		Prep Date:		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	114.4	5.0	100	0	114	75-130	114.6	0.131	30	
1,1,2,2-Tetrachloroethane	114	5.0	100	0	114	75-130	123	7.64	30	
1,1,2-Trichloroethane	107.6	5.0	100	0	108	75-125	114.2	5.95	30	
1,1-Dichloroethane	112.2	5.0	100	0	112	75-133	117.9	5	30	
1,1-Dichloroethene	120	5.0	100	0	120	70-145	122	1.65	30	
1,2-Dichloroethane	100.6	5.0	100	0	101	78-125	106.5	5.75	30	
1,2-Dichloropropane	101.7	5.0	100	0	102	75-125	107.3	5.36	30	
2-Butanone	84.45	25	100	0	84.4	55-150	97.45	14.3	30	
2-Hexanone	91.45	25	100	0	91.4	60-135	97.7	6.61	30	
4-Methyl-2-pentanone	132.2	5.0	100	0	132	77-178	140.8	6.23	30	
Acetone	106.2	50	100	0	106	60-160	113.6	6.74	30	
Benzene	110.7	5.0	100	0	111	85-125	114.3	3.2	30	
Bromodichloromethane	109.4	5.0	100	0	109	75-125	115.4	5.29	30	
Bromoform	101.6	5.0	100	0	102	60-125	107.3	5.46	30	
Bromomethane	52.65	5.0	100	0	52.6	30-185	42.05	22.4	30	
Carbon disulfide	113	5.0	100	0	113	60-165	114.2	1.01	30	
Carbon tetrachloride	113.5	5.0	100	0	114	65-140	113.6	0.132	30	
Chlorobenzene	108.3	5.0	100	0	108	80-120	114.2	5.26	30	
Chloroethane	107.8	5.0	100	0	108	50-140	115.4	6.81	30	
Chloroform	105.5	5.0	100	0	106	80-130	112.6	6.56	30	
Chloromethane	96.95	5.0	100	0	97	50-130	135	32.8	30	R
cis-1,2-Dichloroethene	155.5	5.0	100	55.6	99.9	75-134	163.6	5.11	30	
cis-1,3-Dichloropropene	101.8	5.0	100	0	102	70-130	107	5.03	30	
Dibromochloromethane	89.35	5.0	100	0	89.4	60-115	94.4	5.5	30	
Ethylbenzene	116.1	5.0	100	0	116	85-125	120.8	3.97	30	
m,p-Xylene	230.8	10	200	0	115	75-130	243.7	5.42	30	
Methylene chloride	99.5	25	100	3.35	96.2	75-140	108	8.24	30	
o-Xylene	115.4	5.0	100	0	115	80-125	121.2	4.9	30	
Styrene	119	5.0	100	0	119	85-125	125.2	5	30	
Tetrachloroethene	113.2	5.0	100	0	113	77-138	115.9	2.4	30	
Toluene	112.2	5.0	100	0	112	85-125	116.8	4.1	30	
trans-1,2-Dichloroethene	111	5.0	100	0	111	80-140	114.3	2.97	30	
trans-1,3-Dichloropropene	98.25	5.0	100	0	98.2	72-120	105	6.59	30	
Trichloroethene	111.6	5.0	100	0	112	84-130	113.8	1.91	30	
Vinyl chloride	214.1	5.0	100	120.1	94	50-136	232.2	8.13	30	
Xylenes, Total	346.2	15	300	0	115	80-126	364.9	5.25	30	
Surr: 1,2-Dichloroethane-d4	101.3	0	100	0	101	75-120	102.1	0.787	30	
Surr: 4-Bromofluorobenzene	98.5	0	100	0	98.5	80-110	100	1.56	30	
Surr: Dibromofluoromethane	100.8	0	100	0	101	85-115	102	1.18	30	
Surr: Toluene-d8	102.8	0	100	0	103	85-110	101.3	1.47	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler

Work Order: 1610056

Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197654**

Instrument ID **VMS6**

Method: **SW8260B**

The following samples were analyzed in this batch:

1610056-03A	1610056-04A	1610056-07A
1610056-08A	1610056-09A	1610056-11A
1610056-15A	1610056-18A	1610056-19A
1610056-20A	1610056-21A	1610056-23A
1610056-24A	1610056-28A	1610056-29A
1610056-36A	1610056-48A	1610056-49A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197659 Instrument ID VMS6 Method: SW8260B

MBLK		Sample ID: VBLKW3-161007-R197659				Units: µg/L		Analysis Date: 10/8/2016 02:11 PM		
Client ID:		Run ID: VMS6_161007B			SeqNo: 4073621		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,2-Dichloropropane	ND	1.0								
2-Butanone	ND	5.0								
2-Hexanone	ND	5.0								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	10								
Benzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	1.0								
Carbon disulfide	ND	1.0								
Carbon tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	1.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-Dichloroethene	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
Dibromochloromethane	ND	1.0								
Ethylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylene chloride	ND	5.0								
o-Xylene	ND	1.0								
Styrene	ND	1.0								
Tetrachloroethene	ND	1.0								
Toluene	ND	1.0								
trans-1,2-Dichloroethene	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
Trichloroethene	ND	1.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	20.45	0	20	0	102	75-120	0			
Surr: 4-Bromofluorobenzene	19.47	0	20	0	97.4	80-110	0			
Surr: Dibromofluoromethane	19.93	0	20	0	99.6	85-115	0			
Surr: Toluene-d8	20.18	0	20	0	101	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197659 Instrument ID VMS6 Method: SW8260B

LCS		Sample ID: VLCSW3-161007-R197659				Units: µg/L		Analysis Date: 10/8/2016 10:52 PM		
Client ID:		Run ID: VMS6_161007B			SeqNo: 4073641		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.82	1.0	20	0	104	75-130	0			
1,1,2,2-Tetrachloroethane	21.73	1.0	20	0	109	75-130	0			
1,1,2-Trichloroethane	21.15	1.0	20	0	106	75-125	0			
1,1-Dichloroethane	20.98	1.0	20	0	105	75-133	0			
1,1-Dichloroethene	21.16	1.0	20	0	106	70-145	0			
1,2-Dichloroethane	20.13	1.0	20	0	101	78-125	0			
1,2-Dichloropropane	19.69	1.0	20	0	98.4	75-125	0			
2-Butanone	14.3	5.0	20	0	71.5	55-150	0			
2-Hexanone	15.39	5.0	20	0	77	60-135	0			
4-Methyl-2-pentanone	20.91	1.0	20	0	105	77-178	0			
Acetone	16.07	10	20	0	80.4	60-160	0			
Benzene	20.97	1.0	20	0	105	85-125	0			
Bromodichloromethane	20.99	1.0	20	0	105	75-125	0			
Bromoform	18.63	1.0	20	0	93.2	60-125	0			
Bromomethane	9.56	1.0	20	0	47.8	30-185	0			
Carbon disulfide	17.29	1.0	20	0	86.4	60-165	0			
Carbon tetrachloride	19.95	1.0	20	0	99.8	65-140	0			
Chlorobenzene	20.59	1.0	20	0	103	80-120	0			
Chloroethane	19.11	1.0	20	0	95.6	50-140	0			
Chloroform	20.22	1.0	20	0	101	80-130	0			
Chloromethane	19.16	1.0	20	0	95.8	50-130	0			
cis-1,2-Dichloroethene	21.24	1.0	20	0	106	75-134	0			
cis-1,3-Dichloropropene	20.7	1.0	20	0	104	70-130	0			
Dibromochloromethane	16.77	1.0	20	0	83.8	60-115	0			
Ethylbenzene	21.68	1.0	20	0	108	85-125	0			
m,p-Xylene	43.69	2.0	40	0	109	75-130	0			
Methylene chloride	19.75	5.0	20	0	98.8	75-140	0			
o-Xylene	22.1	1.0	20	0	110	80-125	0			
Styrene	23.09	1.0	20	0	115	85-125	0			
Tetrachloroethene	20.77	1.0	20	0	104	77-138	0			
Toluene	21.32	1.0	20	0	107	85-125	0			
trans-1,2-Dichloroethene	20.59	1.0	20	0	103	80-140	0			
trans-1,3-Dichloropropene	20.02	1.0	20	0	100	72-120	0			
Trichloroethene	20.75	1.0	20	0	104	84-130	0			
Vinyl chloride	18.86	1.0	20	0	94.3	50-136	0			
Xylenes, Total	65.79	3.0	60	0	110	80-126	0			
Surr: 1,2-Dichloroethane-d4	20.28	0	20	0	101	75-120	0			
Surr: 4-Bromofluorobenzene	19.58	0	20	0	97.9	80-110	0			
Surr: Dibromofluoromethane	20.23	0	20	0	101	85-115	0			
Surr: Toluene-d8	20.19	0	20	0	101	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197659 Instrument ID VMS6 Method: SW8260B

MS		Sample ID: 1610056-12A MS				Units: µg/L		Analysis Date: 10/8/2016 11:18 PM		
Client ID: ATR-MW25(45.2)-G092716		Run ID: VMS6_161007B				SeqNo: 4073643		Prep Date:		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	440.4	20	400	0	110	75-130	0			
1,1,2,2-Tetrachloroethane	440.6	20	400	0	110	75-130	0			
1,1,2-Trichloroethane	422.6	20	400	0	106	75-125	0			
1,1-Dichloroethane	450.6	20	400	0	113	75-133	0			
1,1-Dichloroethene	464.2	20	400	0	116	70-145	0			
1,2-Dichloroethane	400.6	20	400	0	100	78-125	0			
1,2-Dichloropropane	405.4	20	400	0	101	75-125	0			
2-Butanone	1273	100	400	1030	60.8	55-150	0			
2-Hexanone	354.8	100	400	0	88.7	60-135	0			
4-Methyl-2-pentanone	483.6	20	400	0	121	77-178	0			
Acetone	415.6	200	400	0	104	60-160	0			
Benzene	434.8	20	400	0	109	85-125	0			
Bromodichloromethane	424.6	20	400	0	106	75-125	0			
Bromoform	382.2	20	400	0	95.6	60-125	0			
Bromomethane	250.8	20	400	0	62.7	30-185	0			
Carbon disulfide	425.8	20	400	0	106	60-165	0			
Carbon tetrachloride	438.8	20	400	0	110	65-140	0			
Chlorobenzene	429.6	20	400	0	107	80-120	0			
Chloroethane	385.6	20	400	0	96.4	50-140	0			
Chloroform	421.2	20	400	0	105	80-130	0			
Chloromethane	239.4	20	400	0	59.8	50-130	0			
cis-1,2-Dichloroethene	622	20	400	209.6	103	75-134	0			
cis-1,3-Dichloropropene	375	20	400	0	93.8	70-130	0			
Dibromochloromethane	332	20	400	0	83	60-115	0			
Ethylbenzene	456	20	400	0	114	85-125	0			
m,p-Xylene	909	40	800	0	114	75-130	0			
Methylene chloride	396	100	400	0	99	75-140	0			
o-Xylene	456	20	400	0	114	80-125	0			
Styrene	467	20	400	0	117	85-125	0			
Tetrachloroethene	438.2	20	400	0	110	77-138	0			
Toluene	445.4	20	400	0	111	85-125	0			
trans-1,2-Dichloroethene	432.8	20	400	0	108	80-140	0			
trans-1,3-Dichloropropene	368	20	400	0	92	72-120	0			
Trichloroethene	422.4	20	400	0	106	84-130	0			
Vinyl chloride	875.2	20	400	487.6	96.9	50-136	0			
Xylenes, Total	1365	60	1200	0	114	80-126	0			
Surr: 1,2-Dichloroethane-d4	405.2	0	400	0	101	75-120	0			
Surr: 4-Bromofluorobenzene	399	0	400	0	99.8	80-110	0			
Surr: Dibromofluoromethane	403.6	0	400	0	101	85-115	0			
Surr: Toluene-d8	406.4	0	400	0	102	85-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197659 Instrument ID VMS6 Method: SW8260B

MSD		Sample ID: 1610056-12A MSD				Units: µg/L		Analysis Date: 10/8/2016 11:44 PM		
Client ID: ATR-MW25(45.2)-G092716		Run ID: VMS6_161007B				SeqNo: 4073644		Prep Date:		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	452.8	20	400	0	113	75-130	440.4	2.78	30	
1,1,2,2-Tetrachloroethane	452.8	20	400	0	113	75-130	440.6	2.73	30	
1,1,2-Trichloroethane	446.6	20	400	0	112	75-125	422.6	5.52	30	
1,1-Dichloroethane	467.4	20	400	0	117	75-133	450.6	3.66	30	
1,1-Dichloroethene	485	20	400	0	121	70-145	464.2	4.38	30	
1,2-Dichloroethane	420.8	20	400	0	105	78-125	400.6	4.92	30	
1,2-Dichloropropane	424	20	400	0	106	75-125	405.4	4.49	30	
2-Butanone	1309	100	400	1030	69.6	55-150	1273	2.76	30	
2-Hexanone	368.8	100	400	0	92.2	60-135	354.8	3.87	30	
4-Methyl-2-pentanone	521.6	20	400	0	130	77-178	483.6	7.56	30	
Acetone	453.2	200	400	0	113	60-160	415.6	8.66	30	
Benzene	446.8	20	400	0	112	85-125	434.8	2.72	30	
Bromodichloromethane	440.6	20	400	0	110	75-125	424.6	3.7	30	
Bromoform	400	20	400	0	100	60-125	382.2	4.55	30	
Bromomethane	311.2	20	400	0	77.8	30-185	250.8	21.5	30	
Carbon disulfide	436.6	20	400	0	109	60-165	425.8	2.5	30	
Carbon tetrachloride	445.8	20	400	0	111	65-140	438.8	1.58	30	
Chlorobenzene	442	20	400	0	110	80-120	429.6	2.85	30	
Chloroethane	410.2	20	400	0	103	50-140	385.6	6.18	30	
Chloroform	438.4	20	400	0	110	80-130	421.2	4	30	
Chloromethane	431.8	20	400	0	108	50-130	239.4	57.3	30	R
cis-1,2-Dichloroethene	640.8	20	400	209.6	108	75-134	622	2.98	30	
cis-1,3-Dichloropropene	405.4	20	400	0	101	70-130	375	7.79	30	
Dibromochloromethane	351.8	20	400	0	88	60-115	332	5.79	30	
Ethylbenzene	465.4	20	400	0	116	85-125	456	2.04	30	
m,p-Xylene	936	40	800	0	117	75-130	909	2.93	30	
Methylene chloride	424.2	100	400	0	106	75-140	396	6.88	30	
o-Xylene	470	20	400	0	118	80-125	456	3.02	30	
Styrene	487	20	400	0	122	85-125	467	4.19	30	
Tetrachloroethene	449.4	20	400	0	112	77-138	438.2	2.52	30	
Toluene	457.8	20	400	0	114	85-125	445.4	2.75	30	
trans-1,2-Dichloroethene	455.2	20	400	0	114	80-140	432.8	5.05	30	
trans-1,3-Dichloropropene	385.8	20	400	0	96.4	72-120	368	4.72	30	
Trichloroethene	441	20	400	0	110	84-130	422.4	4.31	30	
Vinyl chloride	901.4	20	400	487.6	103	50-136	875.2	2.95	30	
Xylenes, Total	1406	60	1200	0	117	80-126	1365	2.96	30	
Surr: 1,2-Dichloroethane-d4	405.6	0	400	0	101	75-120	405.2	0.0987	30	
Surr: 4-Bromofluorobenzene	396.4	0	400	0	99.1	80-110	399	0.654	30	
Surr: Dibromofluoromethane	408.2	0	400	0	102	85-115	403.6	1.13	30	
Surr: Toluene-d8	407.6	0	400	0	102	85-110	406.4	0.295	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
Work Order: 1610056
Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R197659** Instrument ID **VMS6** Method: **SW8260B**

The following samples were analyzed in this batch:

1610056-03A	1610056-07A	1610056-12A
1610056-21A	1610056-32A	1610056-33A
1610056-34A	1610056-35A	1610056-36A
1610056-37A	1610056-40A	1610056-41A
1610056-44A	1610056-45A	1610056-46A
1610056-49A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R197662a Instrument ID VMS6 Method: SW8260B

MBLK		Sample ID: VBLKW1-161009-R197662a				Units: µg/L		Analysis Date: 10/9/2016 10:07 AM		
Client ID:		Run ID: VMS6_161009A		SeqNo: 4074768		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Vinyl chloride	ND	1.0								
Surr: 1,2-Dichloroethane-d4	20.84	0	20	0	104	75-120	0			
Surr: 4-Bromofluorobenzene	19.54	0	20	0	97.7	80-110	0			
Surr: Dibromofluoromethane	19.91	0	20	0	99.6	85-115	0			
Surr: Toluene-d8	20.3	0	20	0	102	85-110	0			

LCS		Sample ID: VLCSW1-161009-R197662a				Units: µg/L		Analysis Date: 10/9/2016 09:15 AM		
Client ID:		Run ID: VMS6_161009A		SeqNo: 4074767		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Vinyl chloride	19.84	1.0	20	0	99.2	50-136	0			
Surr: 1,2-Dichloroethane-d4	20.55	0	20	0	103	75-120	0			
Surr: 4-Bromofluorobenzene	19.86	0	20	0	99.3	80-110	0			
Surr: Dibromofluoromethane	20.88	0	20	0	104	85-115	0			
Surr: Toluene-d8	20.31	0	20	0	102	85-110	0			

MS		Sample ID: 1610190-14B MS				Units: µg/L		Analysis Date: 10/9/2016 07:25 PM		
Client ID:		Run ID: VMS6_161009A		SeqNo: 4074776		Prep Date:		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Vinyl chloride	198.4	10	200	0	99.2	50-136	0			
Surr: 1,2-Dichloroethane-d4	206.5	0	200	0	103	75-120	0			
Surr: 4-Bromofluorobenzene	201.1	0	200	0	101	80-110	0			
Surr: Dibromofluoromethane	200.7	0	200	0	100	85-115	0			
Surr: Toluene-d8	206.4	0	200	0	103	85-110	0			

MSD		Sample ID: 1610190-14B MSD				Units: µg/L		Analysis Date: 10/9/2016 07:51 PM		
Client ID:		Run ID: VMS6_161009A		SeqNo: 4074777		Prep Date:		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Vinyl chloride	231.6	10	200	0	116	50-136	198.4	15.4	30	
Surr: 1,2-Dichloroethane-d4	209.9	0	200	0	105	75-120	206.5	1.63	30	
Surr: 4-Bromofluorobenzene	202.1	0	200	0	101	80-110	201.1	0.496	30	
Surr: Dibromofluoromethane	200.9	0	200	0	100	85-115	200.7	0.0996	30	
Surr: Toluene-d8	201.6	0	200	0	101	85-110	206.4	2.35	30	

The following samples were analyzed in this batch: 1610056-45A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R198189 Instrument ID TOC2 Method: SW9060A

MBLK		Sample ID: MBLK-R198189				Units: mg/L		Analysis Date: 10/14/2016 12:11 PM		
Client ID:		Run ID: TOC2_161014A			SeqNo: 4088072		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total ND 0.50

LCS		Sample ID: LCS-R198189				Units: mg/L		Analysis Date: 10/14/2016 12:11 PM		
Client ID:		Run ID: TOC2_161014A			SeqNo: 4088073		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 4.975 0.50 5 0 99.5 91-110 0

MS		Sample ID: 1610217-01A MS				Units: mg/L		Analysis Date: 10/14/2016 12:11 PM		
Client ID:		Run ID: TOC2_161014A			SeqNo: 4088075		Prep Date:		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 25.88 2.0 20 5.012 104 87-120 0

MSD		Sample ID: 1610217-01A MSD				Units: mg/L		Analysis Date: 10/14/2016 12:11 PM		
Client ID:		Run ID: TOC2_161014A			SeqNo: 4088076		Prep Date:		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 25.97 2.0 20 5.012 105 87-120 25.88 0.355 10

The following samples were analyzed in this batch:

1610056-01B	1610056-02B	1610056-03B
1610056-04B	1610056-05B	1610056-06B
1610056-07B	1610056-08B	1610056-09B
1610056-10B	1610056-11B	1610056-12B
1610056-13B	1610056-14B	1610056-15B
1610056-16B	1610056-17B	1610056-18B
1610056-19B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: **R198239** Instrument ID **TOC3** Method: **SW9060A**

MBLK		Sample ID: MBLK-R198239				Units: mg/L		Analysis Date: 10/15/2016 03:57 PM		
Client ID:		Run ID: TOC3_161015A				SeqNo: 4089476		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total ND 0.50

LCS		Sample ID: LCS-R198239				Units: mg/L		Analysis Date: 10/15/2016 03:57 PM		
Client ID:		Run ID: TOC3_161015A				SeqNo: 4089477		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 5.069 0.50 5 0 101 91-110 0

MS		Sample ID: 1610056-09B MS				Units: mg/L		Analysis Date: 10/15/2016 03:57 PM		
Client ID: ATR-OW2(33)-G092716		Run ID: TOC3_161015A				SeqNo: 4089481		Prep Date:		DF: 4
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 29.15 2.0 20 6.512 113 87-120 0

MSD		Sample ID: 1610056-09B MSD				Units: mg/L		Analysis Date: 10/15/2016 03:57 PM		
Client ID: ATR-OW2(33)-G092716		Run ID: TOC3_161015A				SeqNo: 4089482		Prep Date:		DF: 4
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 27.56 2.0 20 6.512 105 87-120 29.15 5.6 10

The following samples were analyzed in this batch:

1610056-04B	1610056-05B	1610056-09B
1610056-12B	1610056-13B	1610056-14B
1610056-16B	1610056-19B	1610056-20B
1610056-21B	1610056-22B	1610056-23B
1610056-24B	1610056-25B	1610056-26B
1610056-27B	1610056-28B	1610056-29B
1610056-30B	1610056-31B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R198324A Instrument ID TOC3 Method: SW9060A

MBLK		Sample ID: WBLKW1-161016-R198324A				Units: mg/L		Analysis Date: 10/16/2016 05:30 PM		
Client ID:		Run ID: TOC3_161016A		SeqNo: 4091806		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total ND 0.50

LCS		Sample ID: WLCSW1-161016-R198324A				Units: mg/L		Analysis Date: 10/16/2016 05:30 PM		
Client ID:		Run ID: TOC3_161016A		SeqNo: 4091807		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 5.042 0.50 5 0 101 91-110 0

MS		Sample ID: 1610056-31B MS				Units: mg/L		Analysis Date: 10/16/2016 05:30 PM		
Client ID: ATR-MW26(28.8)-G092616		Run ID: TOC3_161016A		SeqNo: 4091849		Prep Date:		DF: 4		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 31.78 2.0 20 3.972 139 87-120 0 S

MSD		Sample ID: 1610056-31B MSD				Units: mg/L		Analysis Date: 10/16/2016 05:30 PM		
Client ID: ATR-MW26(28.8)-G092616		Run ID: TOC3_161016A		SeqNo: 4091850		Prep Date:		DF: 4		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 28.5 2.0 20 3.972 123 87-120 31.78 10.9 10 SR

The following samples were analyzed in this batch:

1610056-12B	1610056-20B	1610056-23B
1610056-24B	1610056-26B	1610056-30B
1610056-31B	1610056-32B	1610056-33B
1610056-34B	1610056-35B	1610056-36B
1610056-37B	1610056-38B	1610056-39B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R198440 Instrument ID TOC3 Method: SW9060A

MBLK		Sample ID: WBLKW1-161017-R198440				Units: mg/L		Analysis Date: 10/17/2016 10:11 PM		
Client ID:		Run ID: TOC3_161017A		SeqNo: 4095040		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.04	0.50								J

LCS		Sample ID: WLCSW1-161017-R198440				Units: mg/L		Analysis Date: 10/17/2016 10:11 PM		
Client ID:		Run ID: TOC3_161017A		SeqNo: 4095041		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	5.038	0.50	5	0	101	91-110	0			

MS		Sample ID: 1610056-36B MS				Units: mg/L		Analysis Date: 10/17/2016 10:11 PM		
Client ID: ATR-OW5(45)-G092616		Run ID: TOC3_161017A		SeqNo: 4095043		Prep Date:		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	489.2	50	250	223.3	106	87-120	0			

MSD		Sample ID: 1610056-36B MSD				Units: mg/L		Analysis Date: 10/17/2016 10:11 PM		
Client ID: ATR-OW5(45)-G092616		Run ID: TOC3_161017A		SeqNo: 4095044		Prep Date:		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	484.6	50	250	223.3	105	87-120	489.2	0.945	10	

The following samples were analyzed in this batch:

1610056-36B	1610056-39B	1610056-40B
1610056-41B	1610056-42B	1610056-43B
1610056-44B	1610056-45B	1610056-46B
1610056-47B	1610056-48B	1610056-49B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: AMEC Foster Wheeler
 Work Order: 1610056
 Project: TFS (3359151040)

QC BATCH REPORT

Batch ID: R198533A Instrument ID TOC3 Method: SW9060A

MBLK	Sample ID: WBLKW1-161018-R198533A				Units: mg/L			Analysis Date: 10/18/2016 04:38 PM		
Client ID:	Run ID: TOC3_161018A				SeqNo: 4097573		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total ND 0.50

LCS	Sample ID: WLCSW1-161018-R198533A				Units: mg/L			Analysis Date: 10/18/2016 04:38 PM		
Client ID:	Run ID: TOC3_161018A				SeqNo: 4097574		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 5.107 0.50 5 0 102 91-110 0

MS	Sample ID: 1610116-06D MS				Units: mg/L			Analysis Date: 10/18/2016 04:38 PM		
Client ID:	Run ID: TOC3_161018A				SeqNo: 4097579		Prep Date:		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 20.23 2.0 10 9.812 104 87-120 0

MSD	Sample ID: 1610116-06D MSD				Units: mg/L			Analysis Date: 10/18/2016 04:38 PM		
Client ID:	Run ID: TOC3_161018A				SeqNo: 4097580		Prep Date:		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Organic Carbon, Total 20.16 2.0 10 9.812 103 87-120 20.23 0.357 10

The following samples were analyzed in this batch: 1610056-40B 1610056-45B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



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COC ID: 34525

ALS Project Manager:

ALS Work Order #: 1610056

Customer Information		Project Information		Parameter/Method Request for Analysis															
Purchase Order	<u>C012605142</u>	Project Name	<u>3359151640</u>	A	VOCs														
Work Order		Project Number	<u>TFS</u>	B	TOC														
Company Name	<u>AMEC Foster Wheeler</u>	Bill To Company	<u>AMEC Foster Wheeler</u>	C															
Send Report To	<u>Paul Stork</u>	Invoice Attn	<u>Paul Stork</u>	D															
Address	<u>521 Byers Road, Suite 204</u>	Address	<u>521 Byers Road, Suite 204</u>	E															
				F															
City/State/Zip	<u>Miamisburg, OH 45342</u>	City/State/Zip	<u>Miamisburg, OH 45342</u>	G															
Phone	<u>(937) 859-3600</u>	Phone	<u>(937) 859-3600</u>	H															
Fax	<u>(937) 859-7951</u>	Fax	<u>(937) 859-7951</u>	I															
e-Mail Address		e-Mail Address		J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold	
1	ATR-MW82-G092816	9-28-16	1425	W	1/3	4	X	X										
2	ATR-EB001-G092816	9-28-16	1325	W	1/3	4	X	X										
3	ATR-MW12-G092816	9-28-16	1255	W	1/3	4	X	X										
4	ATR-MW13-G092816	9-28-16	1150	W	1/3	4	X	X										
5	ATR-CW1(29)-G092816	9-28-16	1020	W	1/3	4	X	X										
6	ATR-CW1(39)-G092816	9-28-16	0920	W	1/3	4	X	X										
7	ATR-CW1(39)-G092816 MS	9-28-16	0920	W	1/3	4	X	X										
8	ATR-CW1(39)-G092816 MSD	9-28-16	0920	W	1/3	4	X	X										
9	ATR-PM2-G092916	9-29-16	1640	W	1/3	4	X	X										
10	ATR-MW81(27)-G092916	9-29-16	1455	W	1/3	4	X	X										

Sampler(s) Please Print & Sign		Shipment Method		Turnaround Time in Business Days (BD) <input type="checkbox"/> Other _____				Results Due Date:		
				<input type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 3 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> 1 BD						
Relinquished by: <u>Lucas Hinegnolour</u>	Date: <u>9/30/16</u>	Time: <u>1050</u>	Received by: <u>[Signature]</u>		Notes:					
Relinquished by: <u>[Signature]</u>	Date: <u>9/30/16</u>	Time: <u>1430</u>	Received by (Laboratory): <u>[Signature]</u> <u>10/1/16</u>		Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
Logged by (Laboratory): <u>MB</u>	Date: <u>10/3/16</u>	Time: <u>1355</u>	Checked by (Laboratory):			<u>2.0</u>	<input type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist		
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						<u>3.2</u>	<input type="checkbox"/> Level III Std QC/Raw Date	<input type="checkbox"/> TRRP Level IV		
							<input type="checkbox"/> Level IV SW846/CLP			
							<input type="checkbox"/> Other _____			

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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COC ID: 34517

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York, PA
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Customer Information		ALS Project Manager:		ALS Work Order #: <u>16100066</u>	
Purchase Order	<u>C012605142</u>	Project Name	<u>TFS</u>	A	VOCs
Work Order		Project Number	<u>3355151040</u>	B	TOC
Company Name	<u>AMEC Foster Wheeler</u>	Bill To Company	<u>AMEC Foster Wheeler</u>	C	
Send Report To	<u>Paul Stork</u>	Invoice Attn	<u>Paul Stork</u>	D	
Address	<u>521 Byers Road, Suite 204</u>	Address	<u>521 Byers Road, Suite 204</u>	E	
City/State/Zip	<u>Miamisburg, OH 45342</u>	City/State/Zip	<u>Miamisburg, OH 45342</u>	F	
Phone	<u>(937) 859-3600</u>	Phone	<u>(937) 859-3600</u>	G	
Fax	<u>(937) 859-7951</u>	Fax	<u>(937) 859-7951</u>	H	
e-Mail Address		e-Mail Address		I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	<u>ATR-OW2(53)-6092716MSD</u>	<u>9-27-16</u>	<u>1700</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
2	<u>ATR-OW2(53)-6092716</u>	<u>9-27-16</u>	<u>1535</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
3	<u>ATR-MW15-6092716</u>	<u>9-27-16</u>	<u>1355</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
4	<u>ATR-MW25(45.2)-6092716</u>	<u>9-27-16</u>	<u>1155</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
5	<u>ATR-OW5(16)-6092716</u>	<u>9-27-16</u>	<u>1040</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
6	<u>ATR-OW4(54)-6092716</u>	<u>9-27-16</u>	<u>0950</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
7	<u>ATR-OW4(35)-6092716</u>	<u>9-27-16</u>	<u>1040</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
8	<u>ATR-MW25(52.6)-6092716</u>	<u>9-27-16</u>	<u>1155</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
9	<u>ATR-MW25(16.4)-6092716</u>	<u>9-27-16</u>	<u>1250</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
10	<u>ATR-OW3(55)-6092716</u>	<u>9-27-16</u>	<u>1445</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>

Sampler(s) Please Print & Sign		Shipment Method		Turnaround Time in Business Days (BD) <input type="checkbox"/> Other _____				Results Due Date:	
				<input type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 3 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> 1 BD					
Relinquished by:	<u>Lukas Hinegardner</u>	Date:	<u>9/30/16</u>	Time:	<u>1050</u>	Received by:	<u>James</u>	Notes:	
Relinquished by:	<u>James</u>	Date:	<u>9/30/16</u>	Time:	<u>1430</u>	Received by Laboratory:	<u>ATP Beckett</u>	<u>10/1/16</u>	
Logged by (Laboratory):	<u>MB</u>	Date:	<u>10/3/16</u>	Time:	<u>1355</u>	Checked by (Laboratory):			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035		Cooler ID		Cooler Temp		QC Package: (Check One Box Below)			
				<u>20</u>		<input type="checkbox"/> Level III Std QC <input type="checkbox"/> TRRP Checklist			
				<u>32</u>		<input type="checkbox"/> Level III Std QC/Raw Date <input type="checkbox"/> TRRP Level IV			
						<input type="checkbox"/> Level IV SW846/CLP			
						<input type="checkbox"/> Other _____			

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ALS Project Manager:

ALS Work Order #: 1610056

Customer Information		Project Information		Parameter/Method Request for Analysis											
Purchase Order	<u>C012605142</u>	Project Name	<u>3354151040</u>	A	VOCs										
Work Order		Project Number	<u>TFS</u>	B	TOC										
Company Name	<u>AMEC Foster Wheeler</u>	Bill To Company	<u>AMEC Foster Wheeler</u>	C											
Send Report To	<u>Paul Stork</u>	Invoice Attn	<u>Paul Stork</u>	D											
Address	<u>521 Byers Road, Suite 204</u>	Address	<u>521 Byers Road, Suite 204</u>	E											
				F											
City/State/Zip	<u>Miamisburg, OH 45342</u>	City/State/Zip	<u>Miamisburg, OH 45342</u>	G											
Phone	<u>(937) 859-3600</u>	Phone	<u>(937) 859-3600</u>	H											
Fax	<u>(937) 859-7951</u>	Fax	<u>(937) 859-7951</u>	I											
e-Mail Address		e-Mail Address		J											

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	<u>ATR-OW3(35)-6092716</u>	<u>9-27-16</u>	<u>1625</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
2	<u>ATR-MW16-6092616</u>	<u>9-26-16</u>	<u>1420</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
3	<u>ATR-MW24(55.4)-6092816</u>	<u>9-28-16</u>	<u>0930</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
4	<u>ATR-MW24(24.9)-6092816</u>	<u>9-28-16</u>	<u>1040</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
5	<u>ATR-MW14-6092816</u>	<u>9-28-16</u>	<u>1210</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
6	<u>ATR-MW20(51)-6092816</u>	<u>9-28-16</u>	<u>1335</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
7	<u>ATR-EB002-6092816</u>	<u>9-28-16</u>	<u>1400</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
8	<u>ATR-MW20(35)-6092816</u>	<u>9-28-16</u>	<u>1520</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
9	<u>ATR-MW20(35)-6092816R</u>	<u>9-28-16</u>	<u>1520</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
10	<u>ATR-MW6L-6092816</u>	<u>9-28-16</u>	<u>1540</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									

Sampler(s) Please Print & Sign: _____ Shipment Method: _____ Turnaround Time in Business Days (BD): 10 BD 5 BD 3 BD 2 BD 1 BD Other _____ Results Due Date: _____

Relinquished by: L. Miller (Honeyardner) Date: 9/30/16 Time: 1050 Received by: [Signature] Date: 10/1/16 Time: 930

Relinquished by: [Signature] Date: 9/30/16 Time: 1430 Received by (Laboratory): [Signature] Date: 10/1/16 Time: 930

Logged by (Laboratory): MB Date: 10/3/16 Time: 1355 Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Notes: Cooler ID: _____ Cooler Temp: 20
32

QC Package: (Check One Box Below)

Level II Std QC TRAP Checklist
 Level III Std QC/Raw Date TRAP Level IV
 Level IV SW846/CLP
 Other _____

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Page 4 of 6

COC ID: 34518

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+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager:

ALS Work Order #: 1610056

Customer Information		Project Information		Parameter/Method Request for Analysis											
Purchase Order	<u>C012605142</u>	Project Name	<u>TFS</u>	A	VOCs										
Work Order		Project Number	<u>3359151040</u>	B	TOC										
Company Name	<u>AMEC Foster Wheeler</u>	Bill To Company	<u>AMEC Foster Wheeler</u>	C											
Send Report To	<u>Paul Stork</u>	Invoice Attn	<u>Paul Stork</u>	D											
Address	<u>521 Byers Road, Suite 204</u>	Address	<u>521 Byers Road, Suite 204</u>	E											
				F											
City/State/Zip	<u>Miamisburg, OH 45342</u>	City/State/Zip	<u>Miamisburg, OH 45342</u>	G											
Phone	<u>(937) 859-3600</u>	Phone	<u>(937) 859-3600</u>	H											
Fax	<u>(937) 859-7951</u>	Fax	<u>(937) 859-7951</u>	I											
e-Mail Address		e-Mail Address		J											

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	<u>ATR-MW17-6092616</u>	<u>9-26-16</u>	<u>1250</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
2	<u>ATR-MW26(58.8)-6092616</u>	<u>9-26-16</u>	<u>1700</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
3	<u>ATR-MW26(28.8)-6092616</u>	<u>9-26-16</u>	<u>1605</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
4	<u>ATR-MW26(17.5)-6092616</u>	<u>9-26-16</u>	<u>1515</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
5	<u>ATR-ZVI2(17.5)-6092616</u>	<u>9-26-16</u>	<u>1305</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
6	<u>ATR-ZVI2(32.5)-6092616</u>	<u>9-26-16</u>	<u>1405</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
7	<u>ATR-OW5(35)-6092616</u>	<u>9-26-16</u>	<u>1650</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
8	<u>ATR-OW5(45)-6092616</u>	<u>9-26-16</u>	<u>1535</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
9	<u>ATR-OW2(33)-6092716</u>	<u>9-27-16</u>	<u>1700</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
10	<u>ATR-OW2(33)-6092716 MS</u>	<u>9-27-16</u>	<u>1700</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									

Sampler(s) Please Print & Sign _____ Shipment Method _____ Turnaround Time in Business Days (BD) 10 BD 5 BD 3 BD 2 BD 1 BD Other _____ Results Due Date: _____

Relinquished by: <u>Luis Hernandez</u>	Date: <u>9/30/16</u>	Time: <u>1050</u>	Received by: <u>[Signature]</u>	Notes:
Relinquished by: <u>[Signature]</u>	Date: <u>9/30/16</u>	Time: <u>1430</u>	Received by (Laboratory): <u>[Signature]</u>	Notes: <u>10/1/16</u> <u>930</u>
Logged by (Laboratory): <u>MB</u>	Date: <u>10/3/16</u>	Time: <u>1355</u>	Checked by (Laboratory):	QC Package: (Check One Box Below)
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				<input type="checkbox"/> Level II Std QC <input type="checkbox"/> TRAP Checklist <input type="checkbox"/> Level III Std QC/Raw Date <input type="checkbox"/> TRAP Level IV <input type="checkbox"/> Level IV SW846/CLP <input type="checkbox"/> Other _____

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York, PA
+1 717 505 5280

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COC ID: 34519

ALS Project Manager:

ALS Work Order #: 160056

Customer Information		Project Information		Parameter/Method Request for Analysis																			
Purchase Order	<u>012605142</u>	Project Name	<u>TFS</u>	A	VOCs																		
Work Order		Project Number	<u>3359 151040</u>	B	TOC																		
Company Name	<u>AMEC Foster Wheeler</u>	Bill To Company	<u>AMEC Foster Wheeler</u>	C																			
Send Report To	<u>Paul Stork</u>	Invoice Attn	<u>Paul Stork</u>	D																			
Address	<u>521 Byers Road, Suite 204</u>	Address	<u>521 Byers Road, Suite 204</u>	E																			
City/State/Zip	<u>Miamisburg, OH 45342</u>	City/State/Zip	<u>Miamisburg, OH 45342</u>	F																			
Phone	<u>(937) 859-3600</u>	Phone	<u>(937) 859-3600</u>	G																			
Fax	<u>(937) 859-7951</u>	Fax	<u>(937) 859-7951</u>	H																			
e-Mail Address		e-Mail Address		I																			
				J																			

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
7	ATR-MW76-6092916	9-29-16	1015	W	1/3	4	X	X									
8	ATR-MW77-6092916	9-29-16	1140	W	1/3	4	X	X									
9	ATR-MW78-6092916	9-29-16	1305	W	1/3	4	X	X									
0	ATR-MW89(29)-6092916	9-29-16	1625	W	1/3	4	X	X									
1	ATR-PM3-6092916	9-29-16	1505	W	1/3	4	X	X									
2	ATR-MW62-6092916	9-29-16	1409	W	1/3	4	X	X									
3	ATR-MW72-6092916	9-29-16	1235	W	1/3	4	X	X									
4	ATR-MW68-6092916	9-29-16	1125	W	1/3	4	X	X									
5	ATR-MW71-6092916	9-29-16	1030	W	1/3	4	X	X									
6	ATR-MW67-6092916	9-29-16	0940	W	1/3	4	X	X									

Sampler(s) Please Print & Sign		Shipment Method		Turnaround Time in Business Days (BD) <input type="checkbox"/> Other _____				Results Due Date:					
				<input type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 3 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> 1 BD									
Relinquished by:	<u>Lucas Hingorani</u>	Date:	<u>9/30/16</u>	Time:	<u>1050</u>	Received by:	<u>Penner</u>	Notes:					
Relinquished by:	<u>Penner</u>	Date:	<u>9/30/16</u>	Time:	<u>1430</u>	Received by (Laboratory):	<u>UMP Breacht</u>	10/1/16					
Logged by (Laboratory):	<u>NR</u>	Date:	<u>10/31/16</u>	Time:	<u>1355</u>	Checked by (Laboratory):							
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035								Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
									<u>20</u>	<input type="checkbox"/> Level II Std QC <input type="checkbox"/> TRRP Checklist			
									<u>32</u>	<input type="checkbox"/> Level III Std QC/Raw Date <input type="checkbox"/> TRRP Level IV			
										<input type="checkbox"/> Level IV SW846/CLP			
										<input type="checkbox"/> Other _____			

Note: 1. Any changes must be made in writing on samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.



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Everett, WA
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Page 6 of 6

COC ID: 34520

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager:

ALS Work Order #: 160056

Customer Information		Project Information		Parameter/Method Request for Analysis											
Purchase Order	<u>C012605142</u>	Project Name	<u>TFS</u>	A	VOCs										
Work Order		Project Number	<u>3359151640</u>	B	TOC										
Company Name	<u>AMEC Foster Wheeler</u>	Bill To Company	<u>AMEC Foster Wheeler</u>	C											
Send Report To	<u>Paul Stork</u>	Invoice Attn	<u>Paul Stork</u>	D											
Address	<u>521 Byers Road, Suite 204</u>	Address	<u>521 Byers Road, Suite 204</u>	E											
				F											
City/State/Zip	<u>Miamisburg, OH 45342</u>	City/State/Zip	<u>Miamisburg, OH 45342</u>	G											
Phone	<u>(937) 859-3600</u>	Phone	<u>(937) 859-3600</u>	H											
Fax	<u>(937) 859-7951</u>	Fax	<u>(937) 859-7951</u>	I											
e-Mail Address		e-Mail Address		J											

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	<u>ATR-EB003-6090916</u>	<u>9-29-16</u>	<u>0845</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
2	<u>ATR-MW59(29)-6093016</u>	<u>9-30-16</u>	<u>0930</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
3	<u>ATR-MW59(29)-6093016R</u>	<u>9-30-16</u>	<u>0930</u>	<u>W</u>	<u>1/3</u>	<u>4</u>	<u>X</u>	<u>X</u>									
4	<u>ATR-TB001-6093016</u>	<u>9-30-16</u>	<u>/</u>	<u>W</u>	<u>1</u>	<u>2</u>	<u>X</u>										
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Turnaround Time in Business Days (BD) <input type="checkbox"/> Other _____				Results Due Date:				
				<input type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 3 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> 1 BD								
Relinquished by:	<u>Lucas Hines</u>	Date:	<u>9/30/16</u>	Time:	<u>1050</u>	Received by:	<u>P. Stork</u>	Notes:				
Relinquished by:	<u>P. Stork</u>	Date:	<u>9/30/16</u>	Time:	<u>1430</u>	Received by (Laboratory):	<u>M. Breccetti</u>	10/1/16				
Logged by (Laboratory):	<u>MB</u>	Date:	<u>10/30/16</u>	Time:	<u>1355</u>	Checked by (Laboratory):	<u>930</u>	Cooler ID	Cooler Temp	QC Package: (Check One Box Below)		
									<u>2.0</u>	<input type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist	
									<u>3.2</u>	<input type="checkbox"/> Level III Std QC/Raw Data	<input type="checkbox"/> TRRP Level IV	
										<input type="checkbox"/> Level IV SW846/CLP		
										<input type="checkbox"/> Other _____		

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Sample Receipt Checklist

Client Name: **AMEC - DAYTON**

Date/Time Received: **01-Oct-16 09:30**

Work Order: **1610056**

Received by: **MBB**

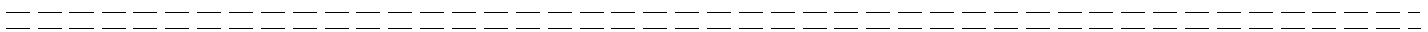
Checklist completed by Meghan Broadbent 03-Oct-16
eSignature Date

Reviewed by: Joseph Ribar 05-Oct-16
eSignature Date

Matrices: **water**
Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<input type="text" value="2.0/2.0 3.2/3.2"/>		<input type="text" value="SR2"/>
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="10/3/2016 3:26:26 PM"/>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	<input type="text"/>		

Login Notes:



Client Contacted: Date Contacted: Person Contacted:
Contacted By: Regarding:

Comments:

CorrectiveAction:



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

October 17, 2016

Paul Stork
AMEC Foster Wheeler
521 Byers Road
Suite 204
Miamisburg, OH 45342

RE: **3359151040**

Pace Workorder: 20465

Dear Paul Stork:

Enclosed are the analytical results for sample(s) received by the laboratory on Monday, October 03, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Ruth Welsh 10/17/2016
Ruth.Welsh@pacelabs.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages ____

Report ID: 20465 - 849653

Page 1 of 62



CERTIFICATE OF ANALYSIS

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Pace Analytical Energy Services LLC
 220 William Pitt Way
 Pittsburgh, PA 15238
 Phone: (412) 826-5245
 Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).



CERTIFICATE OF ANALYSIS

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SAMPLE SUMMARY

Workorder: 20465 3359151040

Lab ID	Sample ID	Matrix	Date Collected	Date Received
204650001	ATR-MW17-G092616	Water	9/26/2016 12:50	10/3/2016 08:30
204650002	ATR-MW26(58.8)-G092616	Water	9/26/2016 17:00	10/3/2016 08:30
204650003	ATR-MW26(28.8)-G092616	Water	9/26/2016 16:05	10/3/2016 08:30
204650004	ATR-MW26(17.5)-G092616	Water	9/26/2016 15:15	10/3/2016 08:30
204650005	ATR-ZVI2(17.5)-G092616	Water	9/26/2016 13:05	10/3/2016 08:30
204650006	ATR-ZVI2(32.5)-G092616	Water	9/26/2016 14:05	10/3/2016 08:30
204650007	ATR-OW5(35)-G092616	Water	9/26/2016 16:50	10/3/2016 08:30
204650008	ATR-OW5(45)-G092616	Water	9/26/2016 15:35	10/3/2016 08:30
204650009	ATR-MW16-G092616	Water	9/26/2016 14:20	10/3/2016 08:30
204650010	ATR-OW2(33)-G092716	Water	9/27/2016 17:00	10/3/2016 08:30
204650011	ATR-OW2(53)-G092716	Water	9/27/2016 15:35	10/3/2016 08:30
204650012	ATR-MW15-G092716	Water	9/27/2016 13:55	10/3/2016 08:30
204650013	ATR-MW25(45.2)-G092716	Water	9/27/2016 11:55	10/3/2016 08:30
204650014	ATR-OW5(16)-G092716	Water	9/27/2016 10:40	10/3/2016 08:30
204650015	ATR-OW4(54)-G092716	Water	9/27/2016 09:50	10/3/2016 08:30
204650016	ATR-OW4(35)-G092716	Water	9/27/2016 10:40	10/3/2016 08:30
204650017	ATR-MW25(32.6)-G092716	Water	9/27/2016 11:55	10/3/2016 08:30
204650018	ATR-MW25(16.4)-G092716	Water	9/27/2016 12:50	10/3/2016 08:30
204650019	ATR-OW3(55)-G092716	Water	9/27/2016 14:45	10/3/2016 08:30
204650020	ATR-OW3(35)-G092716	Water	9/27/2016 16:25	10/3/2016 08:30
204650021	ATR-MW24(55.4)-G092816	Water	9/28/2016 09:30	10/3/2016 08:30
204650022	ATR-MW24(24.9)-G092816	Water	9/28/2016 10:40	10/3/2016 08:30
204650023	ATR-MW14-G092816	Water	9/28/2016 12:10	10/3/2016 08:30
204650024	ATR-MW20(51)-G092816	Water	9/28/2016 13:35	10/3/2016 08:30
204650025	ATR-MW76-G092916	Water	9/29/2016 10:15	10/3/2016 08:30
204650026	ATR-MW77-G092916	Water	9/29/2016 11:40	10/3/2016 08:30
204650027	ATR-MW78-G092916	Water	9/29/2016 13:05	10/3/2016 08:30
204650028	ATR-PM3-G092916	Water	9/29/2016 15:05	10/3/2016 08:30
204650029	ATR-MW62-G092916	Water	9/29/2016 14:00	10/3/2016 08:30
204650030	ATR-MW72-G092916	Water	9/29/2016 12:35	10/3/2016 08:30
204650031	ATR-MW68-G092916	Water	9/29/2016 11:25	10/3/2016 08:30
204650032	ATR-MW71-G092916	Water	9/29/2016 10:30	10/3/2016 08:30
204650033	ATR-MW67-G092916	Water	9/29/2016 09:40	10/3/2016 08:30
204650034	ATR-EB003-G092916	Water	9/29/2016 08:45	10/3/2016 08:30
204650035	ATR-MW59(29)-G093016	Water	9/30/2016 09:30	10/3/2016 08:30

Report ID: 20465 - 849653

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SAMPLE SUMMARY

Workorder: 20465 3359151040

Lab ID	Sample ID	Matrix	Date Collected	Date Received
204650036	ATR-MW59(29)-G093016R	Water	9/30/2016 09:30	10/3/2016 08:30
204650037	ATR-EB002-G092816	Water	9/28/2016 14:00	10/3/2016 08:30
204650038	ATR-MW20(35)-G092816	Water	9/28/2016 15:20	10/3/2016 08:30
204650039	ATR-MW20(35)-G092816R	Water	9/28/2016 15:20	10/3/2016 08:30
204650040	ATR-MW6C-G092816	Water	9/28/2016 15:40	10/3/2016 08:30
204650041	ATR-MW82-G092816	Water	9/28/2016 14:25	10/3/2016 08:30
204650042	ATR-EB001-G092816	Water	9/28/2016 13:25	10/3/2016 08:30
204650043	ATR-MW12-G092816	Water	9/28/2016 12:55	10/3/2016 08:30
204650044	ATR-MW13-G092816	Water	9/28/2016 11:50	10/3/2016 08:30
204650045	ATR-OW1(28)-G092816	Water	9/28/2016 10:20	10/3/2016 08:30
204650046	ATR-OW1(39)-G092816	Water	9/28/2016 09:20	10/3/2016 08:30
204650047	ATR-PM2-G092916	Water	9/29/2016 16:40	10/3/2016 08:30
204650048	ATR-MW81(27)-G092916	Water	9/29/2016 14:55	10/3/2016 08:30



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PROJECT SUMMARY

Workorder: 20465 3359151040

Workorder Comments

The container pH for samples 20465 (0008-0009, 0035) were measured as below the expected pH (< 10) for those samples preserved with trisodium phosphate, as assigned to PAES method AM20GAX.

Samples 20465 (0011-0012) were analyzed outside the hold time of 14 days from collection for the Light Hydrocarbons, method AM20GAX. The original analysis of the sample was conducted within the procedural holdtime; however re-analysis to confirm concentration was conducted outside the assigned holding time period.

Batch Comments

Batch: DISG/5654 - AM20GAX Water QC

The matrix spike and/or spike duplicate, recovery or relative percent difference; accuracy influenced by the concentration of the reference sample 204380005. Analyte Methane. Batch acceptance based on laboratory control sample recovery.



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650001 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW17-G092616 Date Collected: 9/26/2016 12:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	2.2	ug/l	0.50	0.027	1	10/8/2016 06:21	TD	n
Ethane	0.023J	ug/l	0.10	0.0070	1	10/8/2016 06:21	TD	n
Ethene	0.10 U	ug/l	0.10	0.0090	1	10/8/2016 06:21	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650002** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-MW26(58.8)-G092616** Date Collected: 9/26/2016 17:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	9500	ug/l	0.50	0.027	1	10/8/2016 06:33	TD	n
Ethane	3.1	ug/l	0.10	0.0070	1	10/8/2016 06:33	TD	n
Ethene	10	ug/l	0.10	0.0090	1	10/8/2016 06:33	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650003 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW26(28.8)-G092616 Date Collected: 9/26/2016 16:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	22000	ug/l	0.50	0.027	1	10/8/2016 06:46	TD	n
Ethane	90	ug/l	0.10	0.0070	1	10/8/2016 06:46	TD	n
Ethene	0.10	U ug/l	0.10	0.0090	1	10/8/2016 06:46	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650004 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW26(17.5)-G092616 Date Collected: 9/26/2016 15:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	16000	ug/l	0.50	0.027	1	10/8/2016 07:04	TD	n
Ethane	250	ug/l	0.10	0.0070	1	10/8/2016 07:04	TD	n
Ethene	100	ug/l	0.10	0.0090	1	10/8/2016 07:04	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650005 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-ZVI2(17.5)-G092616 Date Collected: 9/26/2016 13:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	19000	ug/l	0.50	0.027	1	10/8/2016 07:17	TD	n
Ethane	380	ug/l	0.10	0.0070	1	10/8/2016 07:17	TD	n
Ethene	19	ug/l	0.10	0.0090	1	10/8/2016 07:17	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650006 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-ZVI2(32.5)-G092616 Date Collected: 9/26/2016 14:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	5200	ug/l	0.50	0.027	1	10/8/2016 07:29	TD	n
Ethane	31	ug/l	0.10	0.0070	1	10/8/2016 07:29	TD	n
Ethene	180	ug/l	0.10	0.0090	1	10/8/2016 07:29	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650007** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-OW5(35)-G092616** Date Collected: 9/26/2016 16:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
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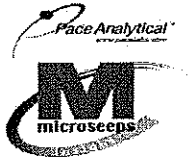
RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
Methane	22000	ug/l	0.50	0.027	1	10/8/2016 07:42	TD	n
Ethane	110	ug/l	0.10	0.0070	1	10/8/2016 07:42	TD	n
Ethene	200	ug/l	0.10	0.0090	1	10/8/2016 07:42	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

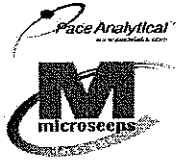
Lab ID: 204650008 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW5(45)-G092616 Date Collected: 9/26/2016 15:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	16000	ug/l	0.50	0.027	1	10/8/2016 07:54	TD	n
Ethane	19	ug/l	0.10	0.0070	1	10/8/2016 07:54	TD	n
Ethene	860	ug/l	0.10	0.0090	1	10/8/2016 07:54	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650009** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-MW16-G092616** Date Collected: 9/26/2016 14:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	22000	ug/l	0.50	0.027	1	10/8/2016 08:07	TD	n
Ethane	84	ug/l	0.10	0.0070	1	10/8/2016 08:07	TD	n
Ethene	140	ug/l	0.10	0.0090	1	10/8/2016 08:07	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650010 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW2(33)-G092716 Date Collected: 9/27/2016 17:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	22000	ug/l	0.50	0.027	1	10/8/2016 08:19	TD	n
Ethane	200	ug/l	0.10	0.0070	1	10/8/2016 08:19	TD	n
Ethene	870	ug/l	0.10	0.0090	1	10/8/2016 08:19	TD	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650011 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW2(53)-G092716 Date Collected: 9/27/2016 15:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	28000	ug/l	0.50	0.027	1	10/14/2016 16:00	BW	H1,n
Ethane	150	ug/l	0.10	0.0030	1	10/14/2016 16:00	BW	H1,n
Ethene	9.3	ug/l	0.10	0.0010	1	10/14/2016 16:00	BW	H1,n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650012 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW15-G092716 Date Collected: 9/27/2016 13:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	11000	ug/l	0.50	0.027	1	10/14/2016 16:19	BW	H1,n
Ethane	20	ug/l	0.10	0.0030	1	10/14/2016 16:19	BW	H1,n
Ethene	1700	ug/l	0.10	0.0010	1	10/14/2016 16:19	BW	H1,n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650013** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-MW25(45.2)-G092716** Date Collected: 9/27/2016 11:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
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RISK - PAES

Analysis Desc: AM20GAX		Analytical Method: AM20GAX						
Methane	9800	ug/l	0.50	0.027	1	10/11/2016 10:08	BW	M3,D3,M5,n
Ethane	12	ug/l	0.10	0.0030	1	10/11/2016 10:08	BW	n
Ethene	1900	ug/l	0.10	0.0010	1	10/11/2016 10:08	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650014 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW5(16)-G092716 Date Collected: 9/27/2016 10:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	17000	ug/l	0.50	0.027	1	10/11/2016 10:18	BW	M3,D3,M5,n
Ethane	60	ug/l	0.10	0.0030	1	10/11/2016 10:18	BW	n
Ethene	74	ug/l	0.10	0.0010	1	10/11/2016 10:18	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650015** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-OW4(54)-G092716** Date Collected: 9/27/2016 09:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	6800	ug/l	0.50	0.027	1	10/11/2016 10:31	BW	M3,D3,M5,n
Ethane	0.25	ug/l	0.10	0.0030	1	10/11/2016 10:31	BW	n
Ethene	0.16	ug/l	0.10	0.0010	1	10/11/2016 10:31	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650016 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW4(35)-G092716 Date Collected: 9/27/2016 10:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	20000	ug/l	0.50	0.027	1	10/11/2016 10:41	BW	M3,D3,M5,n
Ethane	8.4	ug/l	0.10	0.0030	1	10/11/2016 10:41	BW	n
Ethene	760	ug/l	0.10	0.0010	1	10/11/2016 10:41	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650017 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW25(32.6)-G092716 Date Collected: 9/27/2016 11:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	24000	ug/l	0.50	0.027	1	10/11/2016 10:52	BW	M3,D3,M5,n
Ethane	450	ug/l	0.10	0.0030	1	10/11/2016 10:52	BW	n
Ethene	130	ug/l	0.10	0.0010	1	10/11/2016 10:52	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650018 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW25(16.4)-G092716 Date Collected: 9/27/2016 12:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	18000	ug/l	0.50	0.027	1	10/11/2016 11:01	BW	M3,D3,n,M5
Ethane	370	ug/l	0.10	0.0030	1	10/11/2016 11:01	BW	n
Ethene	180	ug/l	0.10	0.0010	1	10/11/2016 11:01	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650019 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW3(55)-G092716 Date Collected: 9/27/2016 14:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	24000	ug/l	0.50	0.027	1	10/11/2016 11:12	BW	M3,D3,n,M5
Ethane	66	ug/l	0.10	0.0030	1	10/11/2016 11:12	BW	n
Ethene	80	ug/l	0.10	0.0010	1	10/11/2016 11:12	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650020 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW3(35)-G092716 Date Collected: 9/27/2016 16:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	12000	ug/l	0.50	0.027	1	10/11/2016 11:22	BW	M3,D3,n,M5
Ethane	48	ug/l	0.10	0.0030	1	10/11/2016 11:22	BW	n
Ethene	36	ug/l	0.10	0.0010	1	10/11/2016 11:22	BW	n



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ANALYTICAL RESULTS

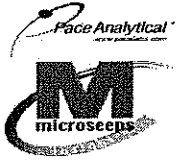
Workorder: 20465 3359151040

Lab ID: 204650021 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW24(55.4)-G092816 Date Collected: 9/28/2016 09:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	22	ug/l	0.50	0.027	1	10/12/2016 14:23	BW	n
Ethane	0.17	ug/l	0.10	0.0030	1	10/12/2016 14:23	BW	n
Ethene	0.086J	ug/l	0.10	0.0010	1	10/12/2016 14:23	BW	n



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Workorder: 20465 3359151040

Lab ID: **204650022** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-MW24(24.9)-G092816** Date Collected: 9/28/2016 10:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	180	ug/l	0.50	0.027	1	10/12/2016 14:34	BW	n
Ethane	0.0093J	ug/l	0.10	0.0030	1	10/12/2016 14:34	BW	n
Ethene	0.016J	ug/l	0.10	0.0010	1	10/12/2016 14:34	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650023 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW14-G092816 Date Collected: 9/28/2016 12:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	6400	ug/l	0.50	0.027	1	10/12/2016 15:24	BW	n
Ethane	10	ug/l	0.10	0.0030	1	10/12/2016 15:24	BW	n
Ethene	950	ug/l	0.10	0.0010	1	10/12/2016 15:24	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650024 Date Received: 10/3/2016 08:30 Matrix: Water
Sample ID: ATR-MW20(51)-G092816 Date Collected: 9/28/2016 13:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	23000	ug/l	0.50	0.027	1	10/12/2016 15:36	BW	n
Ethane	19	ug/l	0.10	0.0030	1	10/12/2016 15:36	BW	n
Ethene	0.022J	ug/l	0.10	0.0010	1	10/12/2016 15:36	BW	n



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Workorder: 20465 3359151040

Lab ID: **204650025** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-MW76-G092916** Date Collected: 9/29/2016 10:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	6000	ug/l	0.50	0.027	1	10/12/2016 15:45	BW	n
Ethane	110	ug/l	0.10	0.0030	1	10/12/2016 15:45	BW	n
Ethene	2600	ug/l	0.10	0.0010	1	10/12/2016 15:45	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650026 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW77-G092916 Date Collected: 9/29/2016 11:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	4200	ug/l	0.50	0.027	1	10/12/2016 15:55	BW	n
Ethane	19	ug/l	0.10	0.0030	1	10/12/2016 15:55	BW	n
Ethene	6.4	ug/l	0.10	0.0010	1	10/12/2016 15:55	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650027 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW78-G092916 Date Collected: 9/29/2016 13:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	22000	ug/l	0.50	0.027	1	10/12/2016 16:06	BW	n
Ethane	38	ug/l	0.10	0.0030	1	10/12/2016 16:06	BW	n
Ethene	0.85	ug/l	0.10	0.0010	1	10/12/2016 16:06	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650028 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-PM3-G092916 Date Collected: 9/29/2016 15:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	17000	ug/l	0.50	0.027	1	10/13/2016 08:07	BW	n
Ethane	180	ug/l	0.10	0.0030	1	10/13/2016 08:07	BW	n
Ethene	4400	ug/l	0.10	0.0010	1	10/13/2016 08:07	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650029 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW62-G092916 Date Collected: 9/29/2016 14:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	17000	ug/l	0.50	0.027	1	10/13/2016 08:16	BW	n
Ethane	250	ug/l	0.10	0.0030	1	10/13/2016 08:16	BW	n
Ethene	2100	ug/l	0.10	0.0010	1	10/13/2016 08:16	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650030 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW72-G092916 Date Collected: 9/29/2016 12:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	7900	ug/l	0.50	0.027	1	10/13/2016 08:42	BW	n
Ethane	60	ug/l	0.10	0.0030	1	10/13/2016 08:42	BW	n
Ethene	8000	ug/l	0.10	0.0010	1	10/13/2016 08:42	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650031 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW68-G092916 Date Collected: 9/29/2016 11:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	11000	ug/l	0.50	0.027	1	10/13/2016 08:53	BW	n
Ethane	80	ug/l	0.10	0.0030	1	10/13/2016 08:53	BW	n
Ethene	6500	ug/l	0.10	0.0010	1	10/13/2016 08:53	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650032 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW71-G092916 Date Collected: 9/29/2016 10:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	9400	ug/l	0.50	0.027	1	10/13/2016 09:05	BW	n
Ethane	70	ug/l	0.10	0.0030	1	10/13/2016 09:05	BW	n
Ethene	5000	ug/l	0.10	0.0010	1	10/13/2016 09:05	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650033 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW67-G092916 Date Collected: 9/29/2016 09:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	3800	ug/l	0.50	0.027	1	10/13/2016 09:14	BW	n
Ethane	170	ug/l	0.10	0.0030	1	10/13/2016 09:14	BW	n
Ethene	4200	ug/l	0.10	0.0010	1	10/13/2016 09:14	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650034 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-EB003-G092916 Date Collected: 9/29/2016 08:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
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RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
Methane	0.16J	ug/l	0.50	0.027	1	10/13/2016 09:29	BW	n
Ethane	0.0094J	ug/l	0.10	0.0030	1	10/13/2016 09:29	BW	n
Ethene	0.060J	ug/l	0.10	0.0010	1	10/13/2016 09:29	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650035 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW59(29)-G093016 Date Collected: 9/30/2016 09:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	16000	ug/l	0.50	0.027	1	10/13/2016 09:38	BW	n
Ethane	130	ug/l	0.10	0.0030	1	10/13/2016 09:38	BW	n
Ethene	7400	ug/l	0.10	0.0010	1	10/13/2016 09:38	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650036 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW59(29)-G093016R Date Collected: 9/30/2016 09:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	18000	ug/l	0.50	0.027	1	10/13/2016 09:51	BW	n
Ethane	140	ug/l	0.10	0.0030	1	10/13/2016 09:51	BW	n
Ethene	8000	ug/l	0.10	0.0010	1	10/13/2016 09:51	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650037 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-EB002-G092816 Date Collected: 9/28/2016 14:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	0.42J	ug/l	0.50	0.027	1	10/12/2016 16:16	BW	n
Ethane	0.015J	ug/l	0.10	0.0030	1	10/12/2016 16:16	BW	n
Ethene	0.037J	ug/l	0.10	0.0010	1	10/12/2016 16:16	BW	n



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Workorder: 20465 3359151040

Lab ID: 204650038 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW20(35)-G092816 Date Collected: 9/28/2016 15:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
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RISK - PAES

Analysis Desc: AM20GAX Analytical Method: AM20GAX

Methane	16000	ug/l	0.50	0.027	1	10/12/2016 16:25	BW	n
Ethane	500	ug/l	0.10	0.0030	1	10/12/2016 16:25	BW	n
Ethene	400	ug/l	0.10	0.0010	1	10/12/2016 16:25	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650039 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW20(35)-G092816R Date Collected: 9/28/2016 15:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	17000	ug/l	0.50	0.027	1	10/12/2016 16:36	BW	n
Ethane	510	ug/l	0.10	0.0030	1	10/12/2016 16:36	BW	n
Ethene	400	ug/l	0.10	0.0010	1	10/12/2016 16:36	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650040 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW6C-G092816 Date Collected: 9/28/2016 15:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
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RISK - PAES

Analysis Desc: AM20GAX Analytical Method: AM20GAX

Methane	17000	ug/l	0.50	0.027	1	10/12/2016 16:45	BW	n
Ethane	270	ug/l	0.10	0.0030	1	10/12/2016 16:45	BW	n
Ethene	360	ug/l	0.10	0.0010	1	10/12/2016 16:45	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650041 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW82-G092816 Date Collected: 9/28/2016 14:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	27000	ug/l	0.50	0.027	1	10/12/2016 16:57	BW	n
Ethane	34	ug/l	0.10	0.0030	1	10/12/2016 16:57	BW	n
Ethene	0.024J	ug/l	0.10	0.0010	1	10/12/2016 16:57	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650042** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-EB001-G092816** Date Collected: 9/28/2016 13:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	0.58	ug/l	0.50	0.027	1	10/12/2016 17:06	BW	n
Ethane	0.013J	ug/l	0.10	0.0030	1	10/12/2016 17:06	BW	n
Ethene	0.0097J	ug/l	0.10	0.0010	1	10/12/2016 17:06	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

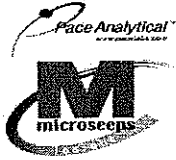
Lab ID: 204650043 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW12-G092816 Date Collected: 9/28/2016 12:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	19000	ug/l	0.50	0.027	1	10/12/2016 17:18	BW	n
Ethane	110	ug/l	0.10	0.0030	1	10/12/2016 17:18	BW	n
Ethene	410	ug/l	0.10	0.0010	1	10/12/2016 17:18	BW	n



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 Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: **204650044** Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: **ATR-MW13-G092816** Date Collected: 9/28/2016 11:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	20000	ug/l	0.50	0.027	1	10/12/2016 17:28	BW	n
Ethane	310	ug/l	0.10	0.0030	1	10/12/2016 17:28	BW	n
Ethene	280	ug/l	0.10	0.0010	1	10/12/2016 17:28	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650045 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW1(28)-G092816 Date Collected: 9/28/2016 10:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	12000	ug/l	0.50	0.027	1	10/12/2016 17:37	BW	n
Ethane	67	ug/l	0.10	0.0030	1	10/12/2016 17:37	BW	n
Ethene	170	ug/l	0.10	0.0010	1	10/12/2016 17:37	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650046 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-OW1(39)-G092816 Date Collected: 9/28/2016 09:20

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	10000	ug/l	0.50	0.027	1	10/12/2016 17:46	BW	n
Ethane	210	ug/l	0.10	0.0030	1	10/12/2016 17:46	BW	n
Ethene	17	ug/l	0.10	0.0010	1	10/12/2016 17:46	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650047 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-PM2-G092916 Date Collected: 9/29/2016 16:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	21000	ug/l	0.50	0.027	1	10/13/2016 10:05	BW	n
Ethane	360	ug/l	0.10	0.0030	1	10/13/2016 10:05	BW	n
Ethene	7800	ug/l	0.10	0.0010	1	10/13/2016 10:05	BW	n



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ANALYTICAL RESULTS

Workorder: 20465 3359151040

Lab ID: 204650048 Date Received: 10/3/2016 08:30 Matrix: Water
 Sample ID: ATR-MW81(27)-G092916 Date Collected: 9/29/2016 14:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - PAES								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Methane	21000	ug/l	0.50	0.027	1	10/13/2016 10:16	BW	n
Ethane	280	ug/l	0.10	0.0030	1	10/13/2016 10:16	BW	n
Ethene	1500	ug/l	0.10	0.0010	1	10/13/2016 10:16	BW	n



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ANALYTICAL RESULTS QUALIFIERS

Workorder: 20465 3359151040

DEFINITIONS/QUALIFIERS

- MDL Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
- PQL Practical Quantitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
- ND Not detected at or above reporting limit.
- DF Dilution Factor.
- S Surrogate.
- RPD Relative Percent Difference.
- % Rec Percent Recovery.
- U Indicates the compound was analyzed for, but not detected at or above the noted concentration.
- J Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

- n The laboratory does not hold NELAP/TNI accreditation for this method or analyte.
- H1 The sample was prepared or the analysis was conducted outside the method specific holding time.
- D3 The matrix spike duplicate relative percent difference (RPD) exceeded laboratory control limits.
- M5 The matrix spike duplicate sample recovery was outside laboratory control limits.
- M3 The matrix spike sample recovery was outside laboratory control limits.



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QUALITY CONTROL DATA

Workorder: 20465 3359151040

QC Batch: DISG/5654 Analysis Method: AM20GAX
 QC Batch Method: AM20GAX
 Associated Lab Samples: 204650013, 204650014, 204650015, 204650016, 204650017, 204650018, 204650019, 204650020

METHOD BLANK: 44646

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.50 U	0.50	M3,D3,M5,n
Ethane	ug/l	0.10 U	0.10	n
Ethene	ug/l	0.10 U	0.10	n

LABORATORY CONTROL SAMPLE & LCSD: 44647 44648

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	740	760	99	101	80-120	2	20	M3,M5,D3,n
Ethane	ug/l	38	38	40	101	104	80-120	2.9	20	n
Ethene	ug/l	35	36	37	101	104	80-120	2.9	20	n

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 44692 44693 Original: 204380005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK											
Methane	ug/l	13000	750	14000	14000	50	39	70-130	25	20	M3,D3,M5,n
Ethane	ug/l	60	38	92	95	84	91	70-130	8	20	n
Ethene	ug/l	26	35	58	59	90	93	70-130	3.3	20	n



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QUALITY CONTROL DATA

Workorder: 20465 3359151040

QC Batch: DISG/5655 Analysis Method: AM20GAX
 QC Batch Method: AM20GAX
 Associated Lab Samples: 204650001, 204650002, 204650003, 204650004, 204650005, 204650006, 204650007, 204650008, 204650009, 204650010

METHOD BLANK: 44663

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.50 U	0.50	n
Ethane	ug/l	0.10 U	0.10	n
Ethene	ug/l	0.10 U	0.10	n

LABORATORY CONTROL SAMPLE & LCSD: 44665 44667

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	760	740	101	99	80-120	2	20	n
Ethane	ug/l	38	39	38	103	99	80-120	4	20	n
Ethene	ug/l	35	36	36	103	102	80-120	0.98	20	n



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QUALITY CONTROL DATA

Workorder: 20465 3359151040

QC Batch: DISG/5660 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 204650021, 204650022, 204650023, 204650024, 204650025, 204650026, 204650027, 204650037, 204650038, 204650039, 204650040, 204650041, 204650042, 204650043, 204650044, 204650045, 204650046

METHOD BLANK: 44689

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.50 U	0.50	n
Ethane	ug/l	0.10 U	0.10	n
Ethene	ug/l	0.10 U	0.10	n

LABORATORY CONTROL SAMPLE & LCSD: 44690 44691

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	760	780	101	104	80-120	2.9	20	n
Ethane	ug/l	38	38	39	102	103	80-120	0.98	20	n
Ethene	ug/l	35	36	37	103	104	80-120	0.97	20	n



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QUALITY CONTROL DATA

Workorder: 20465 3359151040

QC Batch: DISG/5666 Analysis Method: AM20GAX
 QC Batch Method: AM20GAX
 Associated Lab Samples: 204650028, 204650029, 204650030, 204650031, 204650032, 204650033, 204650034, 204650035, 204650036,
 204650047, 204650048

METHOD BLANK: 44730

Parameter	Units	Blank Result	Reporting Limit Qualifiers
RISK			
Methane	ug/l	0.50 U	0.50 n
Ethane	ug/l	0.10 U	0.10 n
Ethene	ug/l	0.10 U	0.10 n

LABORATORY CONTROL SAMPLE & LCSD: 44732 44734

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	770	750	103	100	80-120	3	20	n
Ethane	ug/l	38	38	38	102	100	80-120	2	20	n
Ethene	ug/l	35	36	36	102	101	80-120	0.99	20	n



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QUALITY CONTROL DATA QUALIFIERS

Workorder: 20465 3359151040

QUALITY CONTROL PARAMETER QUALIFIERS

- D3 The matrix spike duplicate relative percent difference (RPD) exceeded laboratory control limits.
- M3 The matrix spike sample recovery was outside laboratory control limits.
- M5 The matrix spike duplicate sample recovery was outside laboratory control limits.
- n The laboratory does not hold NELAP/TNI accreditation for this method or analyte.



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 20465 3359151040

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
204650013	ATR-MW25(45.2)-G092716			AM20GAX	DISG/5654
204650014	ATR-OW5(16)-G092716			AM20GAX	DISG/5654
204650015	ATR-OW4(54)-G092716			AM20GAX	DISG/5654
204650016	ATR-OW4(35)-G092716			AM20GAX	DISG/5654
204650017	ATR-MW25(32.6)-G092716			AM20GAX	DISG/5654
204650018	ATR-MW25(16.4)-G092716			AM20GAX	DISG/5654
204650019	ATR-OW3(55)-G092716			AM20GAX	DISG/5654
204650020	ATR-OW3(35)-G092716			AM20GAX	DISG/5654
204650001	ATR-MW17-G092616			AM20GAX	DISG/5655
204650002	ATR-MW26(58.8)-G092616			AM20GAX	DISG/5655
204650003	ATR-MW26(28.8)-G092616			AM20GAX	DISG/5655
204650004	ATR-MW26(17.5)-G092616			AM20GAX	DISG/5655
204650005	ATR-ZVI2(17.5)-G092616			AM20GAX	DISG/5655
204650006	ATR-ZVI2(32.5)-G092616			AM20GAX	DISG/5655
204650007	ATR-OW5(35)-G092616			AM20GAX	DISG/5655
204650008	ATR-OW5(45)-G092616			AM20GAX	DISG/5655
204650009	ATR-MW16-G092616			AM20GAX	DISG/5655
204650010	ATR-OW2(33)-G092716			AM20GAX	DISG/5655
204650021	ATR-MW24(55.4)-G092816			AM20GAX	DISG/5660
204650022	ATR-MW24(24.9)-G092816			AM20GAX	DISG/5660
204650023	ATR-MW14-G092816			AM20GAX	DISG/5660
204650024	ATR-MW20(51)-G092816			AM20GAX	DISG/5660
204650025	ATR-MW76-G092916			AM20GAX	DISG/5660
204650026	ATR-MW77-G092916			AM20GAX	DISG/5660
204650027	ATR-MW78-G092916			AM20GAX	DISG/5660
204650037	ATR-EB002-G092816			AM20GAX	DISG/5660
204650038	ATR-MW20(35)-G092816			AM20GAX	DISG/5660
204650039	ATR-MW20(35)-G092816R			AM20GAX	DISG/5660
204650040	ATR-MW6C-G092816			AM20GAX	DISG/5660
204650041	ATR-MW82-G092816			AM20GAX	DISG/5660
204650042	ATR-EB001-G092816			AM20GAX	DISG/5660
204650043	ATR-MW12-G092816			AM20GAX	DISG/5660

Report ID: 20465 - 849653

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 20465 3359151040

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
204650044	ATR-MW13-G092816			AM20GAX	DISG/5660
204650045	ATR-OW1(28)-G092816			AM20GAX	DISG/5660
204650046	ATR-OW1(39)-G092816			AM20GAX	DISG/5660
204650028	ATR-PM3-G092916			AM20GAX	DISG/5666
204650029	ATR-MW62-G092916			AM20GAX	DISG/5666
204650030	ATR-MW72-G092916			AM20GAX	DISG/5666
204650031	ATR-MW68-G092916			AM20GAX	DISG/5666
204650032	ATR-MW71-G092916			AM20GAX	DISG/5666
204650033	ATR-MW67-G092916			AM20GAX	DISG/5666
204650034	ATR-EB003-G092916			AM20GAX	DISG/5666
204650035	ATR-MW59(29)-G093016			AM20GAX	DISG/5666
204650036	ATR-MW59(29)-G093016R			AM20GAX	DISG/5666
204650047	ATR-PM2-G092916			AM20GAX	DISG/5666
204650048	ATR-MW81(27)-G092916			AM20GAX	DISG/5666
204650011	ATR-OW2(53)-G092716			AM20GAX	DISG/5670
204650012	ATR-MW15-G092716			AM20GAX	DISG/5670



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CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

20465

008701

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Amece Foster Wheeler	Report To: Paul Stark @amecefw.com	Attention:	Company Name:	Address:	REGULATORY AGENCY:
Address: 521 Byers Rd	Copy To:				NPDES GROUND WATER
Email To: Mamishas OH 45342	Purchase Order No.: 6612605143				UST RORA
Phone: 513-551-3600	Project Name:				DRINKING WATER
Fax:	Project Number: 3354151040				OTHER <input checked="" type="checkbox"/>
Requested Due Date/TAT:					Site Location STATE: IN

ITEM #	Section D Required Client Information	Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Face Project No./ Lab ID
					COMPOSITE START	COMPOSITE END/GRAB			H ₂ SO ₄	HNO ₃	HCl	TSP	BAK	Zinc Acetate & NaOH	Other			
1	ATC-ER002-6092816	DW	WT	G	9-28-16	1400		1										
2	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
3	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
4	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
5	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
6	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
7	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
8	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
9	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
10	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
11	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												
12	ATC-MU20(35)-6092816	WT	WT	G	9-28-16	1520												

ADDITIONAL COMMENTS: **AM20 GAX**

RELINQUISHED BY / AFFILIATION: **Lefts Amece**

DATE: **9-30-16**

TIME: **1030**

ACCEPTED BY / AFFILIATION: **PAUL STARK**

DATE: **10-3-16**

TIME: **0830**

Temp in °C: **3.1**

Received on Ice (Y/N): **Y**

Custody Sealed Cooler (Y/N): **Y**

Samples Intact (N/A): **Y**

ORIGINAL

*Important Note: By signing this form you are accepting Face's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Cooler Receipt Form

Client Name: Amec Project: 3359151040 Lab Work Order: 20465

A. Shipping/Container Information (circle appropriate response)

Courier: FedEx UPS USPS Client Other: _____ Air bill Present: Yes No
 Tracking Number: 784227487901
 Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No
 Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other: _____
 Type of Ice: Wet Blue None Ice Intact: Yes Melted
 Cooler Temperature: 3.10C Radiation Screened: Yes No Chain of Custody Present: Yes No
 Comments: _____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC		✓		
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC	✓			
Sample name/date and time collected	✓			
Sufficient volume provided	✓			
PAES containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments: _____

Cooler contents examined/received by: LY Date: 10.3.16

Project Manager Review: RW Date: 10-4-16

**DATA VALIDATION REPORT
SEPTEMBER 2016 GROUNDWATER SAMPLING
TEXTRON FORMER TORX FACILITY
ROCHESTER, INDIANA**

1.0 INTRODUCTION

Groundwater samples were collected during monitoring well sampling completed in September 2016 at the Former TORX Facility in Rochester, Indiana. Samples were analyzed by ALS Laboratory Group in Holland, Michigan. A summary of sample delivery groups (SDGs) and field samples included in this review is contained in Table 1. Samples reviewed in this report were analyzed for the following USEPA SW-846 (USEPA, 1996) method:

- Volatile Organic Compounds (VOCs) by USEPA Method 8260B

Sample results were validated using general procedures in the USEPA National Data Validation Guidelines (USEPA, 1999), Indiana Department of Environmental Management (IDEM) data validation guidelines (IDEM, 2012), and data validation goals identified in the Work Plan Appendix N Quality Assurance Project Plan (QAPP) [AMEC, 2014]. Project data quality criteria for the VOC analyses are identified based on IDEM quality control (QC) goals (IDEM, 1998) and the professional judgment of the project chemist. A summary of project QC limits used during data validation is provided in Table 2. Full validation was completed on ten percent of the samples analyzed. Full validation was completed on a subset of samples in SDG 1610056. Full validation includes review of raw instrument data, lab notebook records, and calculation checks in addition to the following parameters:

- laboratory report narrative
- sample chain of custody/sample receipt records
- sample preservation and holding times
- instrument tuning and calibration
- QC blanks
- laboratory control sample (LCS) results
- matrix spike and matrix spike duplicate (MS/MSD) sample results
- surrogate recovery
- internal standard recovery and retention times
- field replicate sample results
- sample results summary
- verification of electronic database results

A reduced Level II validation was completed on the remaining ninety percent of the data in accordance with specifications in the Work Plan. During the Level II validation the major quality assurance (QA)/QC indicators of analytical data quality are reviewed, but review of calculations and raw laboratory data is not included. QC data checks are completed using QC summary forms provided in the laboratory packages. The following parameters are checked during the Level II review:

- laboratory report narrative
- sample chain of custody/sample receipt records
- sample preservation and holding times
- QC blanks
- laboratory control sample (LCS) results
- matrix spike and matrix spike duplicate (MS/MSD) sample results

- surrogate recovery
- internal standard recovery and retention times
- field replicate sample results
- sample results summary
- verification of electronic database results

A summary of qualification actions is presented on Table 3. Table 3 includes listings of validation reason codes to document the reason for the validation qualification. Final sample results are presented on Table 4. Target analytes were reported as detections if concentrations were greater than the reporting limit (RL). If target compounds were not detected, or concentrations were less than RLs, the compounds are reported as non-detect (U) at the reporting limits. Data validation qualifiers were added to results if associated quality control data did not meet goals in the validation guidelines or project work plan. The following data quality flags shown below were used to qualify data that did not meet project specific QC goals.

UJ – undetected and reporting limit is estimated
U – undetected
J - estimated value

2.0 VALIDATION OBSERVATION AND ACTIONS

With the exception of the data qualification actions discussed in the sections below, results are interpreted to be usable as reported by the laboratory. A summary of qualification actions is presented on Table 3. Validation reason codes are applied to the results to document the reason for the validation qualification.

2.1 VOCs

During the Level II review the data quality indicators listed below were reviewed. Checks that included validation actions are marked with an asterisk (*) and discussed in the following sections.

- laboratory report narrative
- sample chain of custody/sample receipt records
- sample preservation and holding times*
- QC blanks*
- laboratory control sample (LCS) results*
- matrix spike and matrix spike duplicate (MS/MSD) sample results*
- surrogate recovery
- internal standard recovery and retention times
- field replicate sample results
- sample results summary*
- verification of electronic database results*

During the full validation the data quality indicators listed below were also reviewed.

- instrument tuning
- initial calibration
- continuing calibration*
- calculation checks specified in USEPA guidelines
- analyte identification and quantitation

Sample Preservation and Holding Times

The laboratory Sample Receipt Checklist indicated that all sample pH measurements were acceptable upon receipt. However, the lab report narrative indicates at the time of analysis the following sample was found to have a pH measurement greater than 2:

ATR-MW67-G092916

A 14 day holding time was used for evaluation of all samples except the above (7 day holding time used), and all samples except ATR-MW67-G092916 were analyzed within the holding time. Sample ATR-MW67-G092916 was analyzed 2 days outside the 7 day holding time and all results were qualified estimated (J/UJ). Qualified results are summarized in Table 3 and were assigned reason code HT.

QC Blanks

Chloromethane (1.4-1.6 µg/L) was reported in two of three equipment blanks associated with the samples. An action level was calculated at five times the blank concentration and compared to sample results. Low concentration detections of chloromethane in a subset of samples were qualified non-detect (U). Qualified results are summarized in Table 3 with reason code BL2.

LCS Results

The LCS associated with a subset of samples had a percent recovery for bromomethane (48) that was less than the 70-130 control limits, indicating a potential low bias. Bromomethane was not detected in the associated samples and reporting limits were qualified estimated (UJ). Qualified results are included in Table 3 with reason code LCS-L.

MS/MSD Results

A subset of results for the following compounds was qualified as estimated values (J/UJ) due to MS/MSD percent recoveries and/or relative percent differences (RPDs) outside the QAPP specified control limits. Qualified results are summarized in Table 3 and were assigned reason code MS-L and/or MS-RPD.

- 2-butanone
- bromoform
- bromomethane
- chloromethane

In the MS/MSD associated with sample ATR-OW1(39)-G092816 percent recoveries for bromoform (67, 68), bromomethane (55, 61), and chloromethane (60) were less than the 70-130 control limits indicating potential low bias. These analytes were not detected in sample ATR-OW1(39)-G092816 and the reporting limits were qualified estimated (UJ).

In the MS/MSD associated with sample ATR-OW2(33)-G092716 percent recoveries for bromomethane (42, 53) were less than the 70-130 control limits indicating potential low bias, and the relative percent difference between recoveries for chloromethane (33) was greater than the control limit of 20. Bromomethane and chloromethane were not detected in sample ATR-OW2(33)-G092716 and the reporting limits were qualified estimated (UJ).

In the MS/MSD associated with sample ATR-MW25(45.2)-G092716 percent recoveries for 2-butanone (61), bromomethane (63), and chloromethane (60) were less than the 70-130 control limits indicating potential low bias, and the relative percent difference between recoveries for chloromethane (57) was greater than the control limit of 20. Positive and non-detect results for these analytes in sample ATR-MW25(45.2)-G092716 were qualified estimated (J/UJ).

Continuing Calibration

In the continuing calibration standard associated with a subset of samples, the percent differences for bromoform (21) and bromomethane (23) were greater than the control limit of 20. Bromoform and bromomethane were not detected in associated samples and reporting limits were qualified estimated (UJ). Qualified results are included in Table 3 with reason code CCV%D.

Sample Result Reporting/Verification of Electronic Database Results

The target analyte list in Table 2 of the QAPP includes total 1,2-dichloroethene and total 1,3-dichloropropene, in addition to the individual cis- and trans- isomers. The laboratory reported only the isomers for these compounds and not total concentrations.

Data Validator: Julie Ricardi



Date: December 5, 2016

Report Reviewed by: Christian Ricardi, NRCC-EAC



Date: December 6, 2016

Reference:

IDEM, 1998. "Guidance to the Performance and Presentation of Analytical Chemistry Data"; Indiana Department of Environmental Monitoring; Technical Waste Assessment, Rev. 1: July 16, 1998.

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AMEC, 2014. "Investigation Work Plan Former TORX Facility 4366 North Old US Rt. 31 Rochester, Indiana"; Appendix N QAPP – Groundwater Data Collection, Sampling, And Analyses; June 2014.

U.S. Environmental Protection Agency (USEPA), 1996. "Test Methods for Evaluating Solid Waste"; Laboratory Manual Physical/Chemical Methods; Office of Solid Waste and Emergency Response; Washington, DC; SW-846; November 1986; Revision 4 -December 1996.

U.S. Environmental Protection Agency (USEPA), 1999. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review"; Office of Emergency and Remedial Response; EPA-540/R-99/008; October 1999.

TABLE 1 - SUMMARY OF SAMPLES AND ANALYTICAL METHODS
DATA VALIDATION REPORT
SEPTEMBER 2016 GROUNDWATER SAMPLING
TEXTRON FORMER TORX FACILITY
ROCHESTER, INDIANA

SDG	Location	Field Sample ID	Sample Date	Matrix	Lab Sample ID	Parameter	VOCs
						Method	SW8260B
						QC Code	Param_Count
1610056	MW-12	ATR-MW12-G092816	09/28/16	GW	1610056-03A	FS	36
1610056	MW-13	ATR-MW13-G092816	09/28/16	GW	1610056-04A	FS	36
1610056	MW-14	ATR-MW14-G092816	09/28/16	GW	1610056-23A	FS	36
1610056	MW-15	ATR-MW15-G092716	09/27/16	GW	1610056-11A	FS	36
1610056	MW-16	ATR-MW16-G092616	09/26/16	GW	1610056-20A	FS	36
1610056	MW-17	ATR-MW17-G092616	09/26/16	GW	1610056-29A	FS	36
1610056	MW-20(35)	ATR-MW20(35)-G092816	09/28/16	GW	1610056-26A	FS	36
1610056	MW-20(35)	ATR-MW20(35)-G092816R	09/28/16	GW	1610056-27A	FD	36
1610056	MW-20(51)	ATR-MW20(51)-G092816	09/28/16	GW	1610056-24A	FS	36
1610056	MW-24(24.9)	ATR-MW24(24.9)-G092816	09/28/16	GW	1610056-22A	FS	36
1610056	MW-24(55.9)	ATR-MW24(55.4)-G092816	09/28/16	GW	1610056-21A	FS	36
1610056	MW-25(16.4)	ATR-MW25(16.4)-G092716	09/27/16	GW	1610056-17A	FS	36
1610056	MW-25(32.6)	ATR-MW25(32.6)-G092716	09/27/16	GW	1610056-16A	FS	36
1610056	MW-25(45.2)	ATR-MW25(45.2)-G092716	09/27/16	GW	1610056-12A	FS	36
1610056	MW-26(17.5)	ATR-MW26(17.5)-G092616	09/26/16	GW	1610056-32A	FS	36
1610056	MW-26(28.8)	ATR-MW26(28.8)-G092616	09/26/16	GW	1610056-31A	FS	36
1610056	MW-26(58.8)	ATR-MW26(58.8)-G092616	09/26/16	GW	1610056-30A	FS	36
1610056	MW-59(29)	ATR-MW59(29)-G093016	09/30/16	GW	1610056-48A	FS	36
1610056	MW-59(29)	ATR-MW59(29)-G093016R	09/30/16	GW	1610056-49A	FD	36
1610056	MW-62(36)	ATR-MW62-G092916	09/29/16	GW	1610056-42A	FS	36
1610056	MW-67(30)	ATR-MW67-G092916	09/29/16	GW	1610056-46A	FS	36
1610056	MW-68(32)	ATR-MW68-G092916	09/29/16	GW	1610056-44A	FS	36
1610056	MW-6C	ATR-MW6C-G092816	09/28/16	GW	1610056-28A	FS	36
1610056	MW-71(33)	ATR-MW71-G092916	09/29/16	GW	1610056-45A	FS	36
1610056	MW-72(32)	ATR-MW72-G092916	09/29/16	GW	1610056-43A	FS	36
1610056	MW-76(30)	ATR-MW76-G092916	09/29/16	GW	1610056-37A	FS	36
1610056	MW-77(41)	ATR-MW77-G092916	09/29/16	GW	1610056-38A	FS	36
1610056	MW-78(35)	ATR-MW78-G092916	09/29/16	GW	1610056-39A	FS	36
1610056	MW-81(27)	ATR-MW81(27)-G092916	09/29/16	GW	1610056-08A	FS	36
1610056	MW-82(58)	ATR-MW82-G092816	09/28/16	GW	1610056-01A	FS	36
1610056	MW-89(28)	ATR-MW89(28)-G092916	09/29/16	GW	1610056-40A	FS	36
1610056	OW-01(28)	ATR-OW1(28)-G092816	09/28/16	GW	1610056-05A	FS	36
1610056	OW-01(39)	ATR-OW1(39)-G092816	09/28/16	GW	1610056-06A	FS	36
1610056	OW-02(33)	ATR-OW2(33)-G092716	09/27/16	GW	1610056-09A	FS	36
1610056	OW-02(53)	ATR-OW2(53)-G092716	09/27/16	GW	1610056-10A	FS	36
1610056	OW-03(35)	ATR-OW3(35)-G092716	09/27/16	GW	1610056-19A	FS	36
1610056	OW-03(55)	ATR-OW3(55)-G092716	09/27/16	GW	1610056-18A	FS	36
1610056	OW-04(35)	ATR-OW4(35)-G092716	09/27/16	GW	1610056-15A	FS	36
1610056	OW-04(54)	ATR-OW4(54)-G092716	09/27/16	GW	1610056-14A	FS	36
1610056	OW-05(16)	ATR-OW5(16)-G092716	09/27/16	GW	1610056-13A	FS	36
1610056	OW-05(35)	ATR-OW5(35)-G092616	09/26/16	GW	1610056-35A	FS	36
1610056	OW-05(54)	ATR-OW5(45)-G092616	09/26/16	GW	1610056-36A	FS	36
1610056	PM-2	ATR-PM2-G092916	09/29/16	GW	1610056-07A	FS	36
1610056	PM-3	ATR-PM3-G092916	09/29/16	GW	1610056-41A	FS	36
1610056	QC	ATR-EB001-G092816	09/28/16	BW	1610056-02A	EB	36
1610056	QC	ATR-EB002-G092816	09/28/16	BW	1610056-25A	EB	36
1610056	QC	ATR-EB003-G092916	09/29/16	BW	1610056-47A	EB	36
1610056	QC	ATR-TB001-G093016	09/30/16	BW	1610056-50A	TB	36
1610056	ZVI-2(17.5)	ATR-ZVI2(17.5)-G092616	09/26/16	GW	1610056-33A	FS	36
1610056	ZVI-2(32.5)	ATR-ZVI2(32.5)-G092616	09/26/16	GW	1610056-34A	FS	36

GW = groundwater, SW = surface water, BW = blank water
FS = field sample, FD = field duplicate, TB = trip blank

EB = equipment blank, FB = field blank
Param_Count = number of target analytes reported

**TABLE 2 - QC LIMITS
DATA VALIDATION REPORT
SEPTEMBER 2016 GROUNDWATER SAMPLING
TEXTRON FORMER TORX FACILITY
ROCHESTER, INDIANA**

PARAMETER	QC TEST	ANALYTE	WATER (%)	WATER RPD
Volatiles	Surrogate	All Surrogates(1) All Target	85 - 115	
	LCS	Compounds All Target	70 - 130	
	MS/MSD	Compounds All Target	70 - 130	20(2)
	Field Duplicates	Compounds		25(3)

Notes:

LCS - Laboratory Control Sample

MS/MSD - Matrix Spike/ Matrix Spike Duplicate

(1) Project-specific limits for surrogate recovery review/validation are established based on subcontract laboratory and Indiana Department of Environmental Management (IDEM) recommended control limits. The project limits are used for evaluation of recovery for all surrogates during data validation.

(2) Both results are > 5X the sample quantitation limit (SQL). For aqueous results < 5X the SQL use \pm SQL value. For solid media (soil and sediment) use \pm 2X SQL value.

(3) Both results are > 5X the SQL. For aqueous results < 5X the SQL use \pm 1.5X SQL value. For solid media (soil and sediment) use \pm 2.5X SQL value.

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
DATA VALIDATION REPORT
SEPTEMBER 2016 GROUNDWATER SAMPLING
TEXTRON FORMER TORX FACILITY
ROCHESTER, INDIANA

SDG	Method	Location	Field Sample ID	Lab Sample ID	Sample Date	Parameter Name	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units
1610056	SW8260B	MW-12	ATR-MW12-G092816	1610056-03A	09/28/16	Chloromethane	1.9		1.9	U	BL2	UG/L
1610056	SW8260B	MW-13	ATR-MW13-G092816	1610056-04A	09/28/16	Chloromethane	2.7		2.7	U	BL2	UG/L
1610056	SW8260B	MW-16	ATR-MW16-G092616	1610056-20A	09/26/16	Chloromethane	1.4		1.4	U	BL2	UG/L
1610056	SW8260B	MW-25(16.4)	ATR-MW25(16.4)-G092716	1610056-17A	09/27/16	Bromofom	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-25(16.4)	ATR-MW25(16.4)-G092716	1610056-17A	09/27/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-25(32.6)	ATR-MW25(32.6)-G092716	1610056-16A	09/27/16	Bromofom	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-25(32.6)	ATR-MW25(32.6)-G092716	1610056-16A	09/27/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-25(45.2)	ATR-MW25(45.2)-G092716	1610056-12A	09/27/16	2-Butanone	1000		1,000	J	MS-L	UG/L
1610056	SW8260B	MW-25(45.2)	ATR-MW25(45.2)-G092716	1610056-12A	09/27/16	Bromomethane	10	U	10	UJ	MS-L	UG/L
1610056	SW8260B	MW-25(45.2)	ATR-MW25(45.2)-G092716	1610056-12A	09/27/16	Chloromethane	10	U	10	UJ	MS-L, MS-RPD	UG/L
1610056	SW8260B	MW-26(17.5)	ATR-MW26(17.5)-G092616	1610056-32A	09/26/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L
1610056	SW8260B	MW-62(36)	ATR-MW62-G092916	1610056-42A	09/29/16	Bromofom	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-62(36)	ATR-MW62-G092916	1610056-42A	09/29/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,1,1-Trichloroethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,1,2,2-Tetrachloroethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,1,2-Trichloroethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,1-Dichloroethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,1-Dichloroethene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,2-Dichloroethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	1,2-Dichloropropane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	2-Butanone	5	U	5	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	2-Hexanone	5	U	5	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	4-Methyl-2-pentanone	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Acetone	10	U	10	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Benzene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Bromodichloromethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Bromofom	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Bromomethane	1	U	1	UJ	HT, LCS-L	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Carbon disulfide	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Carbon tetrachloride	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Chlorobenzene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Chloroethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Chloroform	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Chloromethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Cis-1,2-Dichloroethene	66		66	J	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Cis-1,3-Dichloropropene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Dibromochloromethane	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Ethylbenzene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Methylene chloride	5	U	5	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Styrene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Tetrachloroethene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Toluene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	trans-1,2-Dichloroethene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	trans-1,3-Dichloropropene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Trichloroethene	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Vinyl chloride	35		35	J	HT	UG/L

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
DATA VALIDATION REPORT
SEPTEMBER 2016 GROUNDWATER SAMPLING
TEXTRON FORMER TORX FACILITY
ROCHESTER, INDIANA

SDG	Method	Location	Field Sample ID	Lab Sample ID	Sample Date	Parameter Name	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Xylene, o	1	U	1	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Xylenes (m&p)	2	U	2	UJ	HT	UG/L
1610056	SW8260B	MW-67(30)	ATR-MW67-G092916	1610056-46A	09/29/16	Xylenes, Total	3	U	3	UJ	HT	UG/L
1610056	SW8260B	MW-68(32)	ATR-MW68-G092916	1610056-44A	09/29/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L
1610056	SW8260B	MW-71(33)	ATR-MW71-G092916	1610056-45A	09/29/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L
1610056	SW8260B	MW-72(32)	ATR-MW72-G092916	1610056-43A	09/29/16	Bromoform	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-72(32)	ATR-MW72-G092916	1610056-43A	09/29/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-76(30)	ATR-MW76-G092916	1610056-37A	09/29/16	Bromomethane	50	U	50	UJ	LCS-L	UG/L
1610056	SW8260B	MW-78(35)	ATR-MW78-G092916	1610056-39A	09/29/16	Bromoform	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-78(35)	ATR-MW78-G092916	1610056-39A	09/29/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	MW-82(58)	ATR-MW82-G092816	1610056-01A	09/28/16	Chloromethane	1		1	U	BL2	UG/L
1610056	SW8260B	MW-89(28)	ATR-MW89(28)-G092916	1610056-40A	09/29/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L
1610056	SW8260B	OW-01(28)	ATR-OW1(28)-G092816	1610056-05A	09/28/16	Bromoform	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	OW-01(28)	ATR-OW1(28)-G092816	1610056-05A	09/28/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	OW-01(28)	ATR-OW1(28)-G092816	1610056-05A	09/28/16	Chloromethane	2.2		2.2	U	BL2	UG/L
1610056	SW8260B	OW-01(39)	ATR-OW1(39)-G092816	1610056-06A	09/28/16	Bromoform	1	U	1	UJ	MS-L	UG/L
1610056	SW8260B	OW-01(39)	ATR-OW1(39)-G092816	1610056-06A	09/28/16	Bromomethane	1	U	1	UJ	MS-L	UG/L
1610056	SW8260B	OW-01(39)	ATR-OW1(39)-G092816	1610056-06A	09/28/16	Chloromethane	2.6		2.6	J	MS-L	UG/L
1610056	SW8260B	OW-02(33)	ATR-OW2(33)-G092716	1610056-09A	09/27/16	Bromomethane	1	U	1	UJ	MS-L	UG/L
1610056	SW8260B	OW-02(33)	ATR-OW2(33)-G092716	1610056-09A	09/27/16	Chloromethane	1	U	1	UJ	MS-RPD	UG/L
1610056	SW8260B	OW-02(53)	ATR-OW2(53)-G092716	1610056-10A	09/27/16	Bromoform	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	OW-02(53)	ATR-OW2(53)-G092716	1610056-10A	09/27/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	OW-02(53)	ATR-OW2(53)-G092716	1610056-10A	09/27/16	Chloromethane	1.7		1.7	U	BL2	UG/L
1610056	SW8260B	OW-05(16)	ATR-OW5(16)-G092716	1610056-13A	09/27/16	Bromoform	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	OW-05(16)	ATR-OW5(16)-G092716	1610056-13A	09/27/16	Bromomethane	1	U	1	UJ	CCV%D	UG/L
1610056	SW8260B	OW-05(35)	ATR-OW5(35)-G092616	1610056-35A	09/26/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L
1610056	SW8260B	OW-05(54)	ATR-OW5(45)-G092616	1610056-36A	09/26/16	Chloromethane	1.3		1.3	U	BL2	UG/L
1610056	SW8260B	PM-3	ATR-PM3-G092916	1610056-41A	09/29/16	Bromomethane	100	U	100	UJ	LCS-L	UG/L
1610056	SW8260B	ZVI-2(17.5)	ATR-ZVI2(17.5)-G092616	1610056-33A	09/26/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L
1610056	SW8260B	ZVI-2(32.5)	ATR-ZVI2(32.5)-G092616	1610056-34A	09/26/16	Bromomethane	1	U	1	UJ	LCS-L	UG/L

Units --

UG/L = microgram per liter

Qualifiers --

U = not detected, value is the reporting limit
J = value is estimated

Validation Reason Codes --

HT = sample analyzed after expiration of holding time
CCV%D = continuing calibration percent difference exceeds criteria
BL2 = equipment/trip blank contamination
LCS-L = LCS recovery less than control limits
MS-L = MS and/or MSD recovery less than control limits
MS-RPD = MS/MSD RPD greater than control limits

TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056	1610056	1610056	1610056	1610056	
Sample Location			MW-12	MW-13	MW-14	MW-15	MW-16	
Sample Date			09/28/16	09/28/16	09/28/16	09/27/16	09/26/16	
Field Sample ID			ATR-MW12-G092816	ATR-MW13-G092816	ATR-MW14-G092816	ATR-MW15-G092716	ATR-MW16-G092616	
QC Code			FS	FS	FS	FS	FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		5 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		5 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		5 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		15	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		5 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		5 U	
SW8260B	2-Butanone	UG/L	5 U		5 U	56	490	89
SW8260B	2-Hexanone	UG/L	5 U		5 U	5 U	25 U	5 U
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Acetone	UG/L	10 U		10 U	10 U	50 U	10 U
SW8260B	Benzene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Bromodichloromethane	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Bromoform	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Bromomethane	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Carbon disulfide	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Chlorobenzene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Chloroethane	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Chloroform	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Chloromethane	UG/L	1.9 U		2.7 U	1 U	5 U	1.4 U
SW8260B	Cis-1,2-Dichloroethene	UG/L	260		150	2	3700	100
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Dibromochloromethane	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Ethylbenzene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Methylene chloride	UG/L	5 U		5 U	5 U	25 U	5 U
SW8260B	Styrene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Tetrachloroethene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Toluene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	trans-1,2-Dichloroethene	UG/L	1.6		1 U	1 U	140	1 U
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Trichloroethene	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Vinyl chloride	UG/L	270		29	2.3	1200	200
SW8260B	Xylene, o	UG/L	1 U		1 U	1 U	5 U	1 U
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U	2 U	10 U	2 U
SW8260B	Xylenes, Total	UG/L	3 U		3 U	3 U	15 U	3 U

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TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			MW-17		MW-20(35)		MW-20(35)		MW-20(51)		MW-24(24.9)	
Sample Date			09/26/16		09/28/16		09/28/16		09/28/16		09/28/16	
Field Sample ID			ATR-MW17-G092616		ATR-MW20(35)-G092816		ATR-MW20(35)-G092816R		ATR-MW20(51)-G092816		ATR-MW24(24.9)-G092816	
QC Code			FS		FS		FD		FS		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	2-Butanone	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	2-Hexanone	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Acetone	UG/L	10 U		10 U		10 U		10 U		10 U	
SW8260B	Benzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromoform	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromomethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Carbon disulfide	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroform	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Cis-1,2-Dichloroethene	UG/L	36		1 U		1 U		1 U		1 U	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Methylene chloride	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	Styrene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Toluene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	trans-1,2-Dichloroethene	UG/L	1.5		1 U		1 U		1 U		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Trichloroethene	UG/L	170		1 U		1 U		1 U		1 U	
SW8260B	Vinyl chloride	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Xylene, o	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U		2 U		2 U		2 U	
SW8260B	Xylenes, Total	UG/L	3 U		3 U		3 U		3 U		3 U	

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TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			MW-24(55.9)		MW-25(16.4)		MW-25(32.6)		MW-25(45.2)		MW-26(17.5)	
Sample Date			09/28/16		09/27/16		09/27/16		09/27/16		09/26/16	
Field Sample ID			ATR-MW24(55.4)-G092816		ATR-MW25(16.4)-G092716		ATR-MW25(32.6)-G092716		ATR-MW25(45.2)-G092716		ATR-MW26(17.5)-G092616	
QC Code			FS		FS		FS		FS		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	2-Butanone	UG/L	5 U		17		12		1000 J		7.3	
SW8260B	2-Hexanone	UG/L	5 U		5 U		5 U		50 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Acetone	UG/L	10 U		10 U		10 U		100 U		10 U	
SW8260B	Benzene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Bromoform	UG/L	1 U		1 UJ		1 UJ		10 U		1 U	
SW8260B	Bromomethane	UG/L	1 U		1 UJ		1 UJ		10 UJ		1 UJ	
SW8260B	Carbon disulfide	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Chloroethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Chloroform	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Chloromethane	UG/L	1 U		1 U		1 U		10 UJ		1 U	
SW8260B	Cis-1,2-Dichloroethene	UG/L	46		6.4		1 U		190		1 U	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Methylene chloride	UG/L	5 U		5 U		5 U		50 U		5 U	
SW8260B	Styrene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Toluene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	trans-1,2-Dichloroethene	UG/L	2.1		1 U		1 U		10 U		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Trichloroethene	UG/L	72		1 U		1 U		10 U		1 U	
SW8260B	Vinyl chloride	UG/L	1 U		6		1 U		480		1 U	
SW8260B	Xylene, o	UG/L	1 U		1 U		1 U		10 U		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U		2 U		20 U		2 U	
SW8260B	Xylenes, Total	UG/L	3 U		3 U		3 U		30 U		3 U	

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TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			MW-26(28.8)		MW-26(58.8)		MW-59(29)		MW-59(29)		MW-62(36)	
Sample Date			09/26/16		09/26/16		09/30/16		09/30/16		09/29/16	
Field Sample ID			ATR-MW26(28.8)-G092616		ATR-MW26(58.8)-G092616		ATR-MW59(29)-G093016		ATR-MW59(29)-G093016R		ATR-MW62-G092916	
QC Code			FS		FS		FS		FD		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	2-Butanone	UG/L	5 U		91		16		13		5 U	
SW8260B	2-Hexanone	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Acetone	UG/L	10 U		14		10 U		10 U		10 U	
SW8260B	Benzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromoform	UG/L	1 U		1 U		1 U		1 U		1 UJ	
SW8260B	Bromomethane	UG/L	1 U		1 U		1 U		1 U		1 UJ	
SW8260B	Carbon disulfide	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroform	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Cis-1,2-Dichloroethene	UG/L	1 U		14		11		13		1.7	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 U		1 U		3.4		3.1		1 U	
SW8260B	Methylene chloride	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	Styrene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Toluene	UG/L	1 U		1 U		14		14		1 U	
SW8260B	trans-1,2-Dichloroethene	UG/L	1 U		2.3		1 U		1 U		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Trichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Vinyl chloride	UG/L	1 U		43		340		320		7.1	
SW8260B	Xylene, o	UG/L	1 U		1 U		3.4		3		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U		5.5		5.2		2 U	
SW8260B	Xylenes, Total	UG/L	3 U		3 U		8.9		8.2		3 U	

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 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			MW-67(30)		MW-68(32)		MW-6C		MW-71(33)		MW-72(32)	
Sample Date			09/29/16		09/29/16		09/28/16		09/29/16		09/29/16	
Field Sample ID			ATR-MW67-G092916		ATR-MW68-G092916		ATR-MW6C-G092816		ATR-MW71-G092916		ATR-MW72-G092916	
QC Code			FS		FS		FS		FS		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 UJ		1.1		1 U		1 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	2-Butanone	UG/L	5 UJ		35		5 U		35		26	
SW8260B	2-Hexanone	UG/L	5 UJ		5 U		5 U		5 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 UJ		1 U		1 U		4		1.2	
SW8260B	Acetone	UG/L	10 UJ		89		10 U		94		56	
SW8260B	Benzene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Bromoform	UG/L	1 UJ		1 U		1 U		1 U		1 UJ	
SW8260B	Bromomethane	UG/L	1 UJ		1 UJ		1 U		1 UJ		1 UJ	
SW8260B	Carbon disulfide	UG/L	1 UJ		1 U		1 U		1 U		2.9	
SW8260B	Carbon tetrachloride	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Chloroethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Chloroform	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Chloromethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Cis-1,2-Dichloroethene	UG/L	66 J		200		280		8.8		11	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Methylene chloride	UG/L	5 UJ		5 U		5 U		5 U		5 U	
SW8260B	Styrene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Toluene	UG/L	1 UJ		1 U		1 U		38		20	
SW8260B	trans-1,2-Dichloroethene	UG/L	1 UJ		2.1		1.8		1 U		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Trichloroethene	UG/L	1 UJ		1 U		1.8		1 U		1 U	
SW8260B	Vinyl chloride	UG/L	35 J		420		360		140		40	
SW8260B	Xylene, o	UG/L	1 UJ		1 U		1 U		1 U		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 UJ		2 U		2 U		2 U		2 U	
SW8260B	Xylenes, Total	UG/L	3 UJ		3 U		3 U		3 U		3 U	

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TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056	1610056	1610056	1610056	1610056			
Sample Location			MW-76(30)	MW-77(41)	MW-78(35)	MW-81(27)	MW-82(58)			
Sample Date			09/29/16	09/29/16	09/29/16	09/29/16	09/28/16			
Field Sample ID			ATR-MW76-G092916	ATR-MW77-G092916	ATR-MW78-G092916	ATR-MW81(27)-G092916	ATR-MW82-G092816			
QC Code			FS	FS	FS	FS	FS			
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	50 U		1 U		1 U		50 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	50 U		1 U		1 U		50 U	
SW8260B	1,1,2-Trichloroethane	UG/L	50 U		1 U		1 U		50 U	
SW8260B	1,1-Dichloroethane	UG/L	50 U		1 U		1 U		50 U	
SW8260B	1,1-Dichloroethene	UG/L	50 U		1 U		1 U		50 U	
SW8260B	1,2-Dichloroethane	UG/L	50 U		1 U		1 U		50 U	
SW8260B	1,2-Dichloropropane	UG/L	50 U		1 U		1 U		50 U	
SW8260B	2-Butanone	UG/L	250 U		5 U		91		250 U	36
SW8260B	2-Hexanone	UG/L	250 U		5 U		5 U		250 U	5 U
SW8260B	4-Methyl-2-pentanone	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Acetone	UG/L	500 U		10 U		20		500 U	10 U
SW8260B	Benzene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Bromodichloromethane	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Bromoform	UG/L	50 U		1 U		1 UJ		50 U	1 U
SW8260B	Bromomethane	UG/L	50 UJ		1 U		1 UJ		50 U	1 U
SW8260B	Carbon disulfide	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Carbon tetrachloride	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Chlorobenzene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Chloroethane	UG/L	50 U		1 U		1 U		52	1 U
SW8260B	Chloroform	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Chloromethane	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Cis-1,2-Dichloroethene	UG/L	9000		1.2		1.5		13000	1 U
SW8260B	Cis-1,3-Dichloropropene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Dibromochloromethane	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Ethylbenzene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Methylene chloride	UG/L	250 U		5 U		5 U		250 U	5 U
SW8260B	Styrene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Tetrachloroethene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Toluene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	trans-1,2-Dichloroethene	UG/L	64		1 U		1 U		81	1 U
SW8260B	trans-1,3-Dichloropropene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Trichloroethene	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Vinyl chloride	UG/L	18000		1 U		1 U		20000	1 U
SW8260B	Xylene, o	UG/L	50 U		1 U		1 U		50 U	1 U
SW8260B	Xylenes (m&p)	UG/L	100 U		2 U		2 U		100 U	2 U
SW8260B	Xylenes, Total	UG/L	150 U		3 U		3 U		150 U	3 U

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 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			MW-89(28)		OW-01(28)		OW-01(39)		OW-02(33)		OW-02(53)	
Sample Date			09/29/16		09/28/16		09/28/16		09/27/16		09/27/16	
Field Sample ID			ATR-MW89(28)-G092916		ATR-OW1(28)-G092816		ATR-OW1(39)-G092816		ATR-OW2(33)-G092716		ATR-OW2(53)-G092716	
QC Code			FS		FS		FS		FS		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1,2-Trichloroethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	1,1-Dichloroethene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloroethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	1,2-Dichloropropane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	2-Butanone	UG/L	5	U	6.8	U	5	U	5	U	9.2	U
SW8260B	2-Hexanone	UG/L	5	U	5	U	5	U	5	U	5	U
SW8260B	4-Methyl-2-pentanone	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Acetone	UG/L	10	U	10	U	10	U	10	U	10	U
SW8260B	Benzene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromodichloromethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Bromoform	UG/L	1	U	1	UJ	1	UJ	1	U	1	UJ
SW8260B	Bromomethane	UG/L	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ
SW8260B	Carbon disulfide	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Carbon tetrachloride	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Chlorobenzene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloroform	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Chloromethane	UG/L	1	U	2.2	U	2.6	J	1	UJ	1.7	U
SW8260B	Cis-1,2-Dichloroethene	UG/L	1	U	1	U	1	U	54		1	U
SW8260B	Cis-1,3-Dichloropropene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Dibromochloromethane	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Ethylbenzene	UG/L	1.2	U	1	U	1	U	1	U	1	U
SW8260B	Methylene chloride	UG/L	5	U	5	U	5	U	5	U	5	U
SW8260B	Styrene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Tetrachloroethene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Toluene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,2-Dichloroethene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	trans-1,3-Dichloropropene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Trichloroethene	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Vinyl chloride	UG/L	1	U	1	U	1	U	120		1	U
SW8260B	Xylene, o	UG/L	1	U	1	U	1	U	1	U	1	U
SW8260B	Xylenes (m&p)	UG/L	2.4	U	2	U	2	U	2	U	2	U
SW8260B	Xylenes, Total	UG/L	3	U	3	U	3	U	3	U	3	U

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TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			OW-03(35)		OW-03(55)		OW-04(35)		OW-04(54)		OW-05(16)	
Sample Date			09/27/16		09/27/16		09/27/16		09/27/16		09/27/16	
Field Sample ID			ATR-OW3(35)-G092716		ATR-OW3(55)-G092716		ATR-OW4(35)-G092716		ATR-OW4(54)-G092716		ATR-OW5(16)-G092716	
QC Code			FS		FS		FS		FS		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	2-Butanone	UG/L	5 U		210		230		5 U		5 U	
SW8260B	2-Hexanone	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Acetone	UG/L	10 U		12		12		10 U		10 U	
SW8260B	Benzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromoform	UG/L	1 U		1 U		1 U		1 U		1 UJ	
SW8260B	Bromomethane	UG/L	1 U		1 U		1 U		1 U		1 UJ	
SW8260B	Carbon disulfide	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroform	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Cis-1,2-Dichloroethene	UG/L	1 U		370		53		1 U		48	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Methylene chloride	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	Styrene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Toluene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	trans-1,2-Dichloroethene	UG/L	1 U		17		3		1 U		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Trichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Vinyl chloride	UG/L	1 U		290		240		1 U		49	
SW8260B	Xylene, o	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U		2 U		2 U		2 U	
SW8260B	Xylenes, Total	UG/L	3 U		3 U		3 U		3 U		3 U	

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TABLE 4 - SUMMARY OF ANALYTICAL RESULTS
 DATA VALIDATION REPORT
 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			OW-05(35)		OW-05(54)		PM-2		PM-3		QC	
Sample Date			09/26/16		09/26/16		09/29/16		09/29/16		09/28/16	
Field Sample ID			ATR-OW5(35)-G092616		ATR-OW5(45)-G092616		ATR-PM2-G092916		ATR-PM3-G092916		ATR-EB001-G092816	
QC Code			FS		FS		FS		FS		EB	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	2-Butanone	UG/L	11		79		5 U		500 U		5 U	
SW8260B	2-Hexanone	UG/L	5 U		5 U		5 U		500 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Acetone	UG/L	10 U		10 U		10 U		1000 U		10 U	
SW8260B	Benzene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Bromoform	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Bromomethane	UG/L	1 UJ		1 U		1 U		100 UJ		1 U	
SW8260B	Carbon disulfide	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Chloroethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Chloroform	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Chloromethane	UG/L	1 U		1.3 U		1 U		100 U		1.4	
SW8260B	Cis-1,2-Dichloroethene	UG/L	1 U		180		9.8		9200		1 U	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 U		1 U		6.8		100 U		1 U	
SW8260B	Methylene chloride	UG/L	5 U		5 U		5 U		500 U		5 U	
SW8260B	Styrene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Toluene	UG/L	1 U		1 U		3.7		100 U		1 U	
SW8260B	trans-1,2-Dichloroethene	UG/L	1 U		1.1		1 U		110		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Trichloroethene	UG/L	1 U		1 U		1 U		100 U		1 U	
SW8260B	Vinyl chloride	UG/L	1 U		140		180		34000		1 U	
SW8260B	Xylene, o	UG/L	1 U		1 U		1.9		100 U		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U		7		200 U		2 U	
SW8260B	Xylenes, Total	UG/L	3 U		3 U		8.9		300 U		3 U	

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 SEPTEMBER 2016 GROUNDWATER SAMPLING
 TEXTRON FORMER TORX FACILITY
 ROCHESTER, INDIANA

SDG			1610056		1610056		1610056		1610056		1610056	
Sample Location			QC		QC		QC		ZVI-2(17.5)		ZVI-2(32.5)	
Sample Date			09/28/16		09/29/16		09/30/16		09/26/16		09/26/16	
Field Sample ID			ATR-EB002-G092816		ATR-EB003-G092916		ATR-TB001-G093016		ATR-ZVI2(17.5)-G092616		ATR-ZVI2(32.5)-G092616	
QC Code			EB		EB		TB		FS		FS	
Method	Parameter	Units	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual	Final Result	Final Qual
SW8260B	1,1,1-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2,2-Tetrachloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1,2-Trichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,1-Dichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	1,2-Dichloropropane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	2-Butanone	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	2-Hexanone	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	4-Methyl-2-pentanone	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Acetone	UG/L	10 U		10 U		10 U		10 U		10 U	
SW8260B	Benzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromodichloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromoform	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Bromomethane	UG/L	1 U		1 U		1 U		1 UJ		1 UJ	
SW8260B	Carbon disulfide	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Carbon tetrachloride	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chlorobenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloroform	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Chloromethane	UG/L	1 U		1.6		1 U		1 U		1 U	
SW8260B	Cis-1,2-Dichloroethene	UG/L	1 U		1 U		1 U		1 U		5.9	
SW8260B	Cis-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Dibromochloromethane	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Ethylbenzene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Methylene chloride	UG/L	5 U		5 U		5 U		5 U		5 U	
SW8260B	Styrene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Tetrachloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Toluene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	trans-1,2-Dichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	trans-1,3-Dichloropropene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Trichloroethene	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Vinyl chloride	UG/L	1 U		1 U		1 U		1 U		51	
SW8260B	Xylene, o	UG/L	1 U		1 U		1 U		1 U		1 U	
SW8260B	Xylenes (m&p)	UG/L	2 U		2 U		2 U		2 U		2 U	
SW8260B	Xylenes, Total	UG/L	3 U		3 U		3 U		3 U		3 U	

U = not detected, value is the detection limit
 J = value is estimated
 ug/L = microgram per liter
 EB = Equipment Blank
 FD = Field Duplicate
 FS = Field Sample
 TB = Trip Blank