Hazardous Waste Section

File Room Document Transmittal Sheet

17

Your Name:	Katherine O'Neal
EPA ID:	NCD002591014
Facility Name:	Parker Hannifin
Document Group:	Groundwater (GW)
Document Type:	Groundwater Monitoring Report (GMR)
Description:	Second 2015 Groundwater Monitoring and Remediation System Report
Date of Doc:	4/1/2016
Author of Doc:	

File Room Use Only

NCD002591014

	Month	Day	Year
Date Recieved by File Room:			
Date Scanned:			

Scanner's Initials:

AECOM

Environment

Submitted to
Parker Hannifin
Cleveland, OH

Submitted by
AECOM
Raleigh, NC
April 2016
60341618.3

Second 2015 Groundwater Monitoring and Remediation System Effectiveness Report

Former Parker Hannifin Facility
EPA ID No. NCD-002-591-014
Wake Forest, North Carolina

AECOM Environment

Submitted to
Parker Hannifin
Cleveland, OH

Submitted by
AECOM
Raleigh, NC
April 2016
60341618.3

Second 2015 Groundwater Monitoring and Remediation System Effectiveness Report

Prepared By
Matt Allen, P.G.
Project Geologist

Reviewed By
Robert Wyrick, P.G.
Senior Project Manager

NORTH CAROLINA LICENSED SEAL 1356 GEOLOGIST ROBERT A. WYRICK

Former Parker Hannifin Facility
EPA ID No. NCD-002-591-014
Wake Forest, North Carolina

Table of Contents

Table of Contents ..... **i**
1 Introduction **1-1**

1.1 Regulatory Basis 1-1
1.2 Site History 1-1
1.3 Regional Physiography, Geology, and Hydrogeology 1-1
1.4 Summary of Groundwater Monitoring Program 1-2
1.5 Evaluation of the Extraction Well System 1-2
1.6 Surface Water Sampling 1-2
1.7 Water Supply Well Sampling 1-2

2 Semi-annual Sampling Methods **2-1**

2.1 September 2015 Groundwater Monitoring Overview 2-1
2.2 Sampling Procedures 2-1

2.2.1 Effectiveness and Point of Compliance Wells 2-1
2.2.2 Extraction Wells 2-2
2.2.3 Surface Water Samples 2-2
2.2.4 Water Supply Well Samples 2-2

3 Discussion of the Semi-annual Results **3-1**

3.1 Quality Control/Data Validation for Groundwater Samples 3-1
3.2 Comparison of Analytical Results versus Part B Permit and Title 15A North Carolina Administrative Code 2L Groundwater Quality Standard 3-2

3.2.1 Volatile Organic Compounds 3-3
3.2.2 1,4-dioxane 3-3
3.2.3 Metals 3-3
3.2.4 Extent and Distribution of Volatile Organic Compounds 3-3
3.2.5 Trends in Contaminant Concentrations 3-4

3.3 Water Supply Well Sampling Results 3-4
3.4 Groundwater/Hydrogeologic Evaluations 3-4

3.4.1 Evaluation of Point of Compliance Wells 3-4

4 Effectiveness Evaluation **4-1**

4.1 Groundwater Treatment System 4-1

4.1.1 Review of Operational Data 4-1
4.1.2 Review of Mass Removal Data 4-1
4.1.3 Groundwater Elevations and Hydraulic Control 4-1
4.1.4 Concentrations of Targeted Compounds 4-2
4.1.5 Recommendations and System Upgrade 4-2

4.2 Soil Vapor Extraction System 4-2

5 Conclusions **5-1**
6 References **6-1**

List of Appendices

Appendix A. Semi-annual Groundwater Sampling Records
Appendix B. Data Validation Package and Semi-annual Laboratory Analytical Reports

List of Tables

Table 1-1. Summary of Groundwater Monitoring Requirements
Table 2-1. Monitoring Well Construction Information and Groundwater Elevations
Table 2-2. Field Indicator Parameters
Table 3-1. Summary of Organic Analytical Results – RCRA Permit Parameters for Site Wells
Table 3-2. Historical TCE Groundwater Analytical Data
Table 3-3. Summary of 1,4-Dioxane Groundwater Analytical Results
Table 3-4. Historical 1,4-Dioxane Groundwater Analytical Results
Table 3-5. Summary of Inorganic Analytical Results – RCRA Permit Parameters for Site Wells
Table 3-6a. Qualified Analytical Data
Table 3-6b. Field Duplicate Precision
Table 3-7. Summary of Intra-Aquifer Flow
Table 4-1. Extraction Well Construction Details
Table 4-2. Summary of GWTS Inspection Records
Table 4-3. Influent-Effluent Water Sample Results
Table 4-4. Historical TCE Removal Efficiency Calculations for GWTS
Table 4-5. Historical Estimated GWTS Pumping Rates and Mass Removal
Table 4-6. SVE Soil Vapor Sampling Results

List of Figures

Figure 1-1. Site Location Map
Figure 1-2. Site Plan with Cross-Section Transect
Figure 3-1a. POC Wells – Historical TCE Data
Figure 3-1b. Effectiveness Wells – Historical TCE Data
Figure 3-2. Groundwater Analytical Results Historical 1,4-Dioxane
Figure 3-3. September 2015 TCE Isoconcentration Map – Plan View
Figure 3-4. September 2015 Groundwater Potentiometric Surface Map – Cross-Section A-A’
Figure 3-5. September 2015 Groundwater Potentiometric Surface Map – Cross-Section B-B’
Figure 3-6. Groundwater Potentiometric Surface Map - September 2015 Plan View
Figure 4-1. Hydrographs of Historic Water Level Data – Extraction Wells

List of Acronyms

2L Standard	North Carolina Administrative Code Title 15 2L Groundwater Quality Standard
bls	Below land surface
COC	Chain-of-custody
DCE	Dichloroethene
DO	Dissolved oxygen
EFBQST	Region 4 United States Environmental Protection Agency Field Branches Quality System and Technical Procedures
EPA	United States Environmental Protection Agency
GC/MS	Gas Chromatography/Mass Spectrometry
GWTS	Groundwater treatment system
mg/L	Milligrams per liter
MS/MSD	Matrix spike/matrix spike duplicate
NCDEQ	North Carolina Department of Environmental Quality
ORP	Oxidation-reduction potential
Parker	Parker Hannifin
PCE	Tetrachloroethene
POC	Point-of-compliance
POTW	Publicly Owned Treatment Works
PVC	Polyvinyl chloride
PWR	Partially weathered rock
QA	Quality Assurance
QC	Quality Control
RCRA	Resource, Conservation, and Recovery Act
RPD	Relative percent difference
SIM	Selected ion monitoring
SVE	Soil vapor extraction
SWMU	Solid Waste Management Unit
TCE	Trichloroethene
VOCs	Volatile organic compounds
WSW	Water supply well
µg/L	Micrograms per liter

1 Introduction

This report presents the Second 2015 semi-annual groundwater monitoring results and groundwater remediation system effectiveness evaluation for the former Parker Hannifin (Parker) Facility located at 12415 Capital Boulevard in Wake Forest, Wake County, North Carolina (the Facility). The Facility location is illustrated on Figure 1-1.

1.1 Regulatory Basis

Groundwater monitoring began in August 1991, in accordance with the Parker (Former Schrader Bellows) Resource Conservation and Recovery Act (RCRA) Part B Permit requirements. Modifications to the RCRA Permit were proposed in the 10-year permit reapplication submitted in 2003 to the North Carolina Department of Environmental Quality (NCDEQ). A draft permit was released by NCDEQ in 2005 and a public hearing was held regarding the contents of the draft permit. The final permit was issued June 1, 2006 and the requirements outlined in that document are addressed in this report. The permit is in effect for ten years, until July 1, 2016. Table 1-1 lists the permit defined monitoring requirements which were in effect during the implementation of the Second 2015 monitoring event performed in September 2015.

1.2 Site History

The plant was constructed in 1964 for the manufacture and distribution of air control devices. The plant was previously operated by the Scovill Corporation and Schrader Bellows prior to its purchase by Parker in 1986. Parker previously leased the land from the Wake Forest Industrial Development Corporation. Manufacturing activities at the site ceased in January 2002. The property was sold to St. Ives 220 Commercial, LLC on June 2, 2006, and was later acquired by RREF BB NC SICP, LLC (known as Rialto Capital) on June 29, 2012. Currently there is no commercial or industrial activity on the property.

During the time period when the manufacturing facility was active (1964 through January 2002), the plant operated a system for the treatment of wastewater generated by metal finishing and plating operations. The original wastewater treatment system included a clarifier and two sand filter beds. Wastewater from the plating operation was chemically treated in batch tanks to produce an insoluble metal hydroxide. The wastewater was then pumped into the clarifier, where the metal hydroxides became concentrated as a wet sludge. To further facilitate the removal of solids, the treated wastewater was discharged to the sand filter beds. The metal hydroxide precipitates were retained on the surface of the filter beds and filtrate was collected in the bottom of the filter beds. The treated water was discharged from the filter beds to the Wake Forest Publicly Owned Treatment Works (POTW). The sand filter beds were closed in 1986.

Parker and former operators previously used chlorinated solvents, primarily trichloroethene (TCE), to remove oil and metal particles from machined parts during its manufacturing process. Two aboveground storage tanks (Solid Waste Management Unit [SWMU] 24), one for virgin product and one for used product, were located on the northeast side of the plant. After the plant manufacturing operations ceased in January 2002, process materials and equipment were removed.

1.3 Regional Physiography, Geology, and Hydrogeology

The Facility is situated within the eastern-most portion of the Piedmont Physiographic Province of North Carolina. In general, subsurface soils consist of silty clay residuum overlying clayey sand and silt saprolite, which coarsens with depth. The saprolite originates from the underlying gneissic and schistose bedrock and typically contains relict structures and fabric derived from the parent rock from which it was weathered. The saprolite generally grades into partially weathered rock (PWR) with depth. PWR often exhibits the same properties as deeper saprolitic soils, but with higher occurrence of rock and rock fragments. Typically in the Piedmont of North Carolina, the saprolite serves as an unconfined storage aquifer that transmits water downward (generally) to the lower semi-confined PWR unit and fractured confined metacrystalline bedrock aquifer unit (Daniel and Dahlen, 2002).

1.4 Summary of Groundwater Monitoring Program

During the week of September 1, 2015, the Second 2015 semi-annual sampling and analysis event was conducted. Figure 1-2 presents the location of the Parker monitoring and extraction well network. The current well network includes 13 corrective action system effectiveness wells, 4 point-of-compliance (POC) wells, and three groundwater extraction wells (Table 1-1). Monitoring of these 20 wells fulfills the RCRA Part B Permit requirement to demonstrate the state of corrective action efforts. An additional 37 monitoring wells exist, but are not required to be monitored under the current permit. However, in order to obtain a comprehensive data set, an additional ten monitoring wells were sampled during this event.

The permit requires that semi-annual groundwater samples be collected and analyzed for volatile organic compounds (VOCs), 1,4-dioxane, and select metals. Following a review of historic data, AECOM requested modifications to the sampling program for the Second 2015 event. These modifications are summarized on Table 1-1. The NCDEQ approved the modifications to this sampling event only in a letter dated August 24, 2015. Groundwater sampling and analysis details are provided in Section 2.2 of this report.

Portions of this report were generated using a software package for data management of groundwater levels and concentrations of compounds. The data management package uses Microsoft Access to produce the tables discussed in Section 2.0, with the exception of the quality assurance (QA)/quality control (QC) results. The data are exported to Microsoft Excel to produce historical concentration figures.

1.5 Evaluation of the Extraction Well System

The groundwater extraction well system was brought on-line in May 1992. A detailed discussion of extraction well sampling is provided in Section 2.2 of this report. An effectiveness evaluation of the groundwater treatment system (GWTS) is included in Section 4.0 of this report. The effectiveness evaluation is intended to provide a review of GWTS operating parameters, groundwater elevation and flow direction, and groundwater quality changes over the duration of system operation. The objectives of this evaluation include:

- Evaluation of the performance of the GWTS based on the operational data collected during the monitoring period (April 2015 – September 2015)
- Estimation of the total mass of VOCs removed by the GWTS during the monitoring period, based on the system influent and effluent sampling results along with analytical results from the individual groundwater extraction wells
- Evaluation of the hydraulic capture, based on a review of the vertical and horizontal groundwater flow regime
- Evaluation of the change in concentration of targeted compounds based on the groundwater sampling event and evaluating the effectiveness of the system in reducing those concentrations
- Review of system changes and improvements recommended and/or implemented during previous monitoring periods and evaluating their impact on the system
- Review of the operating status of the accompanying soil vapor extraction (SVE) system
- Preparation of recommendations for enhancing and improving the effectiveness of the system

1.6 Surface Water Sampling

No surface water samples were collected during the September 2015 event due to dry stream conditions.

1.7 Water Supply Well Sampling

Water samples from two water supply wells (WSWs) were also collected and submitted for VOC analysis as part of the Second 2015 monitoring event. Water supply well sampling is discussed in Section 2.2 and results presented in Section 3.0 of this report.

2 Semi-annual Sampling Methods

2.1 September 2015 Groundwater Monitoring Overview

The Second 2015 groundwater monitoring event included wells in the current monitoring well network (Table 1-1), with the exception of five corrective action system effectiveness wells. Corrective action system effectiveness monitoring wells MW-7 and MW-9 were not gauged or sampled due to the well being dry. Monitoring wells MW-4, MW-6D, and MW-6DR were eliminated during this single event. Groundwater samples were collected from 24 monitoring wells and two water supply wells. Groundwater levels were measured for site wells during the first day of the groundwater monitoring event. Table 2-1 summarizes the water level, groundwater elevations, and total well-depth measurements for the monitoring wells. The groundwater elevation data measured in the monitoring wells are included on the groundwater elevation maps discussed in Section 3.0 of this report. The field work was conducted September 1-3, 2015 by AECOM personnel, and the samples were submitted to ESC Lab Sciences, a North Carolina certified analytical laboratory, for analysis. The field generated sample collection records are included in Appendix A. The laboratory analytical reports are presented in Appendix B.

In addition to samples collected from the monitoring network, water samples were collected from two water supply wells. Details of sampling procedures used during the September 2015 monitoring event are discussed in the following sections. No surface water samples were collected due to dry stream conditions.

Trip blanks accompanied several of the sample coolers delivered by courier to ESC Lab Sciences. One duplicate sample was collected from each of the following site wells: MW-36 and RW-4. Additionally, one equipment blank (EB-01-09022015) and one trip blank (for VOC analysis) was collected. A detailed discussion of the QA/QC is provided in Section 3.1 of this report.

2.2 Sampling Procedures

The following section describes the sampling methods used during the Second 2015 groundwater monitoring event. Sampling methods are described below and in the Sampling and Analysis Plan (ENSR, 2007). Sampling procedures are in accordance with the Region 4 United States Environmental Protection Agency (EPA) Field Branches Quality System and Technical Procedures (EFBQSTP) (EFBQSTP, January 2012) protocols.

2.2.1 Effectiveness and Point of Compliance Wells

The sampling team collected samples in a sequence from locations with the lowest to highest VOC concentrations, as determined from past analytical data. Each day, before collecting samples, the sampling team calibrated water quality meters. A peristaltic pump, or a decontaminated submersible pump (Monsoon or Bladder), and new polyethylene tubing were used to purge and sample each well.

Temperature, pH, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured and recorded during well purging. The wells were considered purged when measurements of groundwater temperature, pH, specific conductance, DO, and ORP were stable and the turbidity was <10 Nephelometric Turbidity Units or the well was pumped dry due to inadequate recharge. For this sampling event, field parameters were considered stable if consecutive measurements were within ten percent of the previous well volume measurements. Groundwater samples were collected and transported according to requirements of the RCRA Part B Permit. Sample containers were labeled in the field and a chain-of-custody form was completed. Upon collection, samples were stored on ice in laboratory supplied coolers pending delivery to ESC Lab Sciences. A groundwater sample collection record was prepared for each well sampled (Appendix A). Table 2-2 summarizes the indicator parameter measurements.

The groundwater samples collected from the system effectiveness and POC wells were analyzed for VOCs by EPA Method 8260B, 1,4-dioxane by EPA Method 8260 selected ion monitoring (SIM), and select metals (arsenic, barium, cadmium, chromium, copper, nickel, selenium, silver, zinc, and mercury) by EPA Method 6010B and EPA Method 7470, or an equivalent acceptable method. VOCs, 1,4-dioxane, and metals are reported in accordance with Parker's RCRA Part B Permit. Complete laboratory analytical reports are presented in Appendix B.

Evacuated groundwater was temporarily stored into labeled 55-gallon drums. The contents of the drums were pumped into the on-site remediation system for treatment.

2.2.2 Extraction Wells

Groundwater samples were obtained from the three on-site extraction wells during this sampling event. Each extraction well is equipped with approximately two to five feet of polyvinyl chloride (PVC) piping, which is located between the main well piping and a sampling port. Extraction wells were sampled by attaching a new length of silicone tubing to the sample port spigot. Approximately one-to four-gallons of water were purged from the line at each well prior to sample collection. The sample was collected by transferring the extracted groundwater from the silicone tubing directly to the appropriate laboratory-prepared sample containers. Sample containers were labeled in the field, a chain-of-custody form was completed, and samples stored on ice in laboratory supplied coolers pending delivery to ESC Lab Sciences. A groundwater sample collection record was prepared for the wells sampled (Appendix A). Purge water from sampling activities was placed into labeled 55-gallon drums. The contents of the drums were pumped into the on-site remediation system for treatment.

The samples collected from the three extraction wells were analyzed for VOCs, 1,4-dioxane, and metals using similar analytical methods described in Section 2.2.1 above and results reported in accordance with Parker's RCRA Part B Permit. Complete laboratory analytical reports are presented in Appendix B.

Influent and effluent water samples were also collected from the groundwater treatment system from pre-installed sample ports. Samples were analyzed for VOCs, semi-VOCs, and metals. Sample results have also been reported to the City of Raleigh.

2.2.3 Surface Water Samples

Surface water samples were not collected during the Second 2015 event due to dry stream conditions.

2.2.4 Water Supply Well Samples

Water samples from two WSWs (Andrews WSW and Perry WSW) were also collected and submitted for VOC analysis by EPA Method 8260B. Water samples were collected at the nearest spigot to the well. The well was purged for approximately 15 minutes prior to collecting the samples.

3 Discussion of the Semi-annual Results

The Second 2015 monitoring event included collecting monitoring well samples, extraction well samples, POC well samples, QA/QC samples, and two WSW samples. The analytical results for this event are listed in Tables 3-1 through 3-5. The RCRA Part B Permit established regulatory standard or the Title 15A North Carolina Administrative Code 2L Groundwater Quality Standard (2L Standard) for each compound is also listed on these tables. Laboratory analytical results are presented in Appendix B.

3.1 Quality Control/Data Validation for Groundwater Samples

The data were reviewed for conformance to method specifications and the validation criteria set forth in the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review*, USEPA-540-R-07-003, July 2008, with additional reference to *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review*, EPA 540/R-99-008, May 1999 as they applied to the methodology used. Inorganic data were evaluated based on method specifications and the validation criteria set forth in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA-540-R-04-004, January 2010, as they applied to the analytical methods used. Field duplicate relative percent difference (RPD) review and applicable control limits were taken from the *USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses*, December 1996. The following analyses were requested on the chain-of-custody record.

- EPA Method 8260B – VOC by Gas Chromatography/Mass Spectrometry (GC/MS)
- EPA Method 8260B – 1,4-Dioxane by GC/MS in SIM Mode (Low Level)
- EPA Method 6010C – Metals by Inductively Coupled Plasma

The complete Data Validation Report is located in Appendix B. QC data are summarized in Tables 3-6a and 3-6b. The following QC samples were collected for the September 2015 monitoring event:

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Method blanks/trip blanks
- Surrogate results
- Laboratory control sample results
- Matrix spike/matrix spike duplicate (MS/MSD) results
- Field precision results

In general, the data are valid as reported and may be used for decision making purposes. Sample data are qualified with either a “J” (the associated numerical value is the approximate concentration of the analyte in the sample), “UJ” (the analyte was not detected; however, the reported quantitation limit is approximated and may be inaccurate or imprecise), or “U” (the analyte was not detected above the level of the reported sample quantitation limit).

Positive results less than the reporting limit (i.e., practical quantitation limit), but greater than the method detection limit were qualified “J,” as estimated concentrations, due to increased uncertainty near the detection limit. These “J” qualifiers were maintained in this data validation.

Laboratory sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC.

All samples were analyzed within the holding times required by the methods. The coolers were received within the 4±2° C requirement. All samples that required chemical preservation were chemically preserved to the proper pH.

- EPA Method 8260B: The 2-chloroethylvinylether results were rejected because 2-chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

No analytes were detected at concentrations exceeding the reporting limits for the method blanks, equipment blanks, or trip blanks with the following exceptions:

- EPA Method 8260B: Equipment blank EB-01-0902015 had detections for acetone and TCE. All of the associated samples with detections less than five times the equipment blank concentration were qualified. See Table 3-6a.
- EPA Method 8260B: The trip blank had detections for acetone, carbon disulfide, and tetrachloroethene. All of the associated samples with detections less than five times the trip blank were qualified. See Table 3-6a.

The surrogate recoveries were acceptable for all analyses with the following exceptions:

- EPA Method 8260B: Surrogate 4-bromofluorobenzene was outside of the quality control limits biased low in samples MW-36, MW-38, MW-39D, MW-40D, RW-4, RW-6, and RW-19. The VOC compound results were qualified. See Table 3-6a.
- EPA Method 8260B: Surrogate toluene-d8 was outside of the quality control limits biased low in samples POC-1B, POC-2A, and POC-2B. The VOC compound results were qualified. See Table 3-6a.
- EPA Method 8260B: Surrogate toluene-d8 was outside of the quality control limits biased high in samples RW-6, POC-1B, MW-6, and POC-2A. The 1,4-dioxane results for all of the samples with detections were qualified. See Table 3-6a.

Laboratory control standards for all of the analyses were within the quality control limits.

MS/MSDs that were performed on non-project samples were not evaluated because matrix similarity to project samples could not be assumed.

The MS/MSD recoveries and precision on client samples were all within the advisory limits with the following exceptions:

- EPA Method 8260B: The MS/MSD recoveries were outside of the quality control limits biased high for acetone, acryonitrile, and 2-butanone in sample MW-3. The acetone, acryonitrile, and 2-butanone results in sample MW-3 were non-detect; therefore, data qualification was not required.
- EPA Method 8260B: The MS/MSD recoveries were outside of the quality control limits for TCE in sample MW-3. The spike amount was less than 25 percent of the sample concentration; therefore, data qualification was not required.
- EPA Method 8260B: The MS/MSD recoveries were outside of the quality control limits biased low for acetone and 2-butanone in sample MW-6DR3. The acetone and 2-butanone results in sample MW-6DR3 were qualified. See Table 3-6a.
- EPA Method 8260B: The MS/MSD recoveries were outside of the quality control limits for TCE in sample MW-6DR3. The spike amount was less than 25 percent of the sample concentration; therefore, data qualification was not required.

Field duplicates were collected on samples MW-36 and RW-4. See Appendix B (Tables 2A and 2B) for the RPDs for all compounds for which there were detections. The RPDs between the original and field duplicates that were outside the acceptable criteria of 30 percent are in bold text in Table 3-6b and qualified in Table 3-6a.

3.2 Comparison of Analytical Results versus Part B Permit and Title 15A North Carolina Administrative Code 2L Groundwater Quality Standard

Groundwater data were compared to corresponding Part B Permit and 2L Standards as discussed below. VOCs, 1,4-dioxane, and metals are reported for each of the monitoring and extraction well groundwater samples that were collected during the September 2015 monitoring event.

3.2.1 Volatile Organic Compounds

Groundwater analytical results for VOCs presented in Table 3-1 show that eight VOCs were reported at concentrations above the Part B Permit regulated limit in multiple samples. TCE was detected in 17 wells (10 monitoring wells, 3 extraction wells, and the 4 POC wells) during this monitoring event at concentrations above the Part B Permit regulated limit of 3.0 micrograms per liter (µg/L). Cis-1,2-dichloroethene (DCE) was detected in five wells (one monitoring wells, two POC wells, and two extraction wells) at concentrations above the Part B Permit regulated limit of 70 µg/L. Tetrachloroethene (PCE) was detected in 13 of the wells (seven monitoring wells, two extraction wells, and four POC wells) at concentrations above the Part B Permit regulated limit of 0.7 µg/L. Methyl ethyl ketone was detected in one of the POC wells (POC2B) at an estimated (J value) concentration above the Part B Permit regulated limit of 170 µg/L. Vinyl chloride was detected in five of the wells (one monitoring well, two extraction wells, and two POC wells) at concentrations above the Part B Permit regulated limit of 0.015 µg/L. 1,1-DCE was detected in two of the wells (one POC well, and one extraction well) at concentrations above the 2L Standard of 7 µg/L. 1,2-Dichloroethane was detected in three of the wells (two POC wells, and one extraction well) at estimated (J value) concentrations above the Part B Permit regulated limit of 0.38 µg/L. 1,2-Dichloropropane was detected at one POC well at an estimated (J value) concentration above the Part B Permit regulated limit of 0.6 µg/L.

Other detectible concentrations of VOCs were at or below the Part B Permit regulated limits. Table 3-2 presents historic TCE groundwater concentrations. Trend graphs of historic TCE concentrations for site wells are included for POC and system effectiveness wells presented in Figures 3-1a and 3-1b, respectively.

3.2.2 1,4-dioxane

Table 3-3 lists the 1,4-dioxane results from the September 2015 sampling event. 1,4-Dioxane was detected at concentrations exceeding the Part B Permit regulated limit of 3.0 µg/L at six locations, monitoring wells MW-33 and MW-34, point of compliance wells POC-1B and POC-2A, and recovery wells RW-4 and RW-6. Historical sampling results for 1,4-dioxane are presented in Table 3-4 and Figure 3-2 depicts the historical trends of 1,4-dioxane from select site monitoring wells.

3.2.3 Metals

Table 3-5 lists metal concentrations from the current sampling event. Chromium was detected at concentrations exceeding the Part B Permit regulated limit of 10 µg/L in three wells (POC-1A, POC-2B, and RW-4). Nickel was detected at a concentration exceeding the Part B Permit regulated limit of 100 µg/L in POC-2B.

3.2.4 Extent and Distribution of Volatile Organic Compounds

Figure 3-3 depicts TCE isoconcentration contours in plan view. Figure 3-4 is a cross-section (A-A') running generally south to north across the site from monitoring well MW-30 to monitoring well MW-38. Figure 3-5 is a cross-section (B-B') running generally east to west across the site from monitoring well MW-1 to MW-21. Concentration values are plotted on these sections at the center of the screened interval for each of the wells.

A comparison of the plan view plume maps from the First 2015 monitoring event and the current (Second 2015) monitoring event indicates some varying concentrations, and the TCE plume is starting to recede, most notably in the area adjacent to the POC wells, which may be a result of the injection event which took place in August 2014. TCE concentrations at the source area, POC-2A and POC-2B, decreased from 3,200 and 6,400 µg/L, respectively, in the First 2015 event to 1,980J and 2,510J µg/L, respectively, in the Second 2015 event. Outside of the source area, the majority of the wells show a reduction in TCE concentrations, or have remained relatively stable between the two monitoring events. Historically low TCE concentrations in the southern-most corner of the property, combined with the groundwater elevation measurements and associated groundwater flow maps, indicate there remains no significant movement of the TCE plume towards the south.

Figure 3-4 shows the groundwater potentiometric surface map in cross-section A-A' from the current monitoring event. Cross-section A-A' runs approximately parallel to the plume axis and the direction of groundwater flow. As would be expected, TCE concentrations are the highest in the source area (around POC-1B). Consistent with the First 2015 groundwater monitoring event, TCE concentrations decrease moving north through the section from RW-6 (983J µg/L) to MW-38 (10.9J µg/L).

Figure 3-5 shows the groundwater potentiometric surface map in cross-section B-B' from the current monitoring event. Cross-section B-B' runs obliquely to the plume and side-gradient to the direction of groundwater flow. As would be expected, TCE concentrations are the highest in the source area adjacent to the POC wells. Consistent with the First 2015 groundwater monitoring event, TCE concentrations are generally highest in the middle of the section and decrease gradually outward to the edges of the section.

3.2.5 Trends in Contaminant Concentrations

The groundwater analytical results from the September 2015 sampling event, along with historic groundwater analytical results, were reviewed and evaluated for POC wells, system effectiveness wells, and extraction wells. The following sections discuss an evaluation of the POC wells, a comparison of analytical results to the RCRA Part B Permit and the 2L Standards, the extent and distribution of VOCs, and temporal trends in VOC concentrations.

Trend graphs of historic TCE concentrations for site wells are included for POC and system effectiveness wells as Figures 3-1a and 3-1b, respectively.

3.3 Water Supply Well Sampling Results

Water samples from two WSWs (Andrews WSW and Perry WSW) located to the east of the site were collected and submitted for VOC analysis by EPA Method 8260. No VOCs were detected above laboratory reporting limits during the September 2015 sampling event.

3.4 Groundwater/Hydrogeologic Evaluations

Depth-to-water measurements were collected from 57 shallow and deep monitoring wells during the September 2015 groundwater monitoring event. Groundwater elevations were calculated for each of the wells gauged based on the surveyed top of casing elevations. These groundwater elevations were plotted as Figure 3-4 (cross-section view A-A'), Figure 3-5 (cross-section view B-B'), and Figure 3-6 (plan view). The data included on Figure 3-6 are restricted to shallow and intermediate depth wells screened in the deep saprolite or PWR. These contoured plots were used to estimate the groundwater flow across the site.

Table 3-7 summarizes the vertical gradients observed during the current monitoring period. Downward vertical gradients were present during the September 2015 monitoring event at the MW-6/MW-6D and MW6-DR/MW-6DR3 portions of the MW-6 well cluster, the MW-8D/MW-8DR portion of the MW-8 well cluster, and the MW-21/MW-21D well pair.

Upward vertical gradients were detected at the MW-6D/MW-6DR portion of the MW-6 well cluster. Upward vertical gradients were also detected at the MW-8/MW-8D portion of the MW-8 well cluster, the MW-39/MW-39D well pair, and the MW-40/MW-40D well pair; indicating typical upward groundwater movement in discharge areas (i.e., near streams).

Groundwater contours shown in cross section on Figure 3-4 indicate the direction of groundwater flow in the subsurface from the deep bedrock wells in the MW-6 area is in a downgradient direction (north). Groundwater contours shown in cross section on Figure 3-5 indicate the direction of subsurface groundwater flow from the MW-18D area is in a downgradient direction (west). Figure 3-6 shows the potentiometric surface of the area and is consistent with the cross sections, showing groundwater flow to the north and west. There is no apparent zone of capture in the area adjacent to the recovery wells, likely due to system inactivity during the monitoring period.

3.4.1 Evaluation of Point of Compliance Wells

Water levels in the POC wells for the Second 2015 event were slightly higher than the First 2015 monitoring event likely due to inactivity of the recovery wells (RW-4, RW-6, RW-19) during September 2015.

4 Effectiveness Evaluation

In accordance with Section IV.I.2 of the Facility RCRA Part B Permit, an effectiveness evaluation has been prepared for the GWTS currently operating on-site. The associated groundwater sampling event established groundwater quality and groundwater elevation conditions in September 2015, approximately 283 months after startup of the groundwater remediation system in May 1992. An SVE system was installed and placed into service at the site in 1996. The SVE system is not part of the remedial action system as defined by the RCRA Part B Permit. Section 4.1 will address the GWTS and Section 4.2 addresses the SVE system operating at the site.

4.1 Groundwater Treatment System

This effectiveness evaluation has been developed based on operational data and reports including the RCRA Permit required weekly and monthly inspection reports, along with groundwater quality and groundwater elevation data collected during the semi-annual groundwater sampling event conducted in September 2015.

4.1.1 Review of Operational Data

In accordance with the RCRA Part B Permit, the remediation system operational data is recorded on a weekly basis during the weekly GWTS inspections. The available information regarding the GWTS is summarized in the following tables.

Table 4-1 lists pertinent construction and operational details for the three extraction wells (RW-4, RW-6, and RW-19). This information includes well construction details, top of casing elevations, total depth, and static water levels for each well. Also included is the estimated average pumping rate for each of the extraction wells for the current monitoring period. This average pumping rate is estimated based on the totalizer flow meter readings from the current monitoring period. Figure 4-1 provides historic hydrographs prepared for the three wells.

Table 4-2 presents a summary of the GWTS monthly inspection reports with information concerning equipment repairs, replacement, and general maintenance required. Months not listed deem system was functioning under normal conditions.

Table 4-3 summarizes the detected constituents from the influent and effluent samples. Table 4-4 provides historic information regarding the influent/effluent analytical results for TCE, along with estimated GWTS efficiency at removing targeted VOCs from the waste stream prior to discharge to the city of Raleigh POTW.

Table 4-5 presents estimated average pumping rates and estimated TCE mass removed by the extraction well system.

4.1.2 Review of Mass Removal Data

Table 4-5 provides semi-annual estimates of the total TCE mass removed by the GWTS since system startup. Estimated numbers for the current monitoring period are also included, based on estimated GWTS flow rate during the period and also based on the analytical results from the influent and effluent sampling in July 2015. Based on the July 2015 influent data, the average GWTS influent water concentration of total VOCs was 0.71 milligrams per liter (mg/L). This measured concentration of 0.71 mg/L and an estimated GWTS flow rate of 2.16 gallons per minute (GWTS running for 171 days for a total of 246,240 minutes) were used for the calculations on Table 4-5. It is estimated that 532,507 gallons of water were treated from April 2015 to August 2015 while the system was operational.

As indicated on Table 4-5, the total estimated mass of VOCs removed during the period from April 2015 to August 2015 is approximately 3 pounds. The estimated total mass removed by the GWTS since startup in 1992 is 4,229 pounds.

4.1.3 Groundwater Elevations and Hydraulic Control

Figure 3-6 demonstrates that groundwater flow across the site flows to the north and northwest. There is currently a limited area of capture due to the inactivity of the GWTS.

4.1.4 Concentrations of Targeted Compounds

Figure 3-1a is a plot of historical TCE concentrations for the four POC wells included in the groundwater monitoring program. Groundwater samples were collected from POC-1A, POC-1B, POC-2A, and POC-2B in September 2015. Concentrations of TCE have decreased at all but one of the POC well locations since the last monitoring event. Decreases at POC well locations may be due to the injection event which took place in August of 2014. POC-1A shows an increase in TCE concentration since March 2015, but shows an overall decrease since the September 2014 event. Historical TCE concentrations in the four POC wells continue to show a long-term declining trend overall since the GWTS startup in 1992.

Figure 3-1b is a plot of historical TCE concentrations for the 13 effectiveness wells included in the groundwater monitoring program. Concentrations of TCE in most of these wells have remained generally constant during the monitoring program, with a few of the wells (e.g., MW-3 and MW-8DR) showing a long-term declining trend.

4.1.5 Recommendations and System Upgrade

The subsurface piping that transmits effluent water to the City of Raleigh wastewater treatment plant is currently blocked with debris. Parker is working to solve the problem so that operation of the GWTS can resume as soon as technically feasible. During the monitoring period, no upgrades were completed for the GWTS.

4.2 Soil Vapor Extraction System

The SVE system was installed and placed into service in 1996. The target areas for vapor removal when the system was originally installed were SWMU 31, SWMU 24, SWMU 32, and AOC 38. There were four SVE points connected to the system constructed of 2-inch diameter PVC, installed to a total depth of 25 feet below land surface (bls), with a screen interval and sand-pack from 5 to 25 feet bls.

The four SVE well points have since been removed from service due to construction activities and replaced with three new SVE wells (SVE-4, SVE-5, and SVE-6). The first two new SVE wells (SVE-4 and SVE-5) were installed in November and December 2006 in the SWMU 31/33 area and immediately brought online. The third SVE well (SVE-6) was also installed in the SWMU 31/33 area and brought online March 7, 2007. The SVE wells are 4-inch diameter PVC, installed to a total depth of 25 feet bls, with a screened interval from 5 to 25 feet bls. On September 3, 2015, AECOM sampled the SVE wells along with influent and effluent vapor points. Table 4-6 shows the vapor sampling results. The SVE system operates continuously and all SVE wells were operational during the current monitoring period (April 2015 to September 2015).

5 Conclusions

The following conclusions were developed based on the September 2015 groundwater monitoring event:

- TCE, PCE, cis-1,2-DCE, and vinyl chloride were detected in groundwater samples at concentrations above Part B Permit and/or 2L Standard limits during this monitoring event. Concentrations of TCE were detected at up to an estimated concentration of 4,470 µg/L, PCE was detected at up to an estimated concentration of 12.5 µg/L, cis-1,2-DCE was detected up to an estimated concentration of 10,600 µg/L, and concentrations of vinyl chloride were detected up to an estimated concentration of 2.20 µg/L.
- 1,4-Dioxane was detected in excess of the permit limit of 3 µg/L in monitoring wells MW-33 (9.02 µg/L), MW-34 (6.62 µg/L), recovery wells RW-4 (6.12 µg/L), and RW-6 (estimated concentration of 3.64 µg/L), and point of compliance wells POC-1B (estimated concentration of 10.5 µg/L), and POC-2A (estimated concentration of 22.3 µg/L).
- Two metals were detected in groundwater samples above the Part B Permit and/or 2L Standard during the monitoring event. Chromium was detected above the Part B Permit regulated limit of 10 µg/L in point of compliance wells POC-1A (21.8 µg/L), POC-2B (143 µg/L), and recovery well RW-4 (15.5 µg/L, RW-4 DUP02). Nickel was detected at a concentration exceeding the Part B Permit regulated limit of 100 µg/L in POC-2B (146 µg/L). No other metals were detected in groundwater samples at concentrations above the permit limits.
- The calculated total mass of VOCs removed by the GWTS was estimated to be 3 pounds during the monitoring period. The estimated total mass removed by the GWTS since startup in 1992 is 4,229 pounds.
- Plots of the groundwater elevation data collected during this event indicate that the extraction wells are not influencing groundwater flow at the site due to the system being inactive. There is currently a limited zone of capture for the TCE plume.

6 References

Daniel, C.C., III, and Dahlen, P.R., 2002, Preliminary Hydrogeologic Assessment and Study Plan for a Regional Ground-Water Resource Investigation of the Blue Ridge and Piedmont Provinces of North Carolina. U.S. Geological Survey Water-Resources Investigations Report 02-4105.

EFBQSTP, 2012. EPA Field Branches Quality System and Technical Procedures . Prepared by EFBQSTP. January 2012.

ENSR, 2007. Sampling and Analysis Plan. 2007.

EPA, 1996. EPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses. December 1996.

EPA, 1999. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA 540/R-99-008. May 1999.

EPA, 2008. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA-540-R-07-003. July 2008.

EPA, 2010. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA-540-R-04-004. January 2010.

Tables

Table 1-1
Groundwater Monitoring Plan - August 2015
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Well Type	VOCs	Metals	1-4, Dioxane	Field Parameters
MW-3	CA	1	Cr, Ni		1
MW-6	CA	1		1	1
MW-6D	CA				
MW-6DR	CA				
MW-6DR3	CA	1		1	1
MW-8	CA	1			1
MW-8D	CA	1			1
MW-8DR	CA	1			1
MW-21	CA	1			1
MW-21D	CA	1			1
RW-4	RW	1	Cr, Ni	1	1
RW-6	RW	1	Cr, Ni	1	1
RW-19	RW	1	Cr, Ni	1	1
POC-1A	POC	1	Cr, Ni	1	1
POC-1B	POC	1	Cr, Ni	1	1
POC-2A	POC	1	Cr, Ni	1	1
POC-2B	POC	1	Cr, Ni	1	1
MW-9	other	1		1	1
MW-13	other	1		1	1
MW-29	other	1		1	1
MW-32	other	1		1	1
MW-33	other	1		1	1
MW-34	other	1		1	1
MW-36	other	1			1
MW-37	other				
MW-38	other	1			1
MW-39	other				
MW-39D	other	1			1
MW-40	other				
MW-40D	other	1			1
MW-41	other				
QA/QC	other	2	1	1	0
Totals		27	9	16	25

Notes:
POC - point of compliance
RW - recovery wells
CA - corrective action effectiveness wells
Other - other recommended monitoring well
Orange-highlighted well denotes reduction from previously performed anlayses.
Green-highlighted well denotes addition to previously performed anlayses.
Field Parameters: Water level, dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, temperature, and turbidity.
VOCs - volatile organic compounds
Metals:- Cr - chromium, Ni - nickel.
QA/QC - quality assurance / quality control samples

Table 2-1
Monitoring Well Construction Information and Groundwater Elevations
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Date Gauged	Water Level Below TOC (feet)	Measuring Point Elevation at TOC (feet MSL)	Groundwater Elevation (feet MSL)	Total Well Depth (feet)
MW-1	9/1/2015	37.50	398.85	361.35	43.60
MW-2	9/1/2015	30.59	394.01	363.42	44.12
MW-3	9/1/2015	30.57	393.58	363.01	55.70
MW-4	9/1/2015	33.60	395.65	362.05	39.30
MW-5	9/1/2015	34.77	394.61	359.84	39.30
MW-6	9/1/2015	26.40	385.47	359.07	45.64
MW-6D	9/1/2015	29.22	385.58	356.36	69.20
MW-6DR	9/1/2015	28.98	387.07	358.09	103.90
MW-6DR3	9/1/2015	34.72	387.95	353.23	154.10
MW-7	9/1/2015	DRY	354.45	DRY	10.00
MW-8	9/1/2015	14.75	357.87	343.12	17.20
MW-8D	9/1/2015	14.00	358.14	344.14	67.20
MW-8DR	9/1/2015	14.77	358.41	343.64	92.20
MW-9	9/1/2015	DRY	362.38	DRY	16.05
MW-10	9/1/2015	28.87	389.10	360.23	31.40
MW-11	9/1/2015	30.01	384.69	354.68	35.00
MW-11D	9/1/2015	30.22	384.79	354.57	67.20
MW-12	9/1/2015	23.57	386.75	363.18	38.02
MW-13	9/1/2015	28.30	377.93	349.63	34.65
MW-14	9/1/2015	22.63	377.93	355.30	26.65
MW-15	9/1/2015	23.51	369.88	346.37	29.87
MW-16	9/1/2015	23.40	372.94	349.54	24.05
MW-17	9/1/2015	12.67	357.10	344.43	17.00
MW-18	9/1/2015	33.66	394.33	360.67	40.50
MW-18D	9/1/2015	47.48	397.04	349.56	105.50
MW-20	9/1/2015	36.49	396.11	359.62	46.40
MW-21	9/1/2015	4.87	339.38	334.51	20.00
MW-21D	9/1/2015	15.70	340.07	324.37	142.32
MW-22	9/1/2015	25.77	382.10	356.33	38.35
MW-23	9/1/2015	19.60	361.41	341.81	28.50
MW-24	9/1/2015	36.37	395.12	358.75	48.11
MW-25	9/1/2015	34.66	395.42	360.76	45.45
MW-26	9/1/2015	32.42	394.01	361.59	83.70
MW-27	9/1/2015	31.62	390.56	358.94	43.72
MW-28	9/1/2015	31.34	383.14	351.80	46.90
MW-29	9/1/2015	27.40	376.32	348.92	37.20
MW-30	9/1/2015	38.02	389.92	351.90	49.31
MW-31	9/1/2015	33.34	391.26	357.92	49.19
MW-32	9/1/2015	22.90	375.67	352.77	62.55
MW-33	9/1/2015	32.60	382.54	349.94	40.15
MW-34	9/1/2015	38.34	383.07	344.73	84.00
MW-35R	9/1/2015	22.60	376.99	354.39	32.85
MW-36	9/1/2015	30.40	391.26	360.86	40.10
MW-37	9/1/2015	37.75	395.01	357.26	39.51
MW-38	9/1/2015	17.15	335.10	317.95	32.81
MW-39	9/1/2015	16.55	352.05	335.50	26.25
MW-39D	9/1/2015	14.49	352.02	337.53	69.90
MW-40	9/1/2015	16.10	350.10	334.00	32.60
MW-40D	9/1/2015	16.35	350.54	334.19	61.70
MW-41	9/1/2015	19.01	371.79	352.78	28.60
RW-4	9/1/2015	31.62	393.87	362.25	78.00
RW-6	9/1/2015	29.80	388.02	358.22	65.08
RW-19	9/1/2015	97.78	356.99	259.21	163.50
POC-1A	9/1/2015	30.34	393.72	363.38	41.92
POC-1B	9/1/2015	30.39	393.44	363.05	44.53
POC-2A	9/1/2015	32.84	395.30	362.46	47.00
POC-2B	9/1/2015	33.60	395.67	362.07	65.30

Notes:
MSL - Mean Sea Level
TOC - Top of Casing

Table 2-2
Field Indicator Parameters
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Sample Date	Conductivity	DO	ORP	pH	Temperature	Turbidity
		mS/cm	mg/L	mV	SU	C	NTU
MW-3	9/2/2015	0.154	7.07	122.8	5.74	18.20	8.71
MW-6	9/2/2015	0.059	3.10	35.7	5.07	17.40	NA
MW-6DR3	9/2/2015	0.173	4.46	6.9	8.00	20.80	NA
MW-8	9/1/2015	0.057	0.39	67.4	5.00	17.20	NA
MW-8D	9/1/2015	0.175	4.61	32.1	6.63	17.50	NA
MW-8DR	9/1/2015	0.386	0.19	-67.4	7.17	17.70	NA
MW-13	9/3/2015	0.085	3.97	62.6	4.97	18.40	NA
MW-21	9/1/2015	0.095	0.71	45.7	5.19	21.70	NA
MW-21D	9/1/2015	0.141	1.71	58.2	8.60	21.00	NA
MW-29	9/3/2015	0.096	5.95	59.4	5.02	21.20	NA
MW-32	9/1/2015	0.161	0.37	52.0	6.05	20.80	NA
MW-33	9/1/2015	0.085	6.86	159.4	5.77	16.40	NA
MW-34	9/1/2015	0.489	6.73	157.4	9.29	17.80	NA
MW-36	9/2/2015	0.051	6.46	152.5	4.80	18.10	NA
MW-38	9/1/2015	0.228	2.89	177.2	6.11	17.00	NA
MW-39D	9/1/2015	0.164	2.63	150.9	6.63	17.40	NA
MW-40D	9/1/2015	0.157	6.01	96.7	6.67	17.10	NA
RW-4	9/3/2015	0.344	0.12	-110.2	5.55	18.80	5.91
RW-6	9/3/2015	0.315	0.67	38.0	6.36	19.70	1.77
RW-19	9/3/2015	0.123	5.58	95.6	5.78	16.50	3.77
POC-1A	9/2/2015	0.115	6.58	86.1	6.47	19.20	6.91
POC-1B	9/2/2015	0.153	5.90	83.0	7.01	17.50	2.40
POC-2A	9/2/2015	0.300	0.11	-140.7	6.26	19.30	8.55
POC-2B	9/2/2015	5.559	0.14	-52.6	5.68	20.00	8.79

Notes:
C - Degrees Celsius
DO - Dissolved Oxygen
mg/L - milligrams per liter
mS/cm - milliseimens per centimeter
mV - millivolts
NTU - Nephelometric Turbidity Units
ORP - Oxidation-Reduction Potential
SU - Standard Units

Table 3-1
Summary of Organic Analytical Results - RCRA Permit Parameters for Site Wells
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Sample Date	Acetone	Benzene	Bromo-dichloromethane	Dibromo-chloromethane	Carbon Disulfide	Chloroform	cis-1,2-DCE	Dichloro-difluoromethane	MEK	PCE
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NCAC 2L Permit Limit		**6000**	**1**	**0.6**	**0.4**	**700**	**70**	**70**	**1000**	**170**	**0.7**
MW-3	9/2/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	0.499 J	20.4 J	<0.127	<1.28	**0.886 J**
MW-6	9/2/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	1.28	**440**	<0.127	<1.28	**4.12**
MW-6DR3	9/2/2015	<1.05 UJ	<0.0896	<0.0800	<0.128	<0.101	0.648	1.14	<0.127	<1.28 UJ	<0.199
MW-8	9/1/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	6.41	<0.127	<1.28	**6.45**
MW-8D	9/1/2015	<1.08 U	<0.0896	<0.0800	<0.128	<0.101	<0.0860	2.43	<0.127	<1.28	0.510 J
MW-8DR	9/1/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	9.00	<0.127	<1.28	**1.92**
MW-13	9/3/2015	<1.15 U	<0.0896	<0.0800	<0.128	<0.101	<0.0860	0.877	<0.127	<1.28	**13.6**
MW-21	9/1/2015	<1.22 U	<0.0896	<0.0800	<0.128	<0.101	<0.0860	<0.0933	<0.127	<1.28	<0.199
MW-21D	9/1/2015	<5.28 U	<0.0896	<0.0800	<0.128	<0.101	<0.0860	<0.0933	<0.127	1.89 J	<0.199
MW-29	9/3/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	3.19	<0.127	<1.28	**1.25**
MW-32	9/1/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	<0.0933	<0.127	<1.28	<0.199
MW-33	9/1/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	2.16	4.70	<0.127	<1.28	**0.834**
MW-34	9/1/2015	<1.09 U	<0.0896	<0.0800	<0.128	<0.101	<0.0860	5.03	<0.127	<1.28	<0.199
MW-36	9/2/2015	<1.05 UJ	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	<0.0860 UJ	<0.0933 UJ	<0.127 UJ	<1.28 UJ	<0.199 UJ
MW-36 DUP-01	9/2/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	0.376 J	<0.127	<1.28	<0.199
MW-38	9/1/2015	<1.05 UJ	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	<0.0860 UJ	<0.0933 UJ	<0.127 UJ	<1.28 UJ	<0.199 UJ
MW-39D	9/1/2015	<1.05 UJ	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	<0.0860 UJ	<0.0933 UJ	<0.127 UJ	<1.28 UJ	<0.199 UJ
MW-40D	9/1/2015	<1.05 UJ	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	<0.0860 UJ	<0.0933 UJ	<0.127 UJ	<1.28 UJ	<0.199 UJ
POC-1A	9/2/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	3.59	<0.127	<1.28	**0.791**
POC-1B	9/2/2015	<1.05 UJ	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	2.59 J	8.47 J	<0.127 UJ	<1.28 UJ	**4.46 J**
POC-2A	9/2/2015	17.8 J	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	1.78 J	**2830 J**	<0.127 UJ	21.0 J	**2.85 J**
POC-2B	9/2/2015	<39.4 U	<0.448 UJ	<0.400 UJ	<0.640 UJ	<0.505 UJ	4.21 J	**10600 J**	<0.635 UJ	**207 J**	**3.05 J**
RW-4	9/3/2015	64.2	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	0.497 J	**6700 J**	<0.127 UJ	62.6 J	<0.199 UJ
RW-4 DUP-02	9/3/2015	56.5	<0.0896	<0.0800	<0.128	<0.101	0.832	**7140**	<0.127	62.4	<0.199
RW-6	9/3/2015	<6.27 U	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	0.962 J	**1500 J**	<0.127 UJ	9.30 J	**2.36 J**
RW-19	9/3/2015	<1.05 UJ	<0.0896 UJ	<0.0800 UJ	<0.128 UJ	<0.101 UJ	<0.0860 UJ	12.7 J	<0.127 UJ	<1.28 UJ	**12.5 J**
WSW-ANDREWS	9/3/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	<0.0933	<0.127	<1.28	<0.199
WSW-PERRY	9/3/2015	<1.05	<0.0896	<0.0800	<0.128	<0.101	<0.0860	<0.0933	<0.127	<1.28	<0.199

Notes:
< - Non-detect
Bold values indicate an exceedance of permit limit.
1,1,1-TCA - 1,1,1-Trichloroethane
1,1-DCE - 1,1-Dichloroethene
PCE - Tetrachloroethene
U - not detected above the level of the reported sample quantitation limit
2L Standard - Title 15A North Carolina Administrative Code 2L Groundwater Standard
1,2-DCA - 1,2-Dichloroethane
MEK - Methyl Ethyl Ketone
TCE - Trichloroethene
TCFM - Trichlorofluoromethane
trans-1,2-DCE - trans-1,2-Dichloroethene
1,1,2-TCA - 1,1,2-Trichloroethane
cis-1,2-DCE - cis-1,2-Dichloroethene
1,1-DCA - 1,1-Dichloroethane
1,2-DCE - 1,2-Dichloroethene
1,2-TCP - 1,2-Dichloropropane
J - Estimated
µg/L - micrograms per liter

Table 3-1
Summary of Organic Analytical Results - RCRA Permit Parameters for Site Wells
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Sample Date	Toluene	trans-1,2-DCE	TCE	TCFM	Vinyl chloride	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCP	Total VOC's
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NCAC 2L Permit Limit		**600**	**100**	**3**	**2000**	**0.03**	**200**	**6**	**7**	**0.4**	**0.6**	
MW-3	9/2/2015	<0.102	0.513 J	**386**	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	386.00
MW-6	9/2/2015	0.301 J	19.4	**1720**	<0.130	**0.765**	<0.0940	0.401 J	1.21	<0.108	<0.190	2164.89
MW-6DR3	9/2/2015	1.18	<0.152	**124**	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	124.00
MW-8	9/1/2015	<0.102	<0.152	**10.1**	1.42	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	16.55
MW-8D	9/1/2015	0.396 J	<0.152	**3.85**	0.433 J	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	3.85
MW-8DR	9/1/2015	<0.102	<0.152	**22.3**	2.00	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	24.22
MW-13	9/3/2015	<0.102	<0.152	2.64	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	13.60
MW-21	9/1/2015	0.477 J	<0.152	<0.153	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	0.00
MW-21D	9/1/2015	4.50	<0.152	<0.153	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	0.00
MW-29	9/3/2015	0.959	<0.152	**6.19**	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	7.44
MW-32	9/1/2015	<0.102	<0.152	<0.153	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	0.00
MW-33	9/1/2015	<0.102	<0.152	**41.6**	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	42.43
MW-34	9/1/2015	<0.102	<0.152	**20.5**	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	20.50
MW-36	9/2/2015	<0.102 UJ	<0.152 UJ	<0.312 U	<0.130 UJ	<0.118 UJ	<0.0940 UJ	<0.114 UJ	<0.188 UJ	<0.108 UJ	<0.190 UJ	0.00
MW-36 DUP-01	9/2/2015	<0.102	<0.152	<0.935 U	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	0.00
MW-38	9/1/2015	<0.102 UJ	<0.152 UJ	**10.9 J**	<0.130 UJ	<0.118 UJ	<0.0940 UJ	<0.114 UJ	<0.188 UJ	<0.108 UJ	<0.190 UJ	0.00
MW-39D	9/1/2015	<0.102 UJ	<0.152 UJ	<0.153 UJ	<0.130 UJ	<0.118 UJ	<0.0940 UJ	<0.114 UJ	<0.188 UJ	<0.108 UJ	<0.190 UJ	0.00
MW-40D	9/1/2015	<0.102 UJ	<0.152 UJ	0.768 J	<0.130 UJ	<0.118 UJ	<0.0940 UJ	<0.114 UJ	<0.188 UJ	<0.108 UJ	<0.190 UJ	0.00
POC-1A	9/2/2015	<0.102	<0.152	**214**	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	214.79
POC-1B	9/2/2015	<0.102 UJ	0.843 J	**4470 J**	<0.130 UJ	<0.118 UJ	<0.0940 UJ	<0.114 UJ	<0.188 UJ	<0.108 UJ	0.342 J	0.00
POC-2A	9/2/2015	<0.102 UJ	3.17 J	**1980 J**	<0.130 UJ	**0.830 J**	<0.0940 UJ	<0.114 UJ	5.39 J	**0.749 J**	0.346 J	0.00
POC-2B	9/2/2015	1.43 J	4.97 J	**2510 J**	<0.650 UJ	**2.20 J**	<0.470 UJ	<0.570 UJ	**13.0 J**	**1.46 J**	**1.38 J**	0.00
RW-4	9/3/2015	<0.102 UJ	2.02 J	**17.7 J**	<0.130 UJ	**1.48 J**	<0.0940 UJ	<0.114 UJ	**13.3 J**	**0.716 J**	0.375 J	0.00
RW-4 DUP-02	9/3/2015	<0.102	2.79 J	**25.4 J**	<0.130	**1.7**	<0.0940	<0.114	**14.2**	**1.70 J**	0.588	7155.90
RW-6	9/3/2015	<0.102 UJ	2.87 J	**983 J**	<0.130 UJ	**0.905 J**	<0.0940 UJ	<0.114 UJ	4.46 J	<0.108 UJ	<0.190 UJ	0.00
RW-19	9/3/2015	<0.102 UJ	<0.152 UJ	**283 J**	1.14 J	<0.118 UJ	<0.0940 UJ	<0.114 UJ	<0.188 UJ	<0.108 UJ	<0.190 UJ	0.00
WSW-ANDREWS	9/3/2015	<0.102	<0.152	<0.153	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	0.00
WSW-PERRY	9/3/2015	<0.102	<0.152	<0.153	<0.130	<0.118	<0.0940	<0.114	<0.188	<0.108	<0.190	0.00

Notes:
< - Non-detect
Bold values indicate an exceedance of permit limit.
1,1,1-TCA - 1,1,1-Trichloroethane
1,1-DCE - 1,1-Dichloroethene
PCE - Tetrachloroethene
U - not detected above the level of the reported sample quantitation limit
2L Standard - Title 15A North Carolina Administrative Code 2L Groundwater Standard

1,2-DCA - 1,2-Dichloroethane
MEK - Methyl Ethyl Ketone
TCE - Trichloroethene
TCFM - Trichlorofluoromethane
trans-1,2-DCE - trans-1,2-Dichloroethene
1,1,2-TCA - 1,1,2-Trichloroethane

cis-1,2-DCE - cis-1,2-Dichloroethene
1,1-DCA - 1,1-Dichloroethane
1,2-DCE - 1,2-Dichloroethene
1,2-DCP - 1,2-Dichloropropane
J - Estimated
µg/L - micrograms per liter

Table 3-2
Historical TCE Groundwater Analytical Data
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well ID	Historic TCE NCAC 2L Permit Level: 3.0 µg/L																				
	July 2005	Feb 2006	Aug 2006	Feb 2007	Aug 2007	Feb 2008	Aug 2008	Feb 2009	Aug 2009	Feb 2010	Sept 2010	Feb 2011	Aug 2011	Feb 2012	Aug 2012	Feb 2013	Aug 2013	Feb 2014	Aug 2014	Mar 2015	Sept 2015
MW-1	<1	<1.0	< 1 U	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NS	350.0	NS	NS	NS	NS	NS	1810	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	NS	330.0	500.0	980.0	2190	745	1000	NS	2420	1520	NS	1600	830.0	790.0	930	920	1200	1100 J	1700	1200	386
MW-6	1600	1200	850.0	970.0	1380	989	1230	372.0	1040	2390	2700	2000	2300	1900	1300	2500	2800	2800 J	490	4300	1720
MW-6D	NS	930.0	1300	1700	1800	1350	397	989.0	1310	2090	980.0	1500	1500	970	2000	2600	2200	1500 J	5100	3500	NS
MW-6DR	1300	270 J	1200	1200	953.0	754	977	809.0	897.0	3900	1100	770.0	790.0	610.0	690	2800	3600	910	770	850	NS
MW-6DR3	160.0	110.0	99.0	120.0	136.0	112	121	92.6	186.0	29.7	730.0	110.0	100.0	110.0	140	100	66	240	180	170	124
MW-7	NS	230.0	NS	84.0	NS	NS	NS	NS	NS	11.8	30.0	100.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	NS	11.0	1.7	6.7	5.3	9.6	NS	7.3	9.5	7.6	900.0	11.0	NS	12.0	NS	7.8	9.8	12	14	5.9	10.1
MW-8D	NS	8.7	13.0	16.0	16.0	14.9	13.3	14.0	13.0	15.9	12.0	14.0	12.0	15.0	14	14	11	13	11	6.4	3.85
MW-8DR	25.0	63.0	92.0	65.0	50.7	39.9	36.2	33.3	27.1	36.2	34.0	38.0	31.0	34.0	19	37	37	42	42	35	22.3
MW-9	NS	NS	NS	610.0	NS	NS	NS	NS	383.0	NS	NS	410.0	NS	570.0	NS	NS	NS	NS	NS	NS	NS
MW-11	NS	20.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-11D	NS	610.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-13	10.0	7.9	8.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.64
MW-15	NS	320.0	1100	NS	NS	NS	1150	558.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17	NS	4.9	7.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18	NS	7.8	1.2	NS	NS	<1.0	30.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18D	NS	3.6	4.8	NS	NS	1.4	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-20	9.3	6.9	44.0	NS	2.8	NS	NS	1.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21	1.0	<1.0	5.0	<1.0	< 1 U	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.42 J	<0.153
MW-21D	<1.0	<1.0	9.8	<1.0	< 1 U	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.65 J	<0.153
MW-22	NS	130.0	82.0	NS	NS	NS	59.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-23	27.0	16.0	20.0	NS	NS	NS	NS	16.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	NS	120.0	180.0	NS	NS	NS	NS	194.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-25	310.0	190.0	220.0	NS	NS	NS	253	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-26	6.4	23.0	150.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27	150.0	110.0	< 1 U	NS	NS	44.4	NS	28.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-28	510.0	480.0	330.0	470.0	328 A	521.0	NS	273.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29	17.0	14.0	13.0	NS	NS	NS	15.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.19
MW-30	22.0	22.0	NS	NS	NS	NS	NS	1.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31	12.0	20.0	8.5	NS	NS	7.3	NS	<1.0	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32	<1	<1.0	< 1 U	<1.0	< 1 U	<1.0	<1.0	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.153
MW-33	520.0	700 J	570.0	510.0	550.0	539	426 J	227.0	NS	272.0	NS	220.0	32.0	220.0	NS	200	NS	120	110	89	41.6
MW-34	310.0	340 J	280.0	390.0	63.8	58.7	126	NS	91.0	NS	51.0	NS	NS	NS	29	60	120	NS	66	26	20.5
MW-35	38.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-35R	NS	NS	NS	NS	< 1 U	NS	<1.0	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	<0.50	NS	NS	NS
MW-36	NS	1.1	< 1 U	NS	NS	1.4	NS	<1.0	1.3	<1.0	NS	NS	NS	1.4	1	0.88	0.92	0.53	<0.50	NS	<0.312 U
MW-37	NS	43.0	44.0	NS	50.2	NS	NS	NS	NS	NS	6.3	4.5	NS	NS	NS	NS	NS	NS	20	20	NS
MW-38	NS	NS	NS	20.0	17.5	20.1	24.3	24.5	27.1	24.0	22.0	21.0	32.0	26.0	33	29	29	27	22	14	10.9 J
MW-39	NS	NS	NS	<1.0	< 1 U	<1.0	<1.0	<1.0	<1.0	<1.0	1.4 J	<2.0	<0.50	0.47 J	<0.50	<0.50	<0.50	<0.50	<0.50	0.48 J	NS
MW-39D	NS	NS	NS	<1.0	< 1 U	<1.0	<1.0	<1.0	<1.0	<1.0	1.7 J	0.74 J	0.6	0.85	0.63	0.53	<0.50	NS	<0.50	0.50 J	<0.153 UJ
MW-40	NS	NS	NS	<1.0	< 1 U	<1.0	3.4	2.1	8.5	9.2	11.0	6.0	5.3	3.3	2.9	4.4	5.5	5.3	4.2	1.5	NS
MW-40D	NS	NS	NS	12.0	5.4	1.3	7.8	3.1	7.7	14.0	5.5	13.0	3.1	7.4	6.3	23	11	7.3	7.6	1.6	0.768 J
MW-41	NS	NS	NS	<1.0	< 1 U	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40	NS
RW-4	8500	2800	5600	7100	8870 A	6330	11700 J	9840	9400	11800	14000 J	14000	19000	11000	11000	25000	41000	39000	29000 J	190	17.7 J
RW-6	2000	1500	1100	1500	1570	1380	1650	1260	1850	4300	2000	1900	2200	1800	1900	760	3800	7500	2900	1500	983 J
RW-19	NS	550	680	690	852	1070	745	649	789	924	750	840	910	740	760	700	720	570	480	400	283 J
POC-1A	3200	430	1500	4800	NS	NS	3000	1600	NS	3440	740	NS	NS	NS	NS	920	1300 J	1200	780	6.9	214
POC-1B	6500	6500	6500	5600	NS	NS	14400	11900	12100	11100	7200	1300	7700	1700	4400	10000	9400	8400 J	9900	6700	4470 J
POC-2A	NS	NS	NS	1300	NS	NS	NS	NS	NS	18600	3200	NS	NS	NS	NS	39000	20000	18000 J	22000	3200	1980 J
POC-2B	16000	7100	13000	12000	NS	8090	9920	27800	31200	16300	33000	30000	45000	38000	42000	30000	20000	22000 J	40000	6400	2510 J

Notes:
µg/L - micrograms per liter
J - Estimated
NCAC 2L - Title 15A North Carolina Administrative Code 2L Groundwater Standard
NS - not sampled
U - not detected above the level of the reported sample quantitation limit

Table 3-3
Summary of 1,4-Dioxane Groundwater Analytical Results
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Sample Date	1,4-Dioxane µg/L
NCAC 2L Permit Level		3
MW-6	9/2/2015	2.72 J
MW-6DR3	9/2/2015	<0.597
MW-13	9/3/2015	<0.597
MW-29	9/3/2015	<0.597
MW-32	9/1/2015	<0.597
MW-33	9/1/2015	**9.02**
MW-34	9/1/2015	**6.62**
POC-1A	9/2/2015	0.879 J
POC-1B	9/2/2015	**10.5 J**
POC-2A	9/2/2015	**22.3 J**
POC-2B	9/2/2015	<5.97
RW-19	9/3/2015	0.706 J
RW-4	9/3/2015	**6.12**
RW-4 DUP-02	9/3/2015	**5.3**
RW-6	9/3/2015	**3.64 J**
WSW-ANDREWS	9/3/2015	<0.597
WSW-PERRY	9/3/2015	<0.597

Notes:
< - Non-detect
µg/L - micrograms per liter
Bold values indicate an exceedance of permit limit.
J - Estimated
NCAC 2L - Title 15A North Carolina Administrative Code 2L Groundwater Standard

Table 3-4
Historical 1,4-Dioxane Groundwater Analytical Results
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well ID	Historic 1,4-Dioxane NCAC 2L Permit Level: 3µg/L																			
	July 2005	Feb 2006	Aug 2006	Feb 2007	Aug 2007	Feb 2008	Aug 2008	Feb 2009	Aug 2009	Feb 2010	Sept 2010	Feb 2011	Aug 2011	Feb 2012	Aug 2012	Feb 2013	Aug 2013	Feb 2014	Aug 2014	Mar 2015
MW-1	<3.2	<3.4	< 3.3 U	NS	NS	NS	<3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	NS	<3.1	NS	NS	NS	NS	NS	<3.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	NS	<3.0	< 3.6 U	< 3.6 U	< 3.8 U	<4.0	<3.3	<3.2	<3.1	<3.8	**540***	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60
MW-6	<3.3	<3.8	< 3.6 U	< 3.4 U	< 3.8 U	<3.5	<3.3	<4.0	<3.3	<4.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	**13 J**
MW-6D	NS	<3.3	< 4.4 U	< 3.5 U	< 4.5 U	<3.5	<3.5	<3.6	<3.6	<3.8	<3.0	<3.0	<3.0	1.0 J	<3.0	<3.0	<3.0	<3.0	<3.0	**4.7 J**
MW-6DR	<3.8	<3.1	< 3.3 U	< 3.3 U	< 3.2 U	<4.0 UJ	<3.0	<3.2	**3.9**	<3.9	<3.0	1.6 J	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	**4.7**	1.8 J
MW-6DR3	<3.4	<3.0	< 3.5 U	< 3.1 U	< 3.1 U	<3.9	<3.1	<3.2	<3.2	<3.0 UJ	**6.4**	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60
MW-7	NS	<4.1	NS	< 3.6 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	NS	<3.7	< 3.0 U	< 4.2 U	< 3.9 U	<3.3	NS	<3.3	NS	<3.6	NS	<3.0	NS	<3.0	NS	<3.0	<3.0	<3.0	<3.0	<0.60
MW-8D	NS	<3.3	< 3.5 U	< 3.6 U	< 3.3 U	<3.7	<3.2	<3.8	<3.0	<3.8	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60
MW-8DR	<3.1	<3.4	< 3.4 U	< 3.8 U	< 3.2 U	<3.4	<3.2	<3.6	<3.1	<3.3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60
MW-9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<3.0	NS	NS	NS	NS	NS	NS
MW-11	NS	<3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-11D	NS	<3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-13	<3.2	<3.2	< 3.2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-15	NS	<3.9	< 4.2 U	NS	NS	NS	<3.2	<3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-17	NS	<3.5	< 3.3 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18	NS	<3.4	< 4.7 U	NS	NS	<3.5	<3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-18D	NS	<3.7	< 3.5 U	NS	NS	<3.5	<3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-20	<3.1	<3.0	< 3.2 U	NS	< 3.6 U	NS	NS	<3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21	<3.0	<3.1	< 3.2 U	< 3.4 U	< 3.8 U	<3.5	<3.2	<3.8	<3.3	<3.0	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60
MW-21D	<3.4	<3.1	< 3.2 U	< 3.4 U	< 3.3 U	<3.6	<3.2	<3.8	<3.3	<4.0	<1.0	<3.0	<3.0	1.9 J	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60
MW-22	NS	<3.0	< 3.0 U	NS	NS	NS	<3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-23	<3.3	<4.0	< 3.3 U	NS	NS	NS	NS	<3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-24	NS	<3.1	< 3.9 U	NS	NS	NS	NS	<3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-25	<3.3	<3.4	< 3.5 U	NS	NS	NS	<3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-26	**3**	<3.6	< 4.6 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-27	**19**	**17**	**17**	NS	NS	**14.9**	NS	**10**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-28	<3.3	<3.1	< 3.2 U	< 3.2 U	< 3.7 U	<4.5	NS	<3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-29	<3.3	<3.2	< 3 U	NS	NS	NS	<3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-30	<3.3	<3.4	NS	NS	NS	NS	NS	<3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-31	<3.0	<3.1	< 3.2 U	NS	NS	<3.9	NS	<3.4	<3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-32	<3.2	<3.1	< 3.4 U	< 3.5 U	< 3.8 U	<4.2	<3.2	NS	<3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-33	**39**	**34**	**33**	**29**	**32.4**	**26.1**	**27.4**	**22.3**	NS	**24.2**	NS	**22**	**11**	**9.8**	NS	**12**	NS	**14**	**21**	NS
MW-34	**20**	**18**	**19**	**13**	**12.8**	**11.2**	**14.0**	NS	**11.6**	NS	**7.5**	NS	NS	NS	**5.8**	**7.8**	**3.7**	NS	**9.1**	NS
MW-35R	<3.1	NS	NS	NS	< 4.2 U	NS	<3.4	NS	<3.2	NS	NS	NS	NS	NS	NS	NS	NS	<3.0	NS	NS
MW-36	NS	<3.5	< 3.4 U	NS	NS	<4.4	NS	<3.5	<3.2	<3.8	NS	NS	NS	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
MW-37	NS	<3.6	< 3.3 U	NS	< 3.3 U	NS	NS	NS	NS	NS	**10**	<3.0	NS	NS	NS	NS	NS	NS	<3.0	NS
MW-38	NS	NS	NS	< 4.3 U	< 3.2 U	<3.3	<3.1	<3.8	<3.0	<3.8	<1.0	<3.0	<3.0	<3.0	<3.0	1.4 J	<3.0	<3.0	<3.0	NS
MW-39	NS	NS	NS	< 3.4 U	< 3.5 U	<3.2	<3.2	<3.4	<3.7	<3.8	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
MW-39D	NS	NS	NS	< 3.4 U	< 3.6 U	<3.5	<3.1	NS	<3.6	<3.0	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
MW-40	NS	NS	NS	< 3.4 U	< 3.2 U	<4.7	<3.2	<3.8	<3.1	<3.0	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
MW-40D	NS	NS	NS	< 3.3 U	< 3.2 U	<4.6	NS	<3.4	<3.8	<3.5	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
MW-41	NS	NS	NS	< 3.3 U	< 3.5 U	<3.4	<3.2	<3.1	<3.3	<3.0	<1.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NS
RW-4	**5.2**	<3.3	< 3.3 U	< 3.3 U	**18.4 A**	<3.3	<3.1	<3.4	**3.6**	<3.2	**12**	2.8 J	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	**3.2**	<0.60
RW-6	<3.1	<3.4	< 3.6 U	< 3.7 U	< 3.3 U	<3.3	<3.2	<3.3	<3.2	<3.3	<10	1.4 J	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	**5.9 J**
RW-19	NS	<3.1	< 3.2 U	< 3.6 U	< 3.3 U	<3.3	<3.1	<3.3	<3.1	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	0.84 J
POC-1A	<3.1	<3.3	< 3.3 U	< 3.6 U	NS	NS	NS	NS	NS	<3.8	<4.0	NS	NS	NS	NS	<3.0	<3.0	<3.0	<3.0	1.0 J
POC-1B	<3.0	<3.1	< 3.4 U	< 17 U	NS	NS	NS	NS	<10	**8.1**	<10	**8.5**	**9.2**	<3.0	<3.0	**5.5**	<3.0	**11**	**4.1**	**8.7 J**
POC-2A	NS	NS	NS	< 4.1 U	NS	NS	NS	NS	NS	**3.6**	**530***	NS	NS	NS	NS	<3.0	<3.0	<3.0	**7.9**	<0.60
POC-2B	**14**	<3.1	**15**	< 17 U	NS	**4.1**	NS	NS	<3.3	<3.0	<10	**4.3**	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<0.60

Notes:
*September 2010 data for wells MW-3 and POC-2A are likely anomalous and not representative of actual groundwater concentrations.
µg/L - micrograms per liter
Bold values indicate an exceedance of permit limit.
J - Estimated
NCAC 2L - Title 15A North Carolina Administrative Code 2L Groundwater Standard
NS - Not Sampled
U = Non-detect

Table 3-5
Summary of Inorganic Analytical Results-RCRA Permit Parameters for Site Wells
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well ID	Sample Date	Chromium	Nickel
		µg/L	µg/L
NCAC 2L Permit Level		10	100
MW-3	9/2/2015	4.21 J	6.29 J
POC-1A	9/2/2015	**21.8**	16.4
POC-1B	9/2/2015	8.42 J	<4.90
POC-2A	9/2/2015	5.62 J	<4.90
POC-2B	9/2/2015	**143**	**146**
RW-19	9/3/2015	<1.40	<4.90
RW-4	9/3/2015	**14.9**	10.2
RW-4 DUP-02	9/3/2015	**15.5**	8.60 J
RW-6	9/3/2015	<1.40	<4.90

Notes:
µg/L - micrograms per liter.
< - Constituent was not detected above laboratory reporting limit.
U - The analyte was not detected above the level of the reported sample quantitation limit.
J - The associated numerical value is the approximate concentration of the analyze in the sample.
J+ - The associated numerical value is the approximate concentration of the analyze in the sample biased high.
Bold values indicate an exceedance of permit limit.

Table 3-6a
Qualfied Analytical Data
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Sample ID	Method	Analyte	Lab Result	Lab Qualifier	Validated Result	Validation Qualifier[1]	Units	Reason Codes[2]
All samples	8260B	2-Chloroethyl vinyl ether				R	µg/L	SIC
MW-6DR3	8260B	Acetone	ND		1.05	UJ	µg/L	MS
MW-6DR3	8260B	2-Butanone	ND		1.28	UJ	µg/L	MS
MW-8D	8260B	Acetone	1.08	J	1.08	U	µg/L	EB
MW-8D	8260B	Tetrachloroethene	0.51		0.51	J	µg/L	TB
MW-13	8260B	Acetone	1.15	J	1.15	U	µg/L	EB TB
MW-21	8260B	Acetone	1.22	J	1.22	U	µg/L	EB TB
MW-21D	8260B	Acetone	5.28	J	5.28	U	µg/L	EB TB
MW-34	8260B	Acetone	1.09	J	1.09	U	µg/L	EB TB
MW-36	8260B	Trichloroethene	0.312	J	0.312	U	µg/L	EB SUR
MW-36	8260B	All Compounds				J/UJ	µg/L	SUR
MW-38	8260B	All Compounds				J/UJ	µg/L	SUR
MW-39D	8260B	All Compounds				UJ	µg/L	SUR
MW-40D	8260B	All Compounds				J/UJ	µg/L	SUR
RW-4	8260B	1,2-Dichloroethane	0.716		0.716	J	µg/L	FD
RW-4	8260B	trans-1,2-Dichloroethene	2.02		2.02	J	µg/L	FD
RW-4	8260B	1,1,2-Trichloroethane	2.13		2.13	J	µg/L	FD
RW-4	8260B	Trichloroethylene	17.7		17.7	J	µg/L	FD
RW-4	8260B	All Compounds				J/UJ	µg/L	SUR
RW-6	8260B	Acetone	6.27	J	6.27	U	µg/L	EB TB
RW-6	8260B	All Compounds				J/UJ	µg/L	SUR
RW-6	8260B	1,4-Dioxane	3.64		3.64	J	µg/L	SUR
MW-6	8260B	1,4-Dioxane	2.72	J	2.72	J	µg/L	SUR
RW-19	8260B	All Compounds				J/UJ	µg/L	SUR
POC-1B	8260B	All Compounds				J/UJ	µg/L	SUR
POC-1B	8260B	1,4-Dioxane	10.5		10.5	J	µg/L	SUR
POC-2A	8260B	All Compounds				J/UJ	µg/L	SUR
POC-2A	8260B	1,4-Dioxane	22.3		22.3	J	µg/L	SUR
POC-2B	8260B	Acetone	39.4	J	39.4	U	µg/L	EB TB
POC-2B	8260B	Tetrachloroethene	3.05		3.05	J	µg/L	TB
POC-2B	8260B	All Compounds				J/UJ	µg/L	SUR
DUP-01	8260B	Trichloroethene	0.935		0.935	U	µg/L	EB
DUP-02	8260B	1,2-Dichloroethane	1.7		1.7	J	µg/L	FD
DUP-02	8260B	trans-1,2-Dichloroethene	2.79		2.79	J	µg/L	FD
DUP-02	8260B	1,1,2-Trichloroethane	5.11		5.11	J	µg/L	FD
DUP-02	8260B	Trichloroethylene	25.4		25.4	J	µg/L	FD

Notes:
[1]: EPA-defined data validation qualifiers applied in this data evaluation:
J - The associated numerical value is the approximate concentration of the analyte in the sample.
UJ: The analyte was not detected; however, the reported quantitation limit is approximated and may be inaccurate or imprecise.
U - The analyte was not detected above the level of the reported sample quantitation limit.
R: Rejected
[2]: Reason Codes:
EB - Equipment blank contamination.
TB - Trip blank contamination.
SUR - The surrogate recovery was outside of the quality control limits.
MS - The matrix spike recovery was outside of the quality control limits.
SIC: The sample integrity was compromised.
FD - The field duplicate %RPD was outside of the quality control limits.

Table 3-6b
Field Duplicate Precision
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Field Identification	Analyte	Sample Result	Duplicate Result	Units	% RPD	Qualification
MW-36/DUP-01	cis-1,2-Dichloroethene	ND	0.376 J	µg/L	NC*	none
RW-4/DUP-02	Chromium	14.9	15.5	µg/L	4	none
	Nickel	10.2	8.6 J	µg/L	17	none
	Acetone	64.2	56.5	µg/L	13	none
	Chloroform	0.497 J	0.832	µg/L	50 *	none
	1,2-Dichloroethane	**0.716**	**1.7**	**µg/L**	**81**	**yes**
	1,1-Dichloroethene	13.3	14.2	µg/L	6.6	none
	cis-1,2-Dichloroethene	6700	7140	µg/L	6.4	none
	trans-1,2-Dichloroethylene	**2.02**	**2.79**	**µg/L**	**32**	**yes**
	1,2-Dichloropropane	0.375 J	0.588	µg/L	44 *	none
	2-Butanone	62.6	62.4	µg/L	0.32	none
	1,1,2-Trichloroethane	**2.13**	**5.11**	**µg/L**	**82**	**yes**
	Trichloroethylene	**17.7**	**25.4**	**µg/L**	**36**	**yes**
	Vinyl Chloride	1.48	1.7	µg/L	14	none
	1,4-Dioxane	6.12	5.3	µg/L	14	none

Notes:
% RPD - Relative percent difference between the primary sample result and the sample duplicate result
* The primary result was non-detect and the field duplicate result was below the reporting limit. Based on laboratory precision, the results are acceptable.
ND - Analyte not detected
NC - RPD could not be calculated
µg/L - micrograms per liter
J - Estimated

Table 3-7
Summary of Intra-Aquifer Flow
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well ID	Date	WL Elev. (ft, msl)	Screen Midpoint Elev. (ft, msl)	Gradient (ft/ft)	Direction	Aquifer
MW-6	Sep-15	359.07	341.25	0.099	Downward	Saprolite
MW-6D		356.36	313.98			Rock
MW-6D		356.36	313.98	-0.069	Upward	Rock
MW-6DR		358.09	288.96			Rock
MW-6DR		358.09	288.96	0.095	Downward	Rock
MW-6DR3		353.23	238.06			Rock
MW-8	Sep-15	343.12	345.77	-0.020	Upward	Saprolite
MW-8D		344.14	293.8			Rock
MW-8D		344.14	293.8	0.023	Downward	Rock
MW-8DR		343.64	271.68			Rock
MW-21	Sep-15	334.51	323.93	0.088	Downward	Saprolite
MW-21D		324.37	209			Rock
MW-39	Sep-15	335.50	329.66	-0.042	Upward	Saprolite
MW-39D		337.53	281.76			Rock
MW-40	Sep-15	334.00	321.98	-0.006	Upward	Saprolite
MW-40D		334.19	290.69			Rock

Notes:
ft, msl - Feet relative to mean sea level
ft/ft - feet per foot
Positive gradient is downward (shallow well head > deep well head).
WL Elev. - Water Level Elevation

Table 4-1
Extraction Well Construction Details
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well ID	TOC Elevation (ft MSL)	Total Depth (feet)	Depth to Water (feet)	Static Water Level (ft MSL)	Diameter/Construction Material	Estimated Average Flow Rate (gpm)
RW-4	393.87	78	31.62	362.25	6" Stainless Steel	0.00
RW-6	388.02	65.08	29.8	358.22	6" Steel/Open Hole	0.47
RW-19	356.99	163.5	97.78	259.21	6" Steel/Open Hole	1.55

Notes:
" - inch
ft MSL - feet above mean sea level
gpm - gallons per minute
TOC - top of casing
Water levels were measured on September 1, 2015

Table 4-2
Summary of GWTS Inspection Records
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Date	Comments
August 2009	All pumps operational throughout August 2009. System Influent and Effluent samples collected.
September 2009	RW-4 and RW-6 are taken off line at 11:35 September 18, 2009.
October 2009	RW-4 and RW-6 remain off line.
November 2009	RW-4 and RW-6 remain off line. System Influent and Effluent Samples Collected.
December 2009	RW-4 and RW-6 remain off line.
January 2010	RW-4 and RW-6 remain off line. System Influent and Effluent Samples Collected.
February 2010	RW-4 and RW-6 are brought back online on Friday February 26, 2010. All pumps operational throughout February 2010.
September 2010	All pumps operational throughout September 2010. System Influent and Effluent samples were not collected in September. Samples were last collected in July 2010.
February 2011	All pumps operational throughout February 2011. System Influent and Effluent samples were collected in February 2011.
August 2011	All pumps operational throughout August 2011. System Influent and Effluent samples were collected in August 2011.
February 2012	All pumps operational throughout February 2012. System Influent and Effluent samples were collected January 2012.
August 2012	All pumps operational throughout August 2012. Cleaning and maintanence performed on system. System Influent and Effluent samples were collected August 2012.
February 2013	RW-19 pump operational throughout February 2013. RW-4 and RW-6 shut down in preparation for pilot scale ERD. System Influent and Effluent samples were collected February 2013.
August 2013	RW-19 pump operational throughout August 2013. RW-4 and RW-6 shut down in preparation for pilot scale ERD. System Influent and Effluent samples were collected September 2013.
February 2014	All pumps operational throughout February 2014. Cleaning and maintanence performed on system. System Influent and Effluent samples were collected February 2014.
August 2014	RW-19 and RW-6 operational throughout August 2014. RW-4 shut down in preparation for pilot scale ERD in July 2014. System Influent and Effluent samples were collected August 2014.
March 2015	RW-6 and RW-19 operational through March 2015. RW-4 shut down in July 2014 for ERD field pilot testing. System Influent and Effluent samples were collected in March 2015.
September 2015	RW-6 and RW-19 were shut down in September 2015 due to effluent plumbing issues . RW-4 has been inactive since injection preparation began in July 2014. System Influent and Effluent samples were collected in July 2015.

Notes:
ERD - Enhanced Reductive Dechlorination
GWTS - Groundwater Treatment System

Table 4-3
Influent-Effluent Water Sample Results
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Compound	Unit	Influent 7/2/2015	Effluent 7/2/2015
Volatile Organic Compounds			
Trichloroethene	ug/l	200	<1.0
Semi-Volatile Organic Compounds			
no compounds detected above laboratory reporting limit			
Inorganic Compounds			
Chromium	mg/L	0.550	<0.010
Copper	mg/L	1.200	<0.010
Nickel	mg/L	0.190	<0.010
Zinc	mg/L	1.900	0.050

Notes:

Only detected constituents listed on table.
mg/L - milligrams per liter
NO_2 - nitrogen dioxide
NO_3 - nitrate
ug/L - micrograms per liter

Table 4-4
Historical TCE Removal Efficiency Calculations for GWTS
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Date Sampled	TCE Concentration Influent (µg/L)	TCE Concentration Effluent (µg/L)	Stripping Tower Efficiency (%)
4/22/1992	NS	430	NA
4/22/1992	NS	410	NA
4/29/1992	46,000	290	99.37
4/29/1992	47,000	270	99.43
5/18/1992	60,000	83	99.86
5/26/1992	27,000	88	99.67
6/1/1992	23,000	78	99.66
6/9/1992	23,000	63	99.73
6/15/1992	21,000	50	99.76
6/22/1992	19,000	40	99.79
6/29/1992	NS	40	NA
7/7/1992	NS	34	NA
7/13/1992	NS	30	NA
7/20/1992	NS	28	NA
7/27/1992	18,000	11	99.94
8/3/1992	NS	11	NA
8/11/1992	NS	9.1	NA
8/17/1992	NS	8.8	NA
8/24/1992	NS	7	NA
8/31/1992	19,000	7.3	99.96
9/8/1992	NS	7.6	NA
9/14/1992	NS	4.4J	NA
9/21/1992	NS	5.6	NA
9/28/1992	18,000	14	99.92
10/5/1992	NS	14	NA
10/12/1992	NS	6.7	NA
10/19/1992	NS	16	NA
10/26/1992	NS	12	NA
11/2/1992	21,000	16	99.92
11/9/1992	NS	13	NA
11/16/1992	NS	14	NA
11/23/1992	NS	37	NA
12/2/1992	21,000	34	99.84
1/6/1993	22,000	11	99.95
2/1/1993	22,000	7.8	99.96
3/1/1993	18,000	11	99.94
4/7/1993	21,000	7.8	99.96
4/8/1993	54,000	26	99.95
4/16/1993	50,000	23	99.95
4/21/1993	60,000	27	99.96
4/30/1993	88,000	19	99.98
5/12/1993	50,000	15	99.97
6/7/1993	29,000	9.1	99.97
7/6/1993	42,000	8.8	99.98
9/2/1993	35,000	5.7	99.98
10/13/1993	13,000	34	99.74
11/1/1993	19,000	36	99.81
12/6/1993	13,000	22	99.83

Table 4-4
Historical TCE Removal Efficiency Calculations for GWTS
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Date Sampled	TCE Concentration Influent (µg/L)	TCE Concentration Effluent (µg/L)	Stripping Tower Efficiency (%)
1/4/1994	14,000	14	99.90
2/2/1994	22,000	21	99.90
3/1/1994	14,000	25	99.82
4/13/1994	6,510	8	99.88
5/2/1994	36	8.1	77.50
6/1/1994	14,500	9.1	99.94
7/5/1994	9,890	6.8	99.93
8/1/1994	12,800	6.6	99.95
9/2/1994	6,460	3.1	99.95
10/17/1994	8,960	7	99.92
12/5/1994	20,600	6.9	99.97
1/2/1995	24,300	8.1	99.97
2/7/1995	21,300	7.9	99.96
3/6/1995	18,800	6.9	99.96
5/1/1995	10,100	3.9	99.96
6/7/1995	13,400	2.8	99.98
7/3/1995	11,900	3.3J	99.97
8/1/1995	13,300	2.7	99.98
9/13/1995	2,090	BDL	100.00 Appx.
10/3/1995	3,820	2.7 J	99.93
11/3/1995	2,100	BDL	100.00 Appx.
12/1/1995	28,430	4.8	99.98
1/4/1996	4,120	5.4	99.87
2/26/1996	11,100	4.7	99.96
3/7/1996	27,000	7.1	99.97
4/1/1996	6,760	5.5	99.92
5/2/1996	3,800	4.2	99.89
6/4/1996	13,520	3.6	99.97
7/1/1996	3,800	3.2	99.92
8/1/1996	13,400	BDL	100
9/5/1996	4,160	2.3	99.94
10/1/1996	4,400	2.4	99.95
11/1/1996	1,720	7.2	99.58
12/13/1996	3,240	3.4	99.90
1/8/1997	22,000	2.6	99.99
4/8/1997	3,440	7.6	99.78
7/3/1997	11,540	4.8	99.96
10/2/1997	9,320	2.3	99.98
1/12/1998	8,510	20.7	99.76
7/7/1998	6,980	6.4	99.91
10/5/1998	7,210	BDL	100
1/12/1999	6,370	3.7	99.94
4/6/1999	2,900	BDL	100
7/6/1999	3,740	BDL	100
10/5/1999	3,735	BQL	100
1/17/2000	5,480	5	99.91
4/3/2000	6,780	2.5	99.96
7/3/2000	3,810	2.7	99.93
10/9/2000	4,050	BQL	100

Table 4-4
Historical TCE Removal Efficiency Calculations for GWTS
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Date Sampled	TCE Concentration Influent (µg/L)	TCE Concentration Effluent (µg/L)	Stripping Tower Efficiency (%)
1/3/2001	3,831	3.2	99.92
4/19/2001	4,080	3.2	99.92
7/23/2001	2,450	1.3	99.95
10/8/2001	3,525	1.4	99.96
1/28/2002	1,880	4	99.79
7/26/2002	3,200	8	99.75
2/11/2003	2,420	4	99.83
4/22/2003	2,500	3	99.88
7/17/2003	1,500	BQL	100 Aprox.
2/5/2004	1,520	7.64	99.49
7/28/2004	1,570	BQL	100 Aprox.
1/27/2005	2,690	1.64	99.939
4/20/2005	NM	BQL	100 Aprox.
7/25/2005	4,000	NM	NM
2/28/2006	2,560	ND	100
3/31/2006	7,300	ND	100
4/28/2006	5,900	ND	100
5/25/2006	1,790	ND	100
6/21/2006	1,160	ND	100
8/24/2006	1,260	ND	100
10/25/2006	1,629	ND	100
12/27/2006	4,110	ND	100
2/26/2007	1,975	ND	100
4/27/2007	1,890	ND	100
6/22/2007	4,290	ND	100
8/22/2007	7,540	ND	100
10/26/2007	4,880	ND	100
12/26/2007	1,080	ND	100
2/29/2008	1,160	ND	100
4/25/2008	1,090	ND	100
6/27/2008	3,100	ND	100
8/29/2008	1,690	ND	100
10/30/2008	1,790	ND	100
12/18/2008	735	ND	100
2/26/2009	5,500	ND	100
4/29/2009	1,840	ND	100
6/25/2009	1,430	66.2	95.37
8/31/2009	1,790	189	89.44
11/12/2009	932	48.9	94.75
1/12/2010	1,030	ND	100
3/18/2010	8,760	ND	100
5/21/2010	3,500	ND	100
7/15/2010	2,100	ND	100
11/16/2010	3,500	ND	100
1/25/2011	2,600	ND	100
3/24/2011	1,700	ND	100
5/18/2011	2,300	ND	100
8/29/2011	3,100	ND	100

Table 4-4
Historical TCE Removal Efficiency Calculations for GWTS
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Date Sampled	TCE Concentration Influent (µg/L)	TCE Concentration Effluent (µg/L)	Stripping Tower Efficiency (%)
1/10/2012	3,000	54	98.20
8/20/2012	2,900	ND	100
2/20/2013	12,000	ND	100
2/20/2013	690	11	98.41
9/29/2013	690	25	96.38
2/18/2014	1,800	ND	100.00
8/4/2014	2,100	ND	100.00
2/19/2015	1,400	ND	100.00
7/2/2015	200	ND	100.00

Notes:
GWTS - groundwater treatment system
Removal efficiency for First 2006 event based on influent/effluent sampling from 2/28/06.
System efficiency rates from 7/25/2005 to 7/15/2010 estimated by AECOM. Previous efficiency data taken from the Semi-Annual Remediation System Evaluation (Earth Tech, 2005).
TCE - trichloroethene
µg/L - micrograms per liter

Table 4-5
Historical Estimated GWTS Pumping Rates and Mass Removal
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Period	Influent Concentration, Period Average (mg/L)	Flow Total for Period (x 10^6 gallons)	Mass of TCE Removed (pounds)
May 1992 – Feb 1993	24.3	2.2	449
Mar 1993 – Aug 1993	43.4	2.8	998
Sep 1993 – Feb 1994	19.3	2.2	360
Mar 1994 – Aug 1994	15.6	2	256
Sep 1994 – Feb 1995	16.3	1.7	227
Mar 1995 – Aug 1995	13.5	1.7	197
Sep 1995 – Feb 1996	8.6	1	73
Mar 1996 – Aug 1996	11.4	1.7	160
Sep 1996 – Feb 1997	7.1	2.2	132
Mar 1997 – Aug 1997	7.5	1.4	85
Sep 1997 – Feb 1998	8.9	1.7	125
Mar 1998 – Aug 1998	7	1.8	106
Sep 1998 – Feb 1999	6.8	1	59
Mar 1999 – Aug 1999	3.3	1	28
Sep 1999 – Feb 2000	4.6	1.6	59
Mar 2000 – Jul 2000	5.3	1.2	55
Aug 2000 – Feb 2001	4	1.7	56
Mar 2001 – Aug 2001	3.3	1.6	43
Sep 2001 – Feb 2002	2.7	1.1	26
Mar 2002 – Aug 2002	3.2	1.3	34
Sep 2002 - Feb 2003	2.4	0.95	19
Mar 2003 - Aug 2003	2	1.068	18
Sep 2003 - Feb 2004	1.5	1.7	21
Feb 2004 - July 2004	1.57	1.74	23
July 2004 - Jan 2005	2.7	1.88	42
Jan 2005 - July 2005	3.4	1.3	37
July 2005 - Feb 2006	2.56	0.4	9
Feb 2006 - Aug 2006	2.85	1.11	26
Aug 2006 – Feb 2007	2.11	1.13	20
Feb 2007 - Aug 2007	3.92	2.06	67
Aug 2007 - Feb 2008	3.67	1.21	37
Feb 2008 - Aug 2008	1.76	0.75	11
Aug 2008 - Feb 2009	2.68	1.27	28
Feb 2009 - Aug 2009	2.64	1.67	37
Aug 2009 - Feb 2010	1.43	0.36	4
Feb 2010 - July 2010	2.13	0.31	5
July 2010 - Feb 2011	2.73	1.95	44
Feb 2011 - Aug 2011	3.1	2.06	53
Aug 2011 - Feb 2012	2.8	1.63	37
Feb 2012 - Aug 2012	2.9	1.76	62
Aug 2012 - Feb 2013	12.0	0.43	62
Feb 2013 - Aug 2013	0.7	0.33	3
Aug 2013 - Feb 2014	1.8	0.66	7
Feb 2014 - Aug 2014	2.1	1.54	18
Aug 2014 - Feb 2015	1.40	0.88	7
Feb 2015 - August 2015	0.71	0.53	3
TOTAL		63.6	**4,229**

Notes:
GWTS - groundwater treatment system
mg/L - milligrams per liter
TCE - trichloroethene

AECOM

Table 4-6
SVE Soil Vapor Sampling Results
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Sample Date	1,1,Dichloroethylene	Methylene Chloride	Trans-1,2 Dichloroethylene	1,1 Dichloroethane	CIS-1,2 Dichloroethylene	Chloroform	1,1,1 Trichloroethane	Carbon Tetrachloride	Trichloroethylene	Tetrachloroethylene
		ug/m^3									
SVE-4	2/14/2011	<40	<348	<40	<81	**95**	<24	<27	<32	**517**	**1,522**
	4/25/2011	<40	<348	<40	<81	**83**	<24	<27	<32	**458**	**1,081**
	7/18/2011	**2245**	<348	<40	<81	**389**	<24	<27	<32	**1,169**	**2,379**
	1/11/2012	<40	<348	<40	<81	**441**	<24	<27	<32	**1,395**	**3,602**
	8/30/2012	<40	<348	<40	<81	**143**	<24	<27	<32	**722**	**1,604**
	2/20/2013	<40	<348	<40	<81	<40	<24	<27	<32	**889**	<34
	8/14/2013	<40	<348	<40	<81	**191**	<24	<27	<32	**598**	**1,522**
	2/19/2014	<40	<348	<40	<81	**230**	<24	<27	<32	**1,012**	**2,746**
	8/18/2014	<40	<348	<40	<81	**187**	<24	<27	<32	**264**	**476**
	3/4/2015	<40	<348	<40	<81	**60**	<24	<27	<32	**237**	**1,047**
	9/3/2015	<40	<348	<40	<81	**167**	<24	<27	<32	**813**	**1,651**
SVE-5	2/14/2011	<40	<348	<40	<81	**381**	<24	<27	<32	**2,030**	**3,446**
	4/25/2011	<40	<348	<40	<81	**501**	<24	<27	<32	**1,239**	**3,704**
	7/18/2011	**7406**	<348	<40	<81	**83**	<24	<27	<32	**118**	**306**
	1/11/2012	<40	<348	<40	<81	**99**	<24	<27	<32	**673**	**1,842**
	8/30/2012	<40	<348	<40	<81	<40	<24	<27	<32	<27	<34
	2/20/2013	<40	<348	<40	<81	**282**	<24	<27	<32	**2,073**	**1,760**
	8/14/2013	<40	<348	<40	<81	**103**	<24	<27	<32	**210**	**700**
	2/19/2014	<40	<348	<40	<81	**401**	<24	<27	<32	**1,104**	**3,819**
	8/18/2014	<40	<348	<40	<81	**342**	<24	<27	<32	**738**	**1,142**
	3/4/2015	<40	<348	<40	<81	**242**	<24	<27	<32	**1,906**	**3,466**
	9/3/2015	<40	<348	<40	<81	<40	<24	<27	<32	**248**	**360**
SVE-6	2/14/2011	<40	<348	<40	<81	<40	<24	<27	<32	**21,572**	**143**
	4/25/2011	<40	<348	<40	<81	<40	<24	<27	<32	**14,927**	**183**
	7/18/2011	**5058**	<348	<40	<81	<40	<24	<27	<32	**6,101**	**265**
	1/11/2012	<40	<348	<40	<81	**40**	<24	<27	<32	**13,872**	**156**
	8/30/2012	<40	<348	<40	<81	<40	<24	<27	<32	**4,776**	**150**
	2/20/2013	<40	<348	<40	<81	<40	<24	<27	<32	**5,972**	**61**
	8/14/2013	<40	<348	<40	<81	<40	<24	<27	<32	**3,780**	**102**
	2/19/2014	<40	<348	<40	<81	<40	<24	<27	<32	**12,741**	**136**
	8/18/2014	<40	<348	<40	<81	<40	<24	<27	<32	**7,087**	**102**
	3/4/2015	<40	<348	<40	<81	**44**	<24	<27	<32	**18,072**	**129**
	9/3/2015	<40	<348	<40	<81	**48**	<24	<27	<32	**6,080**	**306**

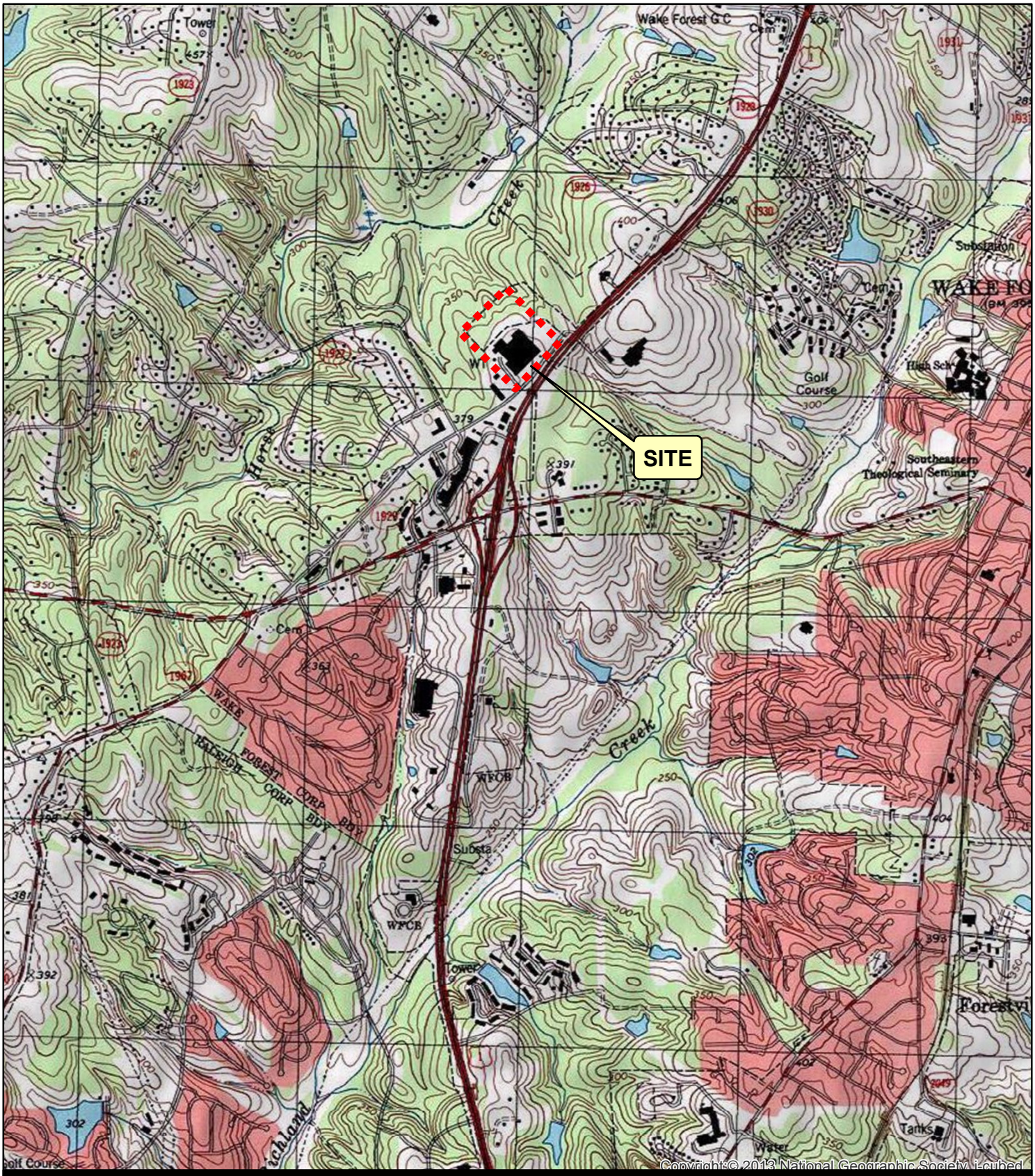
Table 4-6
SVE Soil Vapor Sampling Results
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

Well	Sample Date	1,1,Dichloroethylene	Methylene Chloride	Trans-1,2 Dichloroethylene	1,1 Dichloroethane	CIS-1,2 Dichloroethylene	Chloroform	1,1,1 Trichloroethane	Carbon Tetrachloride	Trichloroethylene	Tetrachloroethylene
		ug/m^3									
Influent	2/14/2011	<40	<348	<40	<81	**103**	<24	<27	<32	**2,763**	**1,189**
	7/18/2011	**2980**	<348	<40	<81	**52**	<24	<27	<32	**1,545**	**401**
	1/11/2012	<40	<348	<40	<81	**107**	<24	<27	<32	**3,296**	**938**
	8/30/2012	<40	<348	<40	<81	**131**	<24	<27	<32	**2,429**	**1,087**
	2/20/2013	<40	<348	<40	<81	**111**	<24	<27	<32	**1,438**	**347**
	8/14/2013	<40	<348	<40	<81	**91**	<24	<27	<32	**2,800**	**340**
	2/19/2014	<40	<348	<40	<81	**199**	<24	<27	<32	**5,089**	**1,271**
	8/18/2014	<40	<348	<40	<81	**119**	<24	<27	<32	**2,019**	**238**
	3/4/2015	<40	<348	<40	<81	**234**	<24	<27	<32	**5,913**	**639**
	9/3/2015	<40	<348	<40	<81	**95**	<24	<27	<32	**1,756**	**428**
Effluent	2/14/2011	<40	<348	<40	<81	<40	<24	<27	<32	**323**	<34
	7/18/2011	<40	<348	<40	<81	<40	<24	<27	<32	**32**	<34
	1/11/2012	<40	<348	<40	<81	<40	<24	<27	<32	**38**	<34
	8/30/2012	<40	<348	<40	<81	<40	<24	<27	<32	**635**	**347**
	2/20/2013	<40	<348	<40	<81	**52**	<24	<27	<32	**770**	**313**
	8/14/2013	<40	<348	<40	<81	**64**	<24	<27	<32	**1,696**	**367**
	2/19/2014	<40	<348	<40	<81	**115**	<24	<27	<32	**2,757**	**904**
	8/18/2014	<40	<348	<40	<81	**83**	<24	<27	<32	**1,879**	**428**
	3/4/2015	<40	<348	<40	<81	**68**	<24	<27	<32	**3,656**	**537**
	9/3/2015	<40	<348	<40	<81	<40	<24	<27	<32	**1,756**	**428**

Notes:
ug/m^3 - micrograms per cubic meter
Bold denotes detection above laboratory limits

Figures

Z:\GIS\Projects\P\Parker_Hannifin\Wake_Forest_NC\MXD\Figure_1-1_Site_Location_Topo_2015.mxd



Map Location

Topographic Site Location Map

Former Parker Hannifin Corp. Facility
Wake Forest, North Carolina

N
W E
S

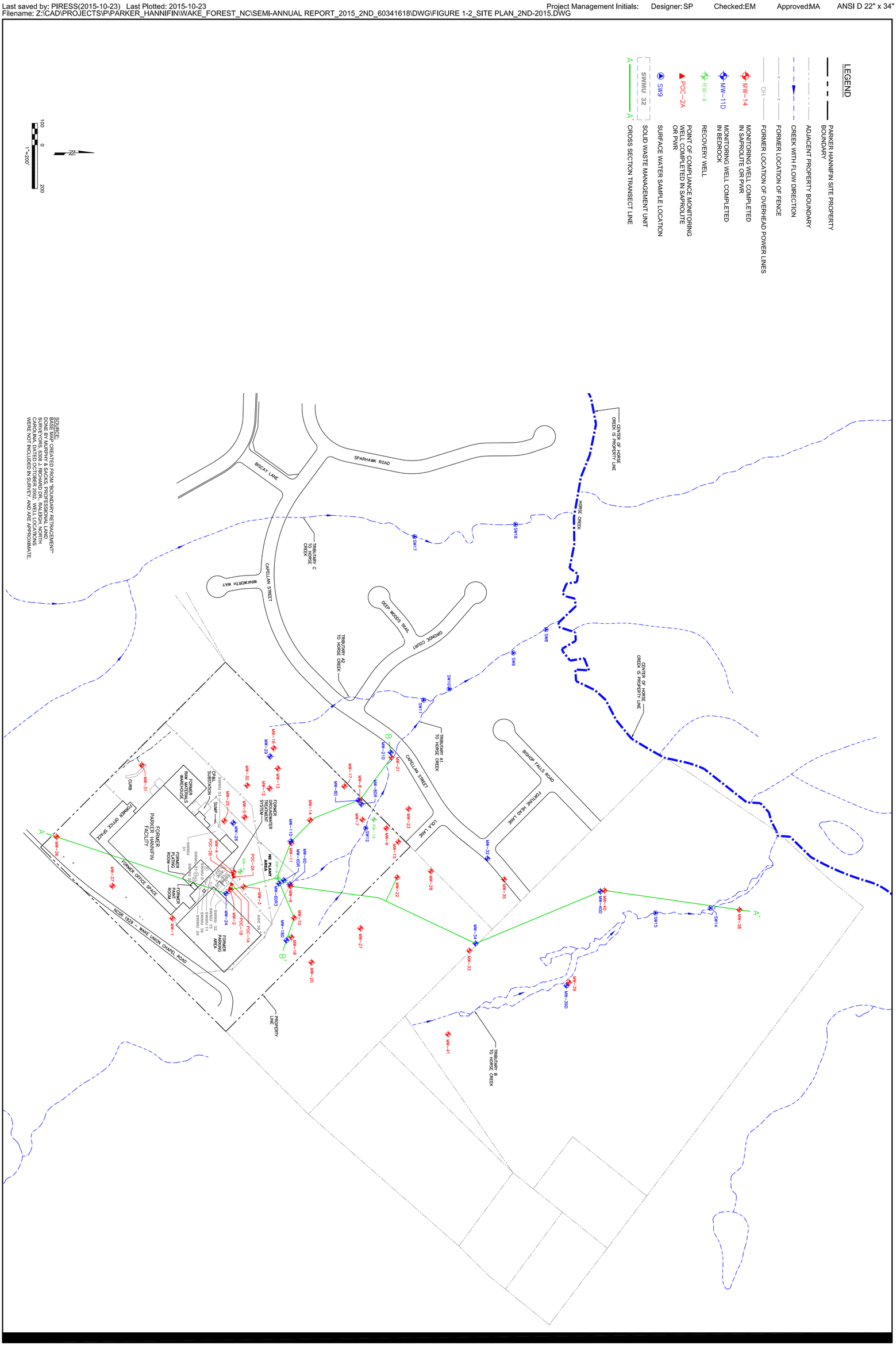
0 2,000 4,000 Feet 1:24,000

October 2015 USGS Topographic Quadrangle Wake Forest (1983) 60341618

Figure 1-1

AECOM

AECOM
701 Corporate Center Drive
Suite 475
Raleigh, NC 27607
Phone: (919) 854-6200
Fax: (919) 854-6259
www.aecom.com



2nd 2015 Semi Annual Report
Former Parker Hannifin Corporation Facility
Wake Forest, North Carolina
Project No.: 60341618 Date: 10/23/2015

SITE PLAN WITH CROSS-SECTION TRANSECTS

AECOM

Figure: 1-2

FIGURE 3-1a
POC Wells - Historical TCE Data
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility
Wake Forest, North Carolina

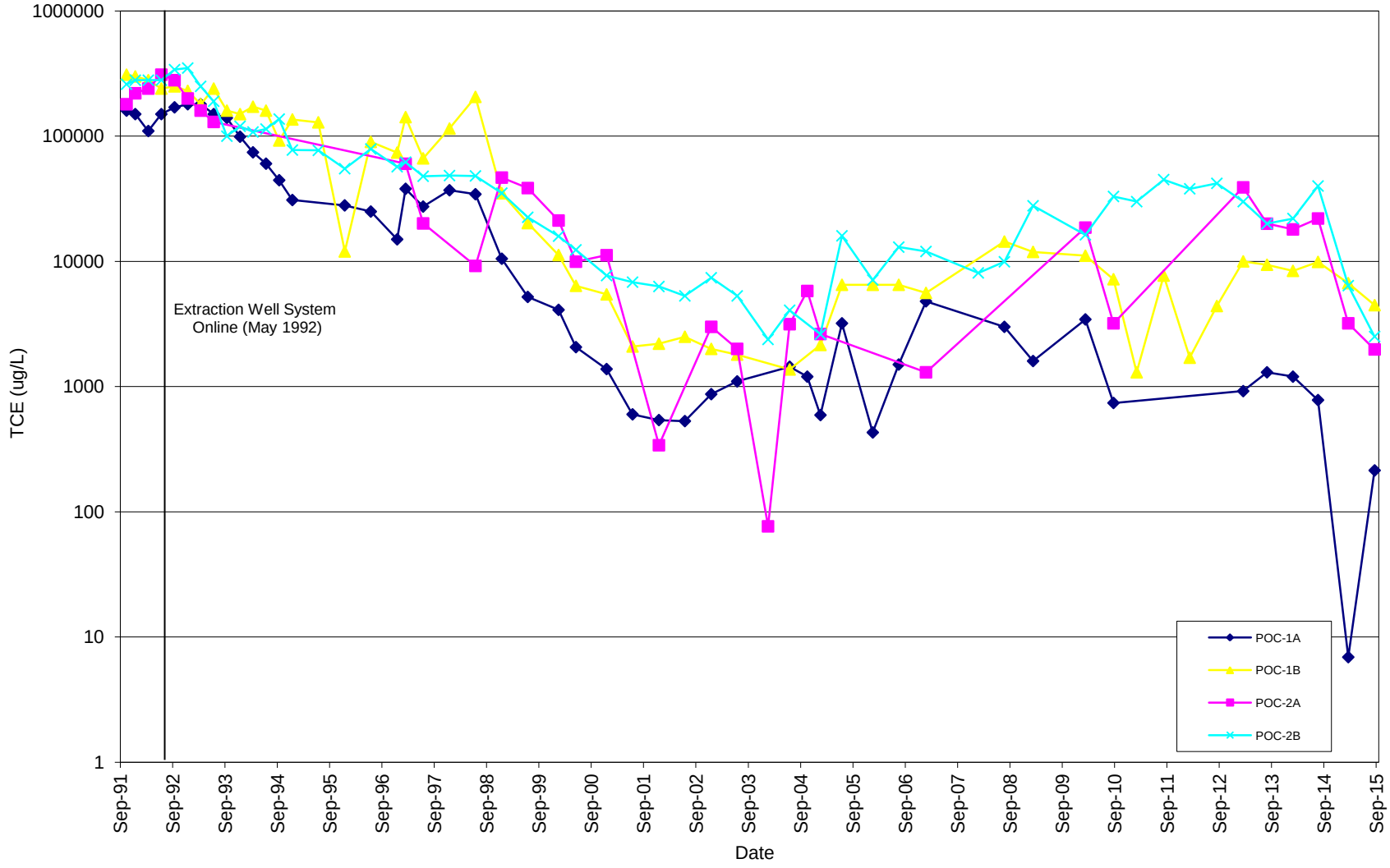
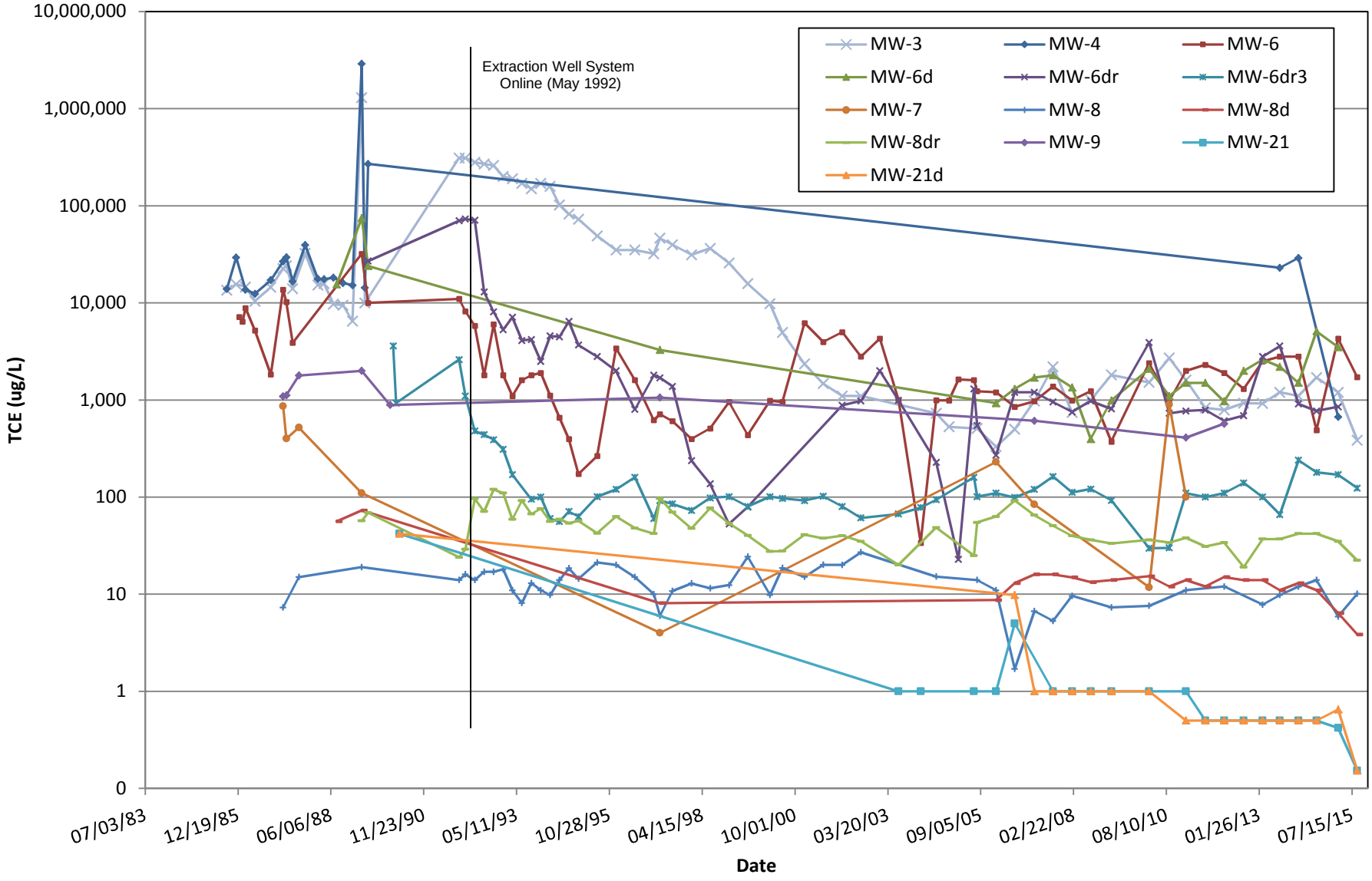


FIGURE 3-1b
Effectiveness Wells - Historical TCE Data
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility, Wake Forest, North Carolina



LEGEND

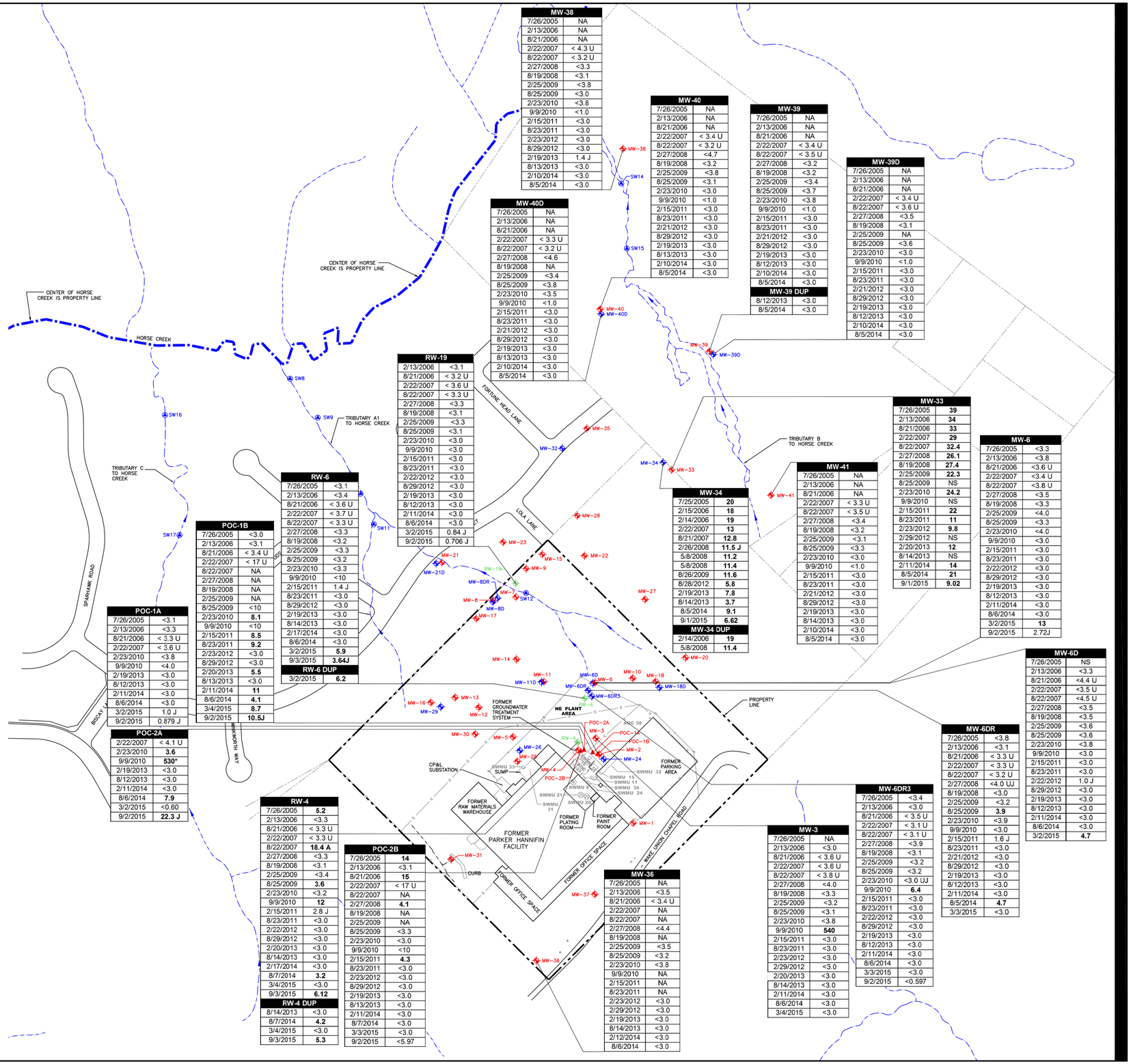
- PARKER HANNIFIN SITE PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- CREEK WITH FLOW DIRECTION
- FORMER LOCATION OF FENCE
- OH — FORMER LOCATION OF OVERHEAD POWER LINES
- MW-14 — MONITORING WELL COMPLETED IN SAPROLITE OR PWR
- MW-11D — MONITORING WELL COMPLETED IN BEDROCK
- RW-4 — RECOVERY WELL
- POC-2A — POINT OF COMPLIANCE MONITORING WELL COMPLETED IN SAPROLITE OR PWR
- SW9 — SURFACE WATER SAMPLE LOCATION
- SWMU 32 — SOLID WASTE MANAGEMENT UNIT

TABLE CONTENTS

NA	NOT ANALYZED
U	NON-DETECT
J	ESTIMATED VALUE
BOLD	DENOTES ABOVE NC2L STANDARD
NC2L STANDARD	3 µg/L

NOTE: ONLY INCLUDES GROUNDWATER SAMPLES ANALYZED FOR 1,4-DIOXANE. WELLS THAT WERE BELOW LABORATORY DETECTION LIMITS ARE NOT LISTED ON THE FIGURE BUT CAN BE FOUND ON TABLE 3-4.

SOURCE: BASE MAP CREATED FROM "BOUNDARY RETRACEMENT" DONE BY MURPHY & SACKS, PROFESSIONAL LAND SURVEYORS, 6308 J. RICHARD DR., RALEIGH, NORTH CAROLINA, DATED OCTOBER 2002. WELL LOCATIONS WERE NOT INCLUDED IN SURVEY, AND ARE APPROXIMATE.



MW-38	
7/26/2005	NA
2/13/2006	NA
8/21/2006	NA
2/22/2007	< 4.3 U
8/22/2007	< 3.2 U
2/27/2008	<3.3
8/19/2008	<3.1
2/25/2009	<3.8
8/25/2009	<3.0
2/23/2010	<3.8
9/9/2010	<1.0
2/15/2011	<3.0
8/23/2011	<3.0
2/23/2012	<3.0
8/29/2012	<3.0
2/19/2013	1.4 J
8/13/2013	<3.0
2/10/2014	<3.0
8/5/2014	<3.0

MW-40	
7/26/2005	NA
2/13/2006	NA
8/21/2006	NA
2/22/2007	< 3.4 U
8/22/2007	< 3.2 U
2/27/2008	<4.7
8/19/2008	<3.2
2/25/2009	<3.8
8/25/2009	<3.1
2/23/2010	<3.0
9/9/2010	<1.0
2/15/2011	<3.0
8/23/2011	<3.0
2/21/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/13/2013	<3.0
2/10/2014	<3.0
8/5/2014	<3.0

MW-39	
7/26/2005	NA
2/13/2006	NA
8/21/2006	NA
2/22/2007	< 3.4 U
8/22/2007	< 3.5 U
2/27/2008	<3.2
8/19/2008	<3.2
2/25/2009	<3.4
8/25/2009	<3.7
2/23/2010	<3.8
9/9/2010	<1.0
2/15/2011	<3.0
8/23/2011	<3.0
2/21/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/10/2014	<3.0
8/5/2014	<3.0
MW-39 DUP	
8/12/2013	<3.0
8/5/2014	<3.0

MW-39D	
7/26/2005	NA
2/13/2006	NA
8/21/2006	NA
2/22/2007	< 3.4 U
8/22/2007	< 3.6 U
2/27/2008	<3.5
8/19/2008	<3.1
2/25/2009	NA
8/25/2009	<3.6
2/23/2010	<3.0
9/9/2010	<1.0
2/15/2011	<3.0
8/23/2011	<3.0
2/21/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/10/2014	<3.0
8/5/2014	<3.0

MW-40D	
7/26/2005	NA
2/13/2006	NA
8/21/2006	NA
2/22/2007	< 3.3 U
8/22/2007	< 3.2 U
2/27/2008	<4.6
8/19/2008	NA
2/25/2009	<3.4
8/25/2009	<3.8
2/23/2010	<3.5
9/9/2010	<1.0
2/15/2011	<3.0
8/23/2011	<3.0
2/21/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/13/2013	<3.0
2/10/2014	<3.0
8/5/2014	<3.0

RW-19	
2/13/2006	<3.1
8/21/2006	< 3.2 U
2/22/2007	< 3.6 U
8/22/2007	< 3.3 U
2/27/2008	<3.3
8/19/2008	<3.1
2/25/2009	<3.3
8/25/2009	<3.1
2/23/2010	<3.0
9/9/2010	<3.0
2/15/2011	<3.0
8/23/2011	<3.0
2/22/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/2/2015	0.84 J
9/2/2015	0.706 J

MW-33	
7/26/2005	**39**
2/13/2006	**34**
8/21/2006	**33**
2/22/2007	**29**
8/22/2007	**32.4**
2/27/2008	**26.1**
8/19/2008	**27.4**
2/25/2009	**22.3**
8/25/2009	NS
2/23/2010	**24.2**
9/9/2010	NS
2/15/2011	**22**
8/23/2011	**11**
2/23/2012	**9.8**
2/29/2012	NS
2/20/2013	**12**
8/14/2013	NS
2/11/2014	**14**
8/5/2014	**21**
9/1/2015	**9.02**

MW-34	
7/25/2005	**20**
2/15/2006	**18**
2/14/2006	**19**
2/22/2007	**13**
8/21/2007	**12.8**
2/26/2008	**11.5 J**
5/8/2008	**11.2**
5/8/2008	**11.4**
8/26/2009	**11.6**
8/28/2012	**5.8**
2/19/2013	**7.8**
8/14/2013	**3.7**
8/5/2014	**9.1**
9/1/2015	**6.62**
MW-34 DUP	
2/14/2006	**19**
5/8/2008	**11.4**

MW-41	
7/26/2005	NA
2/13/2006	NA
8/21/2006	NA
2/22/2007	< 3.3 U
8/22/2007	< 3.5 U
2/27/2008	<3.4
8/19/2008	<3.2
2/25/2009	<3.1
8/25/2009	<3.3
2/23/2010	<3.0
9/9/2010	<1.0
2/15/2011	<3.0
8/23/2011	<3.0
2/21/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/14/2013	<3.0
2/10/2014	<3.0
8/5/2014	<3.0

MW-6	
7/26/2005	<3.3
2/13/2006	<3.8
8/21/2006	<3.6 U
2/22/2007	<3.4 U
8/22/2007	<3.8 U
2/27/2008	<3.5
8/19/2008	<3.3
2/25/2009	<4.0
8/25/2009	<3.3
2/23/2010	<4.0
9/9/2010	<3.0
2/15/2011	<3.0
8/23/2011	<3.0
2/22/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/2/2015	**13**
9/2/2015	2.72J

MW-6D	
7/26/2005	NS
2/13/2006	<3.3
8/21/2006	<4.4 U
2/22/2007	<3.5 U
8/22/2007	<4.5 U
2/27/2008	<3.5
8/19/2008	<3.5
2/25/2009	<3.6
8/25/2009	<3.6
2/23/2010	<3.8
9/9/2010	<3.0
2/15/2011	<3.0
8/23/2011	<3.0
2/22/2012	1.0 J
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/2/2015	**4.7**

MW-6DR	
7/26/2005	<3.8
2/13/2006	<3.1
8/21/2006	< 3.3 U
2/22/2007	< 3.3 U
8/22/2007	< 3.2 U
2/27/2008	<4.0 UJ
8/19/2008	<3.0
2/25/2009	<3.2
8/25/2009	**3.9**
2/23/2010	<3.9
9/9/2010	<3.0
2/15/2011	1.6 J
8/23/2011	<3.0
2/21/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/2/2015	**4.7**

MW-6DR3	
7/26/2005	<3.4
2/13/2006	<3.0
8/21/2006	< 3.5 U
2/22/2007	< 3.1 U
8/22/2007	< 3.1 U
2/27/2008	<3.9
8/19/2008	<3.1
2/25/2009	<3.2
8/25/2009	<3.2
2/23/2010	<3.0 UJ
9/9/2010	**6.4**
2/15/2011	<3.0
8/23/2011	<3.0
2/22/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/3/2015	<3.0
9/2/2015	<0.597

MW-3	
7/26/2005	NA
2/13/2006	<3.0
8/21/2006	< 3.6 U
2/22/2007	< 3.6 U
8/22/2007	< 3.8 U
2/27/2008	<4.0
8/19/2008	<3.3
2/25/2009	<3.2
8/25/2009	<3.1
2/23/2010	<3.8
9/9/2010	**540**
2/15/2011	<3.0
8/23/2011	<3.0
2/23/2012	<3.0
2/29/2012	<3.0
2/20/2013	<3.0
8/14/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/4/2015	<3.0

MW-36	
7/26/2005	NA
2/13/2006	<3.5
8/21/2006	< 3.4 U
2/22/2007	NA
8/22/2007	NA
2/27/2008	<4.4
8/19/2008	NA
2/25/2009	<3.5
8/25/2009	<3.2
2/23/2010	<3.8
9/9/2010	NA
2/15/2011	NA
8/23/2011	NA
2/23/2012	<3.0
2/29/2012	<3.0
2/19/2013	<3.0
8/14/2013	<3.0
2/12/2014	<3.0
8/6/2014	<3.0

RW-6	
7/26/2005	<3.1
2/13/2006	<3.4
8/21/2006	< 3.6 U
2/22/2007	< 3.7 U
8/22/2007	< 3.3 U
2/27/2008	<3.3
8/19/2008	<3.2
2/25/2009	<3.3
8/25/2009	<3.2
2/23/2010	<3.3
9/9/2010	<10
2/15/2011	1.4 J
8/23/2011	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/14/2013	<3.0
2/17/2014	<3.0
8/6/2014	<3.0
3/2/2015	**5.9**
9/3/2015	**3.64J**
RW-6 DUP	
3/2/2015	**6.2**

POC-1B	
7/26/2005	<3.0
2/13/2006	<3.1
8/21/2006	< 3.4 U
2/22/2007	< 17 U
8/22/2007	NA
2/27/2008	NA
8/19/2008	NA
2/25/2009	NA
8/25/2009	<10
2/23/2010	**8.1**
9/9/2010	<10
2/15/2011	**8.5**
8/23/2011	**9.2**
2/23/2012	<3.0
8/29/2012	<3.0
2/20/2013	**5.5**
8/13/2013	<3.0
2/11/2014	**11**
8/6/2014	**4.1**
3/4/2015	**8.7**
9/2/2015	**10.5J**

POC-1A	
7/26/2005	<3.1
2/13/2006	<3.3
8/21/2006	< 3.3 U
2/22/2007	< 3.6 U
2/23/2010	<3.8
9/9/2010	<4.0
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	<3.0
3/2/2015	1.0 J
9/2/2015	0.879 J

POC-2A	
2/22/2007	< 4.1 U
2/23/2010	**3.6**
9/9/2010	**530***
2/19/2013	<3.0
8/12/2013	<3.0
2/11/2014	<3.0
8/6/2014	**7.9**
3/2/2015	<0.60
9/2/2015	**22.3 J**

RW-4	
7/26/2005	**5.2**
2/13/2006	<3.3
8/21/2006	< 3.3 U
2/22/2007	< 3.3 U
8/22/2007	**18.4 A**
2/27/2008	<3.3
8/19/2008	<3.1
2/25/2009	<3.4
8/25/2009	**3.6**
2/23/2010	<3.2
9/9/2010	**12**
2/15/2011	2.8 J
8/23/2011	<3.0
2/22/2012	<3.0
8/29/2012	<3.0
2/20/2013	<3.0
8/14/2013	<3.0
2/17/2014	<3.0
8/7/2014	**3.2**
3/4/2015	<3.0
9/3/2015	**6.12**
RW-4 DUP	
8/14/2013	<3.0
8/7/2014	**4.2**
3/4/2015	<3.0
9/3/2015	**5.3**

POC-2B	
7/26/2005	**14**
2/13/2006	<3.1
8/21/2006	**15**
2/22/2007	< 17 U
8/22/2007	NA
2/27/2008	**4.1**
8/19/2008	NA
2/25/2009	NA
8/25/2009	<3.3
2/23/2010	<3.0
9/9/2010	<10
2/15/2011	**4.3**
8/23/2011	<3.0
2/23/2012	<3.0
8/29/2012	<3.0
2/19/2013	<3.0
8/13/2013	<3.0
2/11/2014	<3.0
8/7/2014	<3.0
3/3/2015	<3.0
9/2/2015	<5.97

Last saved by: PIRESS(2015-10-21) Last Plotted: 2015-10-21
Filename: Z:\CAD\PROJECTS\PPARKER_HANNIFIN\WAKE_FOREST_NC\SEMI-ANNUAL REPORT_2015_2ND_60341618\DWG\FIGURE 3-2_GW HIST 1,4 DIOXANE_2ND-2015.DWG

Project Management Initials: Designer: SP Checked: EM Approved: MA ANSI D 22" x 34"

100 0 200
1"=200'

AECOM

Figure: 3-2

GROUNDWATER ANALYTICAL RESULTS
HISTORICAL 1,4-DIOXANE

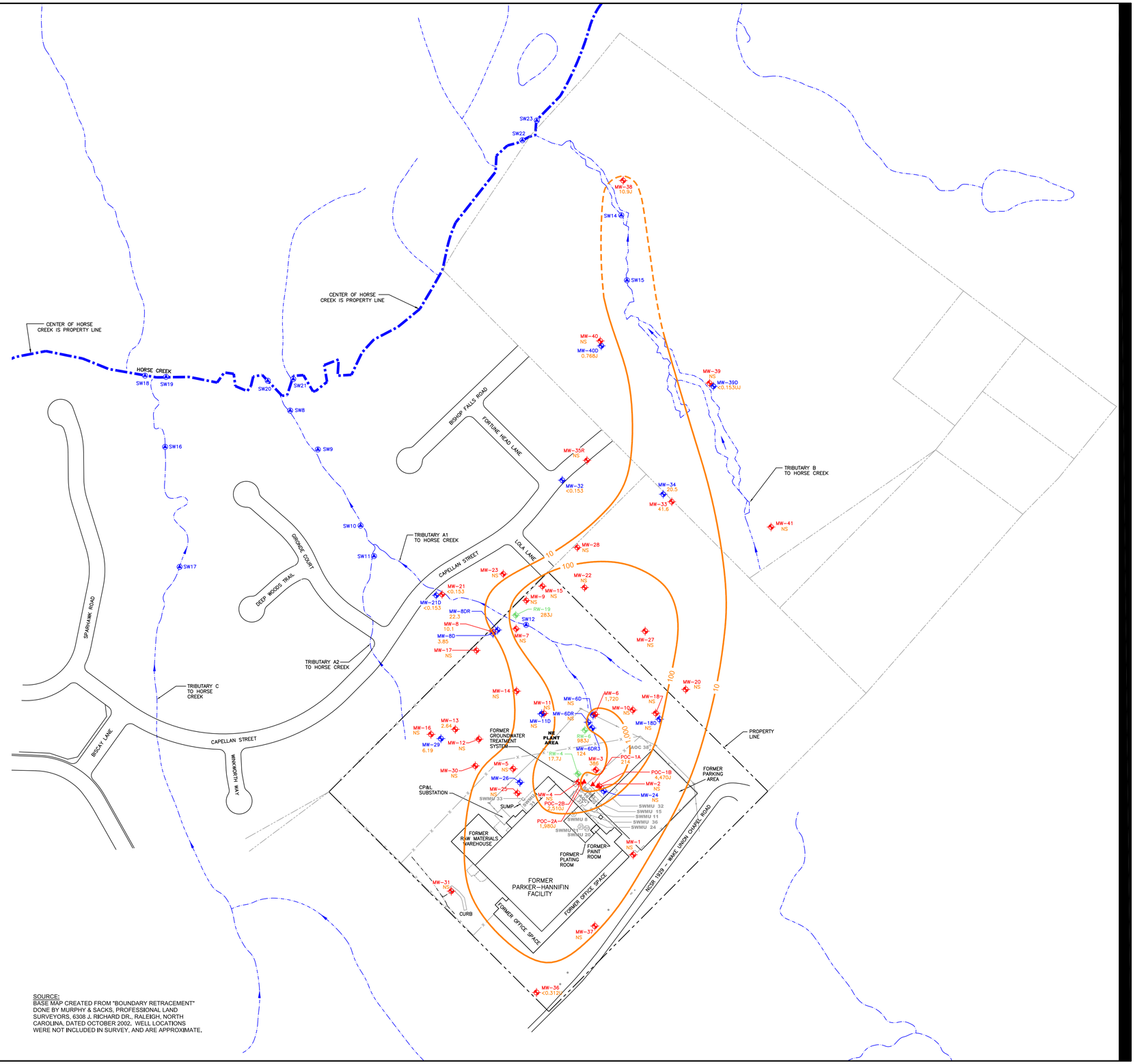
2nd 2015 Groundwater Monitoring Report
Former Parker Hannifin Corporation Facility
Wake Forest, North Carolina
Project No.: 60341618 Date: 10/21/2015

LEGEND

- PARKER HANNIFIN SITE PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- CREEK WITH FLOW DIRECTION
- FORMER LOCATION OF FENCE
- OH — FORMER LOCATION OF OVERHEAD POWER LINES
- MW-14 — MONITORING WELL COMPLETED IN SAPROLITE OR PWR
- MW-11D — MONITORING WELL COMPLETED IN BEDROCK
- RW-4 — RECOVERY WELL
- POC-2A — POINT OF COMPLIANCE MONITORING WELL COMPLETED IN SAPROLITE OR PWR
- SWMU 32 — SOLID WASTE MANAGEMENT UNIT
- 10 — TCE CONTOUR (ug/L) (DASHED WHERE INFERRED)
- MW-13 2.64 — TCE CONCENTRATION (ug/L)

NOTES:

1. GROUNDWATER SAMPLES COLLECTED SEPTEMBER 1-3, 2015.
2. ALL RESULTS REPORTED IN MICROGRAMS PER LITER (ug/L).
3. DATA FROM DEEP BEDROCK WELLS NOT USED IN MAP INTERPRETATION.
4. NS = NOT SAMPLED DURING THIS SAMPLING EVENT.



SOURCE:
BASE MAP CREATED FROM "BOUNDARY RETRACEMENT" DONE BY MURPHY & SACKS, PROFESSIONAL LAND SURVEYORS, 6308 J. RICHARD DR., RALEIGH, NORTH CAROLINA, DATED OCTOBER 2002. WELL LOCATIONS WERE NOT INCLUDED IN SURVEY, AND ARE APPROXIMATE.

N

100 0 200
1"=200'

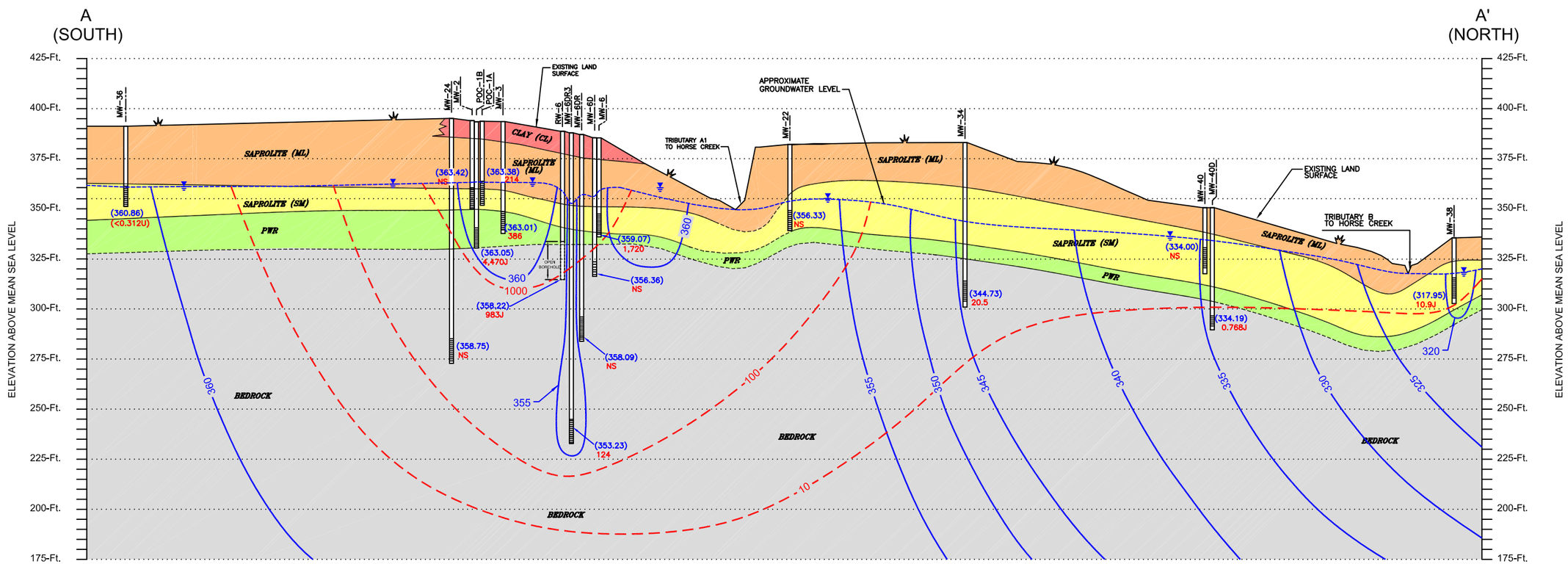
AECOM

Figure: 3-3

TCE ISOCONCENTRATION MAP
SEPTEMBER 2015

2nd 2015 Semi Annual Report
Former Parker Hannifin Corporation Facility
Wake Forest, North Carolina
Project No.: 60341618 Date: 12/4/2015

Last saved by: CAMPBELLC(2015-12-04) Last Plotted: 2015-12-04
Filename: Z:\CAD\PROJECTS\P\PARKER_HANNIFIN\WAKE_FOREST_NC\SEMI-ANNUAL REPORT_2015_2ND_60341618\DWG\FIGURE 3-3_TCE ISOCON MAP_2ND-2015_UPDATES 12.4.15.DWG
Project Management Initials: Designer: SP Checked:EM Approved:MA ANSI D 22" x 34"



LEGEND

- GROUNDWATER LEVEL (ft, msl) (DASHED WHERE INFERRED)
- MONITORING WELL/ WELL SCREEN INTERVAL
- (353.23) GROUNDWATER ELEVATION (ft, msl)
- 124 TCE CONCENTRATION (ug/L)
- 340 GROUNDWATER CONTOUR (ft, msl)
- 10 TCE CONTOUR (ug/L)

LITHOLOGY LEGEND

- CLAY (CL): RED BROWN MICACEOUS CLAY AND FILL MATERIAL
- SAPROLITE (ML): CLAYEY TO SANDY RED BROWN MICACEOUS SILT WITH RELICT ROCK FABRIC
- SAPROLITE (SM): SILTY TO FINE BROWN MICACEOUS SAND WITH RELICT ROCK FABRIC
- PWR: PARTIALLY WEATHERED ROCK
- BEDROCK: FELSIC GNEISS AND SCHIST WITH SOME PEGMATITE VEINS

NOTES:

1. GROUNDWATER ELEVATIONS RECORDED ON SEPTEMBER 1, 2015.
2. ANALYTICAL RESULTS FROM SEPTEMBER 1-3, 2015.

VERTICAL SCALE: 1"=55'
HORIZONTAL SCALE: 1"=275'
VERTICAL EXAGGERATION: 5X

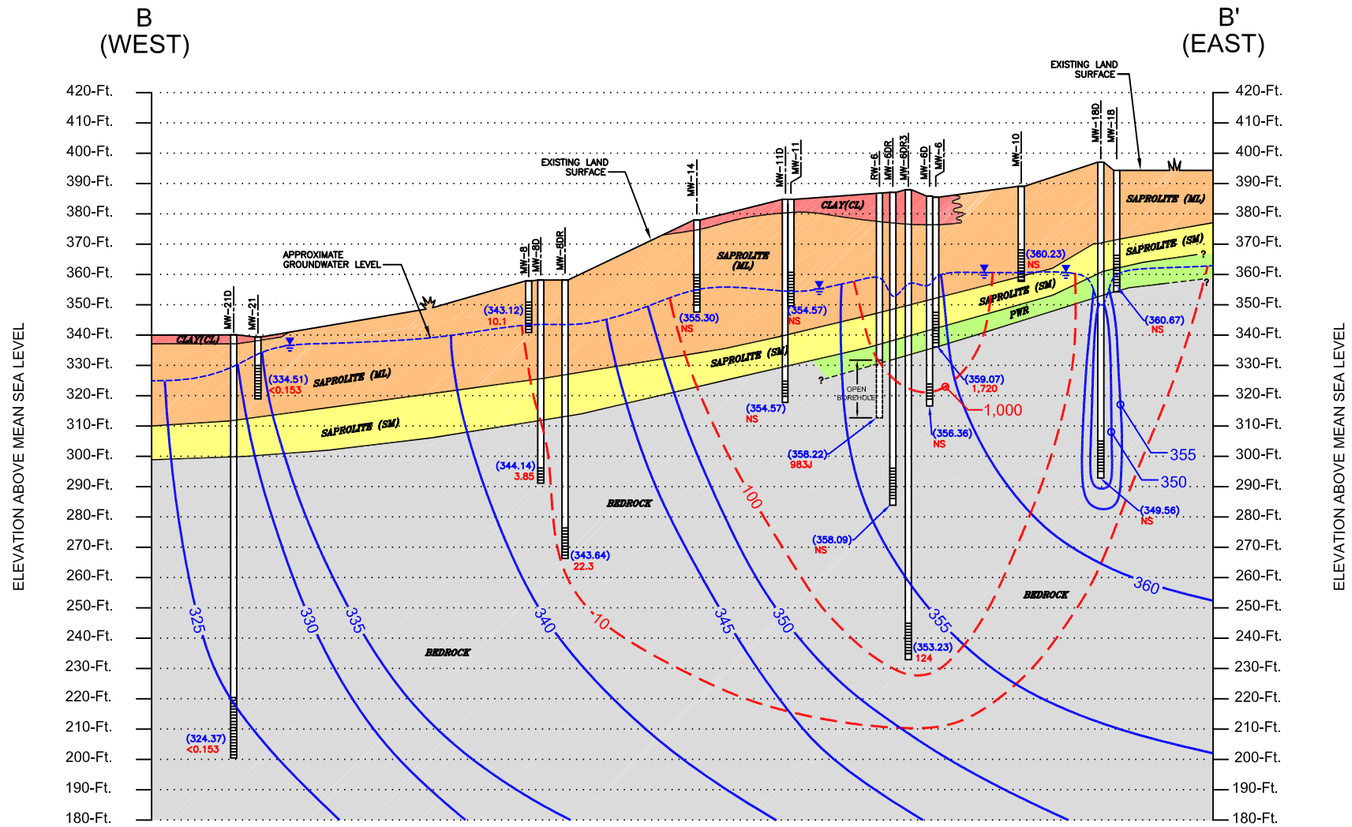
AECOM

Figure: 3-4

SEPTEMBER 2015 GROUNDWATER POTENTIOMETRIC SURFACE MAP
CROSS SECTION A - A'

2nd 2015 Semi Annual Report
Former Parker Hannifin Corporation Facility
Wake Forest, North Carolina
Project No.: 60341618 Date: 10/22/2015

Last saved by: PIRESS(2015-11-02) Last Plotted: 2015-11-02
Filename: Z:\CAD\PROJECTS\P-PARKER_HANNIFIN\WAKE_FOREST_NC\SEMI-ANNUAL REPORT_2015_2ND_60341618\DWG\FIGURE 3-4_CROSS SECTION A-A'_2ND-2015.DWG
Project Management Initials: Designer: SP Checked: EM Approved: MA ANSI B 11" x 17"



LEGEND

- GROUNDWATER LEVEL (ft, msl) (DASHED WHERE INFERRED)
- MONITORING WELL/ WELL SCREEN INTERVAL
- (324.37) GROUNDWATER ELEVATION (ft, msl)
- <0.153 TCE CONCENTRATION (ug/L)
- 340 GROUNDWATER CONTOUR (ft, msl)
- 10 TCE CONTOUR (ug/L)

LITHOLOGY LEGEND

- CLAY (CL): RED BROWN MICACEOUS CLAY AND FILL MATERIAL
- SAPROLITE (ML): CLAYEY TO SANDY RED BROWN MICACEOUS SILT WITH RELICT ROCK FABRIC
- SAPROLITE (SM): SILTY TO FINE BROWN MICACEOUS SAND WITH RELICT ROCK FABRIC
- PWR: PARTIALLY WEATHERED ROCK
- BEDROCK: FELSIC GNEISS AND SCHIST WITH SOME PEGMATITE VEINS

NOTES:

1. GROUNDWATER ELEVATIONS RECORDED ON SEPTEMBER 1, 2015.
2. ANALYTICAL RESULTS FROM SEPTEMBER 1-3, 2015.

VERTICAL SCALE: 1"=50'
HORIZONTAL SCALE: 1"=250'
VERTICAL EXAGGERATION: 5X

AECOM

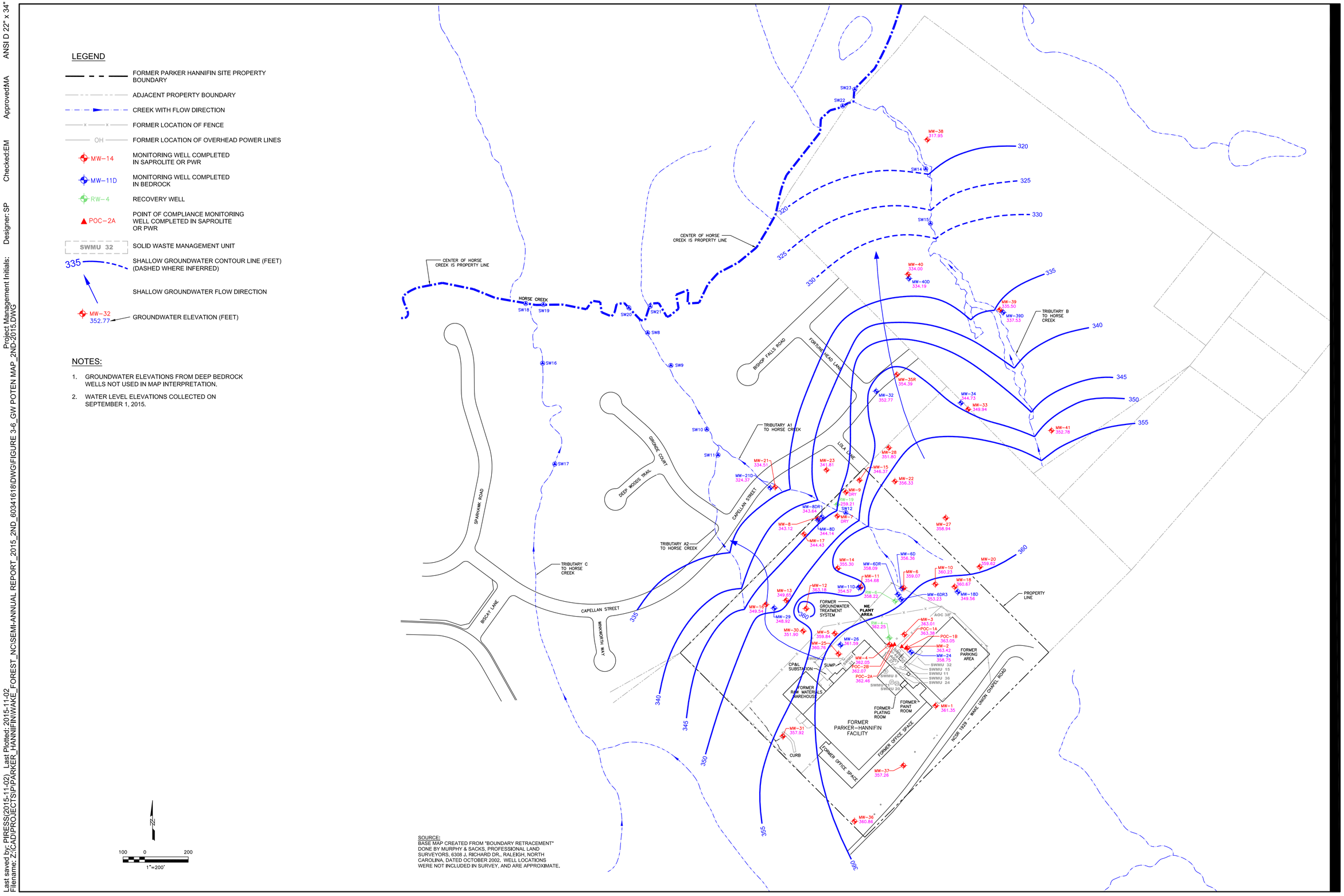
Figure: 3-5

SEPTEMBER 2015 GROUNDWATER POTENTIOMETRIC SURFACE MAP
CROSS SECTION B - B'

2nd 2015 Semi Annual Report
Former Parker Hannifin Corporation Facility
Wake Forest, North Carolina
Project No.: 60341618 Date: 11/2/2015

Last saved by: PIRESS(2015-11-02) Last Plotted: 2015-11-02
Filename: Z:\CADPROJECTS\P\PARKER_HANNIFIN\WAKE_FOREST_NC\SEMI-ANNUAL REPORT_2015_2ND_60341618\DWG\FIGURE 3-5_CROSS SECTION B-B'_2ND-2015.DWG

Project Management Initials: Designer: SP Checked:EM Approved:MA ANSI B 11" x 17"



Last saved by: PIRESS(2015-11-02) Last Plotted: 2015-11-02
Filename: Z:\CADPROJECTS\P\PARKER_HANNIFIN\WAKE_FOREST_NC\SEMI-ANNUAL REPORT_2015_2ND_60341618\DWG\FIGURE 3-6_GW POTEN MAP_2ND-2015.DWG

Project Management Initials: Designer: SP Checked:EM Approved:MA ANSI D 22" x 34"

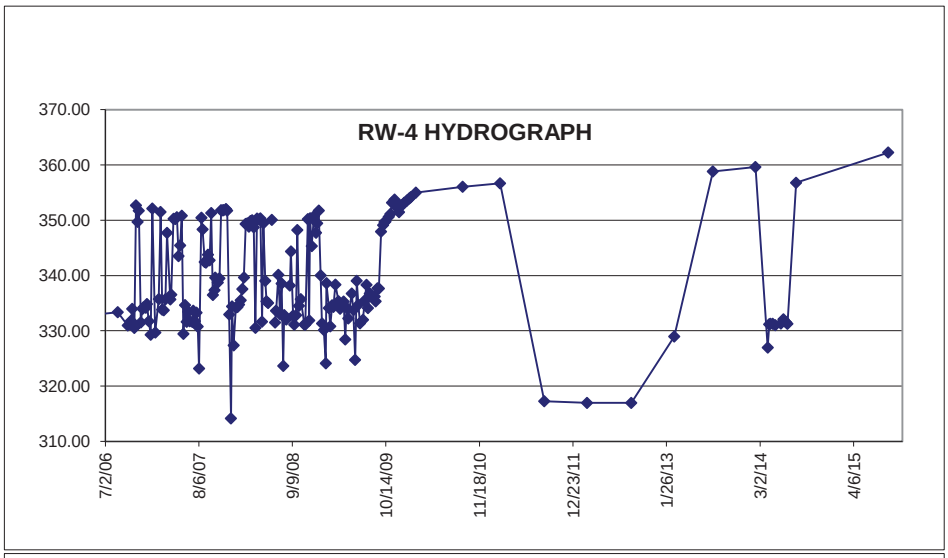
AECOM

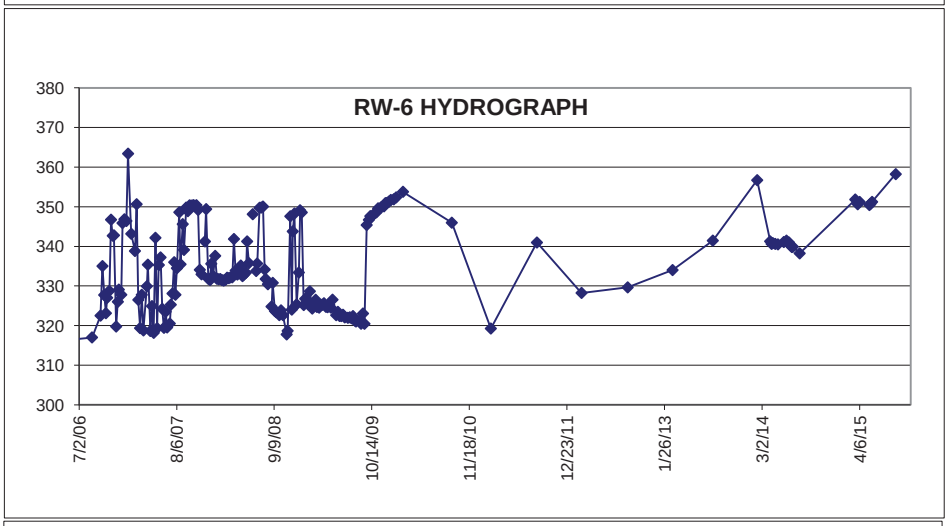
Figure: 3-6

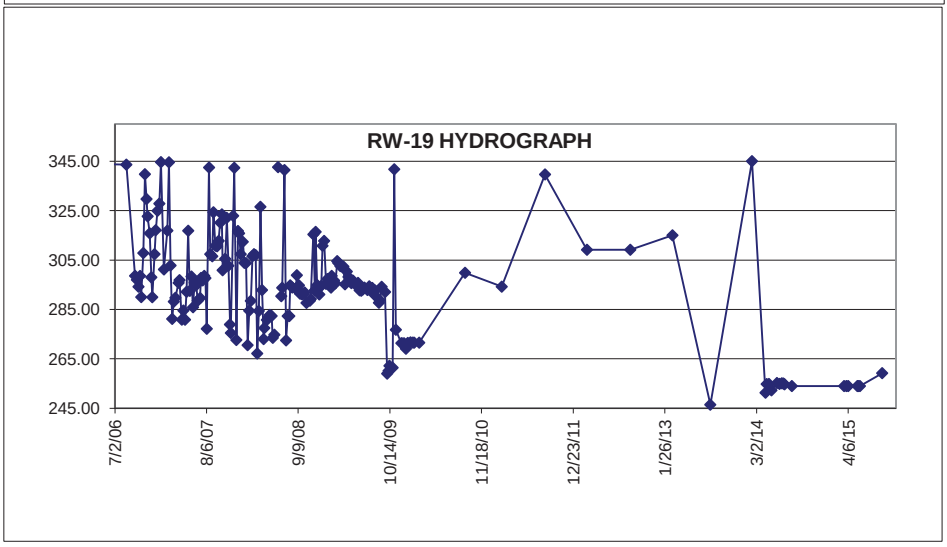
GROUNDWATER POTENTIOMETRIC SURFACE MAP - SEPTEMBER 2015
PLAN VIEW

2nd 2015 Semi Annual Report
Former Parker Hannifin Corporation Facility
Wake Forest, North Carolina
Project No.: 60341618 Date: 11/2/2015

Figure 4-1
Hydrographs of Historic Water Level Data - Extraction Wells
Second 2015 Groundwater Monitoring Report
Former Parker Hannifin Facility, Wake Forest, North Carolina







Appendix A.
Semi-annual Groundwater Sampling Records

AECOM

Well ID: mw-3

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest Date: 9-2-15 Time: Start Ø825 am/pm
Project No: Finish _____ am/pm
Site Location: Wake Forest, NC
Weather: Sunny 70's Collector(s): A.C. Whichard

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 55.7 c. Length of Water Column 25.13

b. Water Table Depth 30.57 d. Calculated System Volume 15.5 L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 % - Specific Conductance ± 10 % - ORP ± 10 %
- pH ± 10 % - Dissolved Oxygen ± 10 % - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
Ø835	2	18.1	5.43	145	5.40	147.4	123	200	30.88	Clear
Ø840	3	18.3	5.37	149	7.13	145.4	135	200	30.88	Clear
Ø845	4	18.4	5.69	152	6.93	126.6	73.6	200	30.88	Clear
Ø850	5	18.2	5.69	152	6.87	121.0	67.9	200	30.88	clear
Ø855	6	18.2	5.74	154	7.07	122.8	51.0	200	30.88	Clear
					Flow cell off					
Ø900	7						38.7			
Ø920	11						12.3			
Ø930	13						8.71			

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-3	VOA	4	HCL	8260 LL	Ø930
	~~VOA~~	~~2~~	~~HCL~~	~~8260~~	
	250 mL	1	HNO3	metals	

Comments:

Signature: [signature] Date 9-2-15

AECOM

Well ID: mw-6

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-2-15	Time: Start	1325 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 90's	Collector(s):	A.C. Whitehead		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 45.64 c. Length of Water Column 19.24

b. Water Table Depth 26.40 d. Calculated System Volume 11.8L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 % - Specific Conductance ± 10 % - ORP ± 10 %
- pH ± 10 % - Dissolved Oxygen ± 10 % - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1335	2	17.7	5.01	61	3.06	40.7	—	200	27.03	Clear
1340	3	17.4	5.03	60	2.93	38.3	—	200	27.03	Clear
1345	4	17.6	5.07	59	3.05	36.0	—	200	27.03	Clear
1350	5	17.4	5.07	59	3.10	35.7	—	200	27.03	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-6	VOA	4	HCL	8260 LL	1400
	VOA	2	HCL	1,4D	

Comments:

Signature: Date 9-2-15

AECOM

Well ID: MW-6DR3

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest
Date: 9-2-15
Time: Start 1245 am/pm
Finish _____ am/pm
Project No:
Site Location: Wake Forest, NC
Weather: Sunny 90's
Collector(s): A.C. Whichard

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 154.1
c. Length of Water Column 119.38
b. Water Table Depth 34.72
d. Calculated System Volume 73.7L
Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 %
- Specific Conductance ± 10 %
- ORP ± 10 %
- pH ± 10 %
- Dissolved Oxygen ± 10 %
- Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C101206

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1255	2	20.0	8.00	187	4.30	.7	—	200	34.73	Clear
1300	3	20.7	7.99	183	4.35	4.4	—	200	34.73	Clear
1305	4	20.5	8.01	174	4.37	4.9	—	200	34.73	Clear
1310	5	20.8	8.00	173	4.46	6.9	—	200	34.73	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-6DR3	VOA	4	HCL	8260 LL	1315
	VOA	2	HCL	1,4D	

Comments:

Signature: [signature] Date 9-2-15

AECOM

Well ID: mw-8

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-1-15	Time: Start	1310 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80's	Collector(s):	A.C. Whichard		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 17.20 c. Length of Water Column 2.45

b. Water Table Depth 14.75 d. Calculated System Volume 1.5L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1320	2	17.4	4.53	57	.54	80.0	–	200	14.81	Clear
1325	3	17.6	4.66	57	.41	76.1	–	200	14.81	Clear
1330	4	17.80	4.85	57	.29	72.0	–	200	14.81	Clear
1335	5	17.20	5.00	57	.39	67.4	–	200	14.81	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-8	VOA	4	HCL	8260 LL	1335

Comments:

Signature: [signature] Date 9-1-15

AECOM

Well ID: mw-8D

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-1-15	Time: Start	1415 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80's	Collector(s):			

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 67.2 c. Length of Water Column 53.2

b. Water Table Depth 14.00 d. Calculated System Volume 32.8L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1425	2	17.4	6.55	176	4.84	24.9	–	200	14.20	Clear
1430	3	17.2	6.50	175	4.48	31.8	–	200	14.25	Clear
1435	4	17.4	6.62	175	4.56	30.5	–	200	14.29	Clear
1440	5	17.5	6.63	175	4.61	32.1	–	200	14.33	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-8D	VOA	3	HCL	8260 LL	1440

Comments:

Signature: [signature] Date 9-1-15

AECOM

Well ID: MW-8DR

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	~~8-1-15~~ 9-1-15	Time: Start	1340 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80's	Collector(s):	A.C. Whichard		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 92.2 c. Length of Water Column 77.43

b. Water Table Depth 14.77 d. Calculated System Volume 47.8L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1350	2	17.8	7.10	402	.23	-117.1	-	200	14.88	Clear
1355	3	17.9	7.18	395	.20	-84.6	-	200	14.91	Clear
1400	4	18.2	7.17	392	.20	-76.5	-	200	14.93	Clear
1405	5	17.5	7.18	388	.18	-69.9	-	200	14.96	Clear
1410	6	17.7	7.17	386	.19	-67.4	-	200	14.99	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-8DR	VOA	3	HCL	8260 LL	~~1400~~ 1410

Comments:

Signature: [signature] Date 9-1-15

AECOM

Well ID: mw-13

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest
Date: 9-3-15
Time: Start 1240 am/pm
Finish _____ am/pm
Project No:
Site Location: Wake Forest, NC
Weather: Sunny 90s
Collector(s): A.C. Wrichard

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 34.65
c. Length of Water Column 6.35
b. Water Table Depth 28.30
d. Calculated System Volume 3.9L
Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 %
- Specific Conductance ± 10 %
- ORP ± 10 %
- pH ± 10 %
- Dissolved Oxygen ± 10 %
- Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1250	2	17.4	4.84	85	3.98	69.1	–	200	28.83	Clear
1255	3	17.6	4.85	85	4.20	68.7	–	200	28.83	Clear
1300	4	18.0	4.93	84	4.11	66.3	–	200	28.83	Clear
1305	5	18.4	4.97	85	3.97	62.6	–	200	28.83	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-13	VOA	3	HCL	8260 LL	1315

Comments:

Signature: [signature] Date 9-3-15

AECOM

Well ID: mw-21

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-1-15	Time: Start	1205 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80's	Collector(s):	A.C. Whichard		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 20 c. Length of Water Column 15.13

b. Water Table Depth 4.87 d. Calculated System Volume 9.3L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 % - Specific Conductance ± 10 % - ORP ± 10 %
- pH ± 10 % - Dissolved Oxygen ± 10 % - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1215	2	23.6	5.50	110	2.14	4.2	-	200	5.21	Clear
1220	3	22.5	5.23	101	.92	43.1	-	200	5.23	Clear
1225	4	21.2	5.11	95.1	.72	44.7	-	200	5.23	Clear
1230	5	21.3	5.17	95	.68	43.5	-	200	5.23	Clear
1235	6	21.7	5.19	95	.71	45.7	-	200	5.23	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
~~0238~~	VOA	3	HCL	8260 LL	1235

Comments:

Signature: [signature] Date 9-1-15

AECOM

Well ID: mw-21d

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest
Date: 9-1-15
Time: Start 1130 am/pm
Finish _____ am/pm
Project No:
Site Location: Wake Forest, NC
Weather: Sunny 80s
Collector(s): A.C. Whichard

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 142.32
c. Length of Water Column 126.62

b. Water Table Depth 15.7
d. Calculated System Volume 78.2L
Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 %
- Specific Conductance ± 10 %
- ORP ± 10 %
- pH ± 10 %
- Dissolved Oxygen ± 10 %
- Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	2	22.6	8.40	143	3.74	70.5	–	200	16.80	Clear
1145	3	22.8	8.67	143	1.85	51.4	–	200	16.99	Clear
1150	4	22.4	8.68	142	1.81	50.6	–	200	17.17	Clear
1155	5	21.3	8.65	142	1.76	51.3	–	200	17.33	Clear
1200	6	21.0	8.60	141	1.71	58.2	–	200	17.49	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-21d	VOA	4	HCL	8260 LL	1200

Comments:

Signature: [signature]
Date 9-1-15

AECOM

Well ID: mw-29

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest Date: 9-3-15 Time: Start 1200 am/pm
Project No: Finish _____ am/pm
Site Location: Wake Forest, NC
Weather: Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 37.2 c. Length of Water Column 9.8

b. Water Table Depth 27.40 d. Calculated System Volume 6.05 L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 % - Specific Conductance ± 10 % - ORP ± 10 %
- pH ± 10 % - Dissolved Oxygen ± 10 % - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1210	2	22.1	5.72	103	5.92	31.1	–	200	29.57	Clear
1215	3	22.3	5.15	100	6.86	59.5	–	200	29.57	Clear
1220	4	22.0	5.04	98	6.19	57.1	–	200	29.57	Clear
1225	5	21.0	5.04	97	6.09	58.1	–	200	29.57	Clear
1230	6	21.2	5.02	96	5.95	59.4	–	200	29.53	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-29	VOA	04	HCL	8260 LL	1230
	VOA	2	HCL	1,4D	

Comments:

Signature: [signature] Date 9-7-15

AECOM

Well ID: MW-32

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest
Date: 9-1-15
Time: Start 1030 am/pm
Finish _____ am/pm
Project No:
Site Location: Wake Forest, NC
Weather: Sunny 80s
Collector(s): A.C. Whichard

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 62.55
c. Length of Water Column 39.65
b. Water Table Depth 22.9
d. Calculated System Volume 24.5 L
Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 %
- Specific Conductance ± 10 %
- ORP ± 10 %
- pH ± 10 %
- Dissolved Oxygen ± 10 %
- Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C101206

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040	2	20.2	6.04	161	.38	54.5	–	200	23.41	Clear
1045	3	20.4	6.04	161	.35	54.6	–	200	23.41	Clear
1050	4	20.5	6.05	162	.38	53.1	–	200	23.41	Clear
1055	5	20.8	6.05	161	.37	52.0	–	200	23.41	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-32	VOA	4	HCL	8260 LL	1055
	VOA	2	HCL	1,4D	

Comments:

Signature: [signature]
Date 9-1-15

AECOM

Well ID: MW-33

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9/1/15	Time: Start	1025 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny ~ 80°	Collector(s):	T. Adham		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 40.15 c. Length of Water Column 7.55

b. Water Table Depth 32.6 d. Calculated System Volume 4.6 L Casing Diameter/Material 2"/PVC

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15110 3259

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1035	2	16.7	5.81	86.7	7.08	154.1	–	~250	32.7	Clear/None
1140	3	16.6	5.80	86.4	6.93	149.7	–	~250	32.71	Clear/None
1145	4	16.5	5.80	85.6	6.94	151.4	–	~250	32.75	Clear/None
1150	5	16.5	5.79	85.1	6.88	151.2	–	~250	32.76	Clear/None
1155	6	16.4	5.77	84.9	6.86	159.4	–	~250	32.81	Clear/None

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-33	VOA	3	HCL	8260 LL	1200
MW-33	VOA	2	HCL	Dioxane	

Comments:

Signature: [signature] Date 9/1/15

AECOM

Well ID: MW-34

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9/1/15	Time: Start	1255 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny ~85°F	Collector(s):	T. Adhan		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 84 c. Length of Water Column 45.65

b. Water Table Depth 38.35 d. Calculated System Volume 28.2 L Casing Diameter/Material 2"/PVC

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 % - Specific Conductance ± 10 % - ORP ± 10 %
- pH ± 10 % - Dissolved Oxygen ± 10 % - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1310	~2	17.5	9.34	503.5	2.38	176.1	–	~250	39.58	clear/none
1315	~2.5	20.4	9.33	501.3	2.02	168.6	–	~250	39.68	clear/none
1325	~3.5	19.1	9.34	502.4	1.81	163.5	–	~250	39.59	clear/none
1330	~4.5	17.7	9.28	489.6	1.68	192.0	–	~250	39.63	clear/none
1335	~5.5	17.8	9.29	489.2	1.73	157.4	–	~250	39.61	clear/none

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-34	VOA	3	HCL	8260 LL	1345
MW-34	VOA	2	HCL	1-4 Dioxane	1345

Comments:

Signature: [signature] Date 9/1/15

AECOM

Well ID: mw-36

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-2-15	Time: Start	0730 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 70s	Collector(s):	A.C. Whichard		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 40.1 c. Length of Water Column 9.7

b. Water Table Depth 30.40 d. Calculated System Volume 6 L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0735	2	17.8	4.20	53	6.28	183.5	–	200	30.45	Cloudy
0740	3	17.8	4.44	53	6.02	168.4	–	200	30.45	Cloudy
0745	4	18.0	4.55	52	6.26	164.7	–	200	30.45	Cloudy
0750	5	17.9	4.69	52	6.31	157.0	–	200	30.45	Cloudy
0755	6	18.1	4.77	52	6.08	154.5	–	200	30.45	Clear
0800	7	18.1	4.80	51	6.46	152.5	–	200	30.45	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-36	VOA	4	HCL	8260 LL	0800

Comments: DUP-01

Signature: [signature] Date 9-2-15

AECOM

Well ID: MW-38

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9/1/15	Time: Start	1015 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny ~ 80°F	Collector(s):	T. Adhan		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 37.81 c. Length of Water Column 15.66

b. Water Table Depth 17.15 d. Calculated System Volume 9.6 L Casing Diameter/Material 2"/PVC

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15C103259

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1025	3	17.2	6.20	229.8	3.98	183.9	—	~500	18.85	clear/none
1030	4	17.2	6.13	229.4	2.87	177.6	—	~250	18.86	clear/none
1035	5	17.1	6.13	229.4	2.76	177.5	—	~250	18.88	clear/none
1040	6	17.1	6.11	228.6	2.88	177.4	—	~250	18.90	clear/none
1045	7	17.0	6.11	228.3	2.89	177.2	—	~250	18.91	clear/none

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-38	VOA	3	HCL	8260 LL	1050

Comments:

Signature: [signature] Date 9/1/15

AECOM

Well ID: 39D

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9/1/15	Time: Start	0920 am/pm
Project No:				Finish	1600 am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny ~ 75°F	Collector(s):	T. Adkins		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 69.9 c. Length of Water Column 55.41

b. Water Table Depth 14.49 d. Calculated System Volume 34.2 L Casing Diameter/Material 2"/PVC

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15C103259

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0930	3	17.3	6.67	165.6	2.85	157.1	–	500	14.53	clear/None
0935	4	17.4	6.69	163.4	2.71	151.7	–	~250	14.53	clear/None
0940	5	17.3	6.68	163.2	2.66	152.6	–	~250	14.53	clear/None
0945	6	17.4	6.67	163.6	2.66	151.6	–	~250	14.53	clear/None
0950	7	17.4	6.63	164.1	2.63	150.9	–	~250	14.54	clear/None

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-39D	VOA	3	HCL	8260 LL	0955

Comments:

Signature: [signature] Date 9/1/15

AECOM

Well ID: mw-40d

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-1-15	Time: Start	0955 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80's	Collector(s):	A.C. Whichard		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 61.7 c. Length of Water Column 45.35

b. Water Table Depth 16.35 d. Calculated System Volume 28.01 L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1005	2	16.9	6.39	157	5.98	110.6	–	200	16.42	Clear
1010	3	17.0	6.48	157	5.98	105.4	–	200	16.42	Clear
1015	4	17.0	6.60	157	5.97	98.6	–	200	16.42	Clear
1020	5	17.1	6.67	157	6.01	96.7	–	200	16.42	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
mw-40d	VOA	4	HCL	8260 LL	1020

Comments:

Signature: Date 9-1-15

AECOM

Well ID: RW-4

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest Date: 9-3-15 Time: Start 1445 am/pm
Project No: Finish _____ am/pm
Site Location: Wake Forest, NC
Weather: Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 78 c. Length of Water Column 46.38

b. Water Table Depth 31.62 d. Calculated System Volume 257.8L Casing Diameter/Material 6" steel

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	

From flow cell

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1455	2	19.0	5.36	410	.16	-87.8	6.89	200	37.72	Clear / yes
1500	3	18.9	5.50	343	.14	-104.7	6.53	200	37.72	clear / yes
1505	4	18.8	5.54	334	.14	-107.9	6.17	200	37.72	clear / yes
1510	5	18.8	5.55	344	.12	-110.2	5.91	200	37.72	Clear / yes

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RW-4	VOA	4	HCL	8260 LL	1515
	VOA	2	HCL	1,4D	
	250	1	HNO3	metals	

Comments: DUP-02

Signature: Date

AECOM

Well ID: RW-6

Low Flow Ground Water Sample Collection Record

Client: Parker Wake Forest
Date: 9-3-15
Time: Start 1405 am/pm
Finish _____ am/pm
Project No:
Site Location: Wake Forest, NC
Weather:
Collector(s):

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 65.08
c. Length of Water Column 35.28
b. Water Table Depth 29.80
d. Calculated System Volume 196.1 L
Casing Diameter/Material 6"

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C101206

From flowcell

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1415	2	19.9	6.35	315	.74	46.0	2.13	200	41.63	clear
1420	3	19.7	6.36	315	.67	40.1	2.20	200	42.87	clear
1425	4	19.8	6.36	315	.66	38.9	2.01	200	42.87	clear
1430	5	19.7	6.36	315	.67	38.0	1.77	200	42.87	clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RW-6	VOA	4	HCL	8260 LL	1430
	VOA	2	HCL	1,4D	
	250	1	HNO3	metals	

Comments:

Signature: [signature]
Date 9-3-15

AECOM

Well ID: RW-19

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date: 9-3-15	Time: Start 1330 am/pm
Project No:			Finish ____ am/pm
Site Location:	Wake Forest, NC		
Weather:		Collector(s):	

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 163.5 c. Length of Water Column 65.72

b. Water Table Depth 97.78 d. Calculated System Volume 365.4 L Casing Diameter/Material 6"

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

for flow cell (well is running @ 2.5 gpm

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1335	2	16.6	5.83	122	5.65	91.2	4.17	200	>103	Clear
1340	3	16.5	5.76	122	5.49	94.0	3.98	200	>103	Clear
1345	4	16.5	5.78	123	5.58	95.6	3.77	200	>103	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RW-19	VOA	4	HCL	8260 LL	1350
	VOA	2	HCL	1,4 D	
	250	1	HNO3	metals	

Comments:

Signature: Date 9-3-15

AECOM

Well ID: POC-1A

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date: 9-2-15		Time: Start 1030	am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80s	Collector(s):			

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 41.92 c. Length of Water Column 11.58

b. Water Table Depth 30.34 d. Calculated System Volume 7.1L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C101206

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1045	3	19.3	6.21	123	6.11	61.5	7.67	200	30.79	Clear
1050	4	19.4	6.45	115	6.61	79.2	8.13	200	30.79	Clear
1055	5	19.3	6.47	115	6.65	83.7	7.23	200	30.79	Clear
1100	6	19.2	6.47	115	6.58	86.1	6.91	200	30.79	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
POC-1A	VOA	4	HCL	8260 LL	1100
	VOA	2	HCL	1,4D	
	250	1	HNO3	metals	

Comments:

Signature: [signature] Date 9-2-15

AECOM

Well ID: POC-1B

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-2-15	Time: Start	0940 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 70's	Collector(s):			

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 44.53 c. Length of Water Column 14.14

b. Water Table Depth 30.39 d. Calculated System Volume 8.7 L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature ± 10 % - Specific Conductance ± 10 % - ORP ± 10 %
- pH ± 10 % - Dissolved Oxygen ± 10 % - Drawdown < 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C101206

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0945	1	17.7	7.13	151	6.39	76.7	3.73	200	30.66	Clear
0950	2	17.7	7.02	153	8.13	80.2	3.31	200	30.69	Clear
0955	3	17.5	7.00	153	6.01	82.8	2.97	200	30.69	Clear
1000	4	17.6	7.01	154	5.98	83.5	2.77	200	30.69	Clear
1010	5	17.5	7.01	153	5.90	83.0	2.40	200	50.69	Clear

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
POC-1B	VOA	4	HCL	8260 LL	1010
	VOA	2	HCL	1,4D	
	250	1	HNO3	metals	

Comments:

Signature: [signature] Date 9-2-15

AECOM

Well ID: POC-2A

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-2-15	Time: Start	1115 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 80's	Collector(s):	A.C. Whickard		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 47 c. Length of Water Column 14.16

b. Water Table Depth 32.84 d. Calculated System Volume 8.7L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1125	2	19.4	6.22	301	.24	-140.1	50.1	200	33.22	Clear/Yes
1130	3	19.4	6.24	298	.15	-142.5	38.3	200	33.22	Clear/Yes
1135	4	19.2	6.26	301	.12	-139.3	21.1	200	33.22	Clear/Yes
1140	5	19.3	6.26	300	.11	-140.7	15.2	200	33.22	Clear/Yes
					Flow cell off					
1145	6						8.55			

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
POC-2A	VOA	4	HCL	8260 LL	1145
	VOA	2	HCL	1,4D	
	250	1	HNO3	metals	

Comments:

Signature: Date 9-2-15

AECOM

Well ID: POC-2B

Low Flow Ground Water Sample Collection Record

Client:	Parker Wake Forest	Date:	9-2-15	Time: Start	1200 am/pm
Project No:				Finish	am/pm
Site Location:	Wake Forest, NC				
Weather:	Sunny 90's	Collector(s):	A.C. Whicherd		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 65.3 c. Length of Water Column 31.7

b. Water Table Depth 33.60 d. Calculated System Volume 19.5L Casing Diameter/Material 2" pvc

2. WELL PURGE DATA

a. Purge Method: ☑ Peristaltic ☑ Bladder ☐ Monsoon

b. Acceptance Criteria Defined (see workplan)

- Temperature	± 10 %	- Specific Conductance	± 10 %	- ORP	± 10 %
- pH	± 10 %	- Dissolved Oxygen	± 10 %	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	12C1012006

Time (24hr)	Volume Purged (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1210	2	20.0	5.68	5560	.14	-30.9	12.1	200	35.92	Clear/yes
1215	3	19.6	5.68	5525	.13	-44.1	9.89	200	35.92	Clear/yes
1220	4	19.7	5.68	5561	.14	-50.2	9.23	200	35.92	Clear/yes
1225	5	20.0	5.68	5559	.14	-52.6	8.79	200	35.92	Clear/yes

d. Acceptance Criteria Pass/Fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If No or N/A explain here: Not Required

3. SAMPLE COLLECTION: Method: **Grab**

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
POC-2B	VOA	4	HCL	8260 LL	1230
	VOA	2	HCL	1,4D	
	VOA	1	HNO3	metals	

Comments:

Signature: Date 9-2-15

Appendix B.
Data Validation Package and Semi-annual Laboratory Analytical Report

AECOM
One Midtown Plaza
1360 Peachtree St. N.E.
Suite 500
Atlanta, GA 30309

404.965.9600 tel
404.965.9605 fax

Memorandum

To	Matt Allen– AECOM Raleigh	Page	1
CC			
Subject	Level 2 Data Validation for Parker Hannifin Wake Forest Groundwater Samples		

From	Robert Davis – AECOM Atlanta
Date	October 6, 2015

Limited validation was performed on one data package from ESC Lab Sciences in Mt. Juliet, Tennessee on groundwater and water samples. The samples were collected at the Parker Hannifin site in Wake Forest, North Carolina on September 1-3, 2015.

The data were reviewed for conformance to method specifications and the validation criteria set forth in the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review*, USEPA-540-R-07-003, July 2008, with additional reference to *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review*, EPA 540/R-99-008, May 1999 as they applied to the methodology used. Inorganic data were evaluated based on method specifications and the validation criteria set forth in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA-540-R-04-004, January 2010, as they applied to the analytical methods used. Field duplicate RPD review and applicable control limits were taken from the *USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses*, December 1996.

The following analyses were requested on the chain-of-custody record.

- Method 8260B - Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS);
- Method 8260B - 1,4-Dioxane by GC/MS in Selected Ion Monitoring Mode (Low Level); and
- Method 6010C – Metals by Inductively Coupled Plasma (ICP);

Review Elements

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Method blanks/trip blanks
- Surrogate results
- Laboratory control sample (LCS) results
- Matrix spike/matrix spike duplicate (MS/MSD) results
- Field precision results

Samples

AECOM Environment collected the following groundwater and water samples from the Parker Hannifin Wake Forest site as reported under the ESC Lab Sciences job number.

L787282

Lab ID	Sample ID	Lab ID	Sample ID
L787282-01	MW-3	L787282-25	RW-4
L787282-02	MW-6	L787282-26	RW-4
L787282-03	MW-6	L787282-27	RW-6
L787282-04	MW-6DR3	L787282-28	RW-6
L787282-05	MW-6DR3	L787282-29	RW-19
L787282-06	MW-8	L787282-30	RW-19
L787282-07	MW-8D	L787282-31	POC-1A
L787282-08	MW-8DR	L787282-32	POC-1A
L787282-09	MW-13	L787282-33	POC-1B
L787282-10	MW-13	L787282-34	POC-1B
L787282-11	MW-21	L787282-35	POC-2A
L787282-12	MW-21D	L787282-36	POC-2A
L787282-13	MW-29	L787282-37	POC-2B
L787282-14	MW-29	L787282-38	POC-2B
L787282-15	MW-32	L787282-39	ANDREWS-WSW
L787282-16	MW-32	L787282-40	ANDREWS-WSW
L787282-17	MW-33	L787282-41	PERRY-WSW
L787282-18	MW-33	L787282-42	PERRY-WSW
L787282-19	MW-34	L787282-43	DUP-01-09022015
L787282-20	MW-34	L787282-44	DUP-02-09032015
L787282-21	MW-36	L787282-45	DUP-02-09032015
L787282-22	MW-38	L787282-46	EB-01-09022015
L787282-23	MW-39D	L787282-47	EB-01-09022015
L787282-24	MW-40D	L787282-48	TRIP BLANK

Analytical Results

In general, the data are valid as reported and may be used for decision making purposes. Sample data are qualified with either a “J” (the associated numerical value is the approximate concentration of the analyte in the sample), “UJ” (the analyte was not detected; however, the reported quantitation limit is approximated and may be inaccurate or imprecise), or “U” (the analyte was not detected above the level of the reported sample quantitation limit). See Table 1.

Positive results less than the reporting limit (i.e., practical quantitation limit), but greater than the method detection limit (MDL) were qualified “J,” as estimated concentrations, due to increased uncertainty near the detection limit. These “J” qualifiers were maintained in this data validation.

Discussion

Agreement of Analyses Conducted with COC Requests

Laboratory sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC.

Holding Times and Preservation

All samples were analyzed within the holding times required by the methods.

The coolers were received within the 4 ± 2° C requirement.

All samples that required chemical preservation were chemically preserved to the proper pH.

Method 8260B: The 2-chloroethylvinylether results were rejected because 2-chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

Method Blanks/Trip Blanks

No analytes were detected at concentrations exceeding the reporting limits for the method blanks, equipment blanks, or trip blanks with the following exceptions:

Method 8260B: Equipment blank EB-01-0902015 had detections for Acetone and Trichloroethene. All of the associated samples with detections less than five times the equipment blank concentration were qualified. See Table 1.

Method 8260B: The trip blank had detections for Acetone, Carbon Disulfide, and Tetrachloroethene. All of the associated samples with detections less than five times the trip blank were qualified. See Table 1.

Surrogate Results

The surrogate recoveries were acceptable for all analyses with the following exceptions:

Method 8260B: Surrogate 4-Bromofluorobenzene was outside of the quality control limits biased low in samples MW-36, MW-38, MW-39D, MW-40D, RW-4, RW-6, and RW-19. The VOC compound results were qualified. See Table 1.

Method 8260B: Surrogate Toluene-d8 was outside of the quality control limits biased low in samples POC-1B, POC-2A, and POC-2B. The VOC compound results were qualified. See Table 1.

Method 8260B: Surrogate Toluene-d8 was outside of the quality control limits biased high in samples RW-6, POC-1B, MW-6, and POC-2A. The 1,4-Dioxane results for all of the samples with detections were qualified. See Table 1.

Laboratory Control Sample Results

Laboratory control standards (LCS) for all of the analyses were within the quality control limits.

Matrix Spike/Matrix Spike Duplicate Results

Matrix spike and matrix spike duplicates that were performed on non-project samples were not evaluated because matrix similarity to project samples could not be assumed.

The matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision on client samples were all within the advisory limits with the following exceptions:

Method 8260B: The MSD recoveries were outside of the quality control limits biased high for Acetone, Acryonitrile, and 2-Butanone in sample MW-3. The Acetone, Acryonitrile, and 2-Butanone results in sample MW-3 were non-detect; therefore, data qualification was not required.

Method 8260B: The MS/MSD recoveries were outside of the quality control limits for Trichloroethene in sample MW-3. The spike amount was less than 25 % of the sample concentration; therefore, data qualification was not required.

Method 8260B: The MSD recoveries were outside of the quality control limits biased low for Acetone and 2-Butanone in sample MW-6DR3. The Acetone and 2-Butanone results in sample MW-6DR3 were qualified. See Table 1.

Method 8260B: The MS/MSD recoveries were outside of the quality control limits for Trichloroethene in sample MW-6DR3. The spike amount was less than 25 % of the sample concentration; therefore, data qualification was not required.

Field Precision Results

Field duplicates were collected on samples MW-36 and RW-4. See Tables 2A and 2B for the Relative Percent Differences (RPDs) for all compounds for which there were detections. The RPDs between the original and field duplicates that were outside the acceptable criteria of 30 % are in bold text in Table 2B and qualified in Table 1.

Table 1
Qualified Analytical Data

Sample ID	Method	Analyte	Lab Result	Lab Qual.	Validated Result	Validation Qualifier[1]	Units	Reason Codes[2]
All samples	8260B	2-Chloroethyl vinyl ether				R	µg/L	SIC
MW-6DR3	8260B	Acetone	ND		1.05	UJ	µg/L	MS
MW-6DR3	8260B	2-Butanone	ND		1.28	UJ	µg/L	MS
MW-8D	8260B	Acetone	1.08	J	1.08	U	µg/L	EB
MW-8D	8260B	Tetrachloroethene	0.510		0.510	J	µg/L	TB
MW-13	8260B	Acetone	1.15	J	1.15	U	µg/L	EB TB
MW-21	8260B	Acetone	1.22	J	1.22	U	µg/L	EB TB
MW-21D	8260B	Acetone	5.28	J	5.28	U	µg/L	EB TB
MW-34	8260B	Acetone	1.09	J	1.09	U	µg/L	EB TB
MW-36	8260B	Trichloroethene	0.312	J	0.312	U	µg/L	EB SUR
MW-36	8260B	All Compounds				J/UJ	µg/L	SUR
MW-38	8260B	All Compounds				J/UJ	µg/L	SUR
MW-39D	8260B	All Compounds				UJ	µg/L	SUR
MW-40D	8260B	All Compounds				J/UJ	µg/L	SUR
RW-4	8260B	1,2-Dichloroethane	0.716		0.716	J	µg/L	FD
RW-4	8260B	trans-1,2-Dichloroethene	2.02		2.02	J	µg/L	FD
RW-4	8260B	1,1,2-Trichloroethane	2.13		2.13	J	µg/L	FD
RW-4	8260B	Trichloroethylene	17.7		17.7	J	µg/L	FD
RW-4	8260B	All Compounds				J/UJ	µg/L	SUR
RW-6	8260B	Acetone	6.27	J	6.27	U	µg/L	EB TB
RW-6	8260B	All Compounds				J/UJ	µg/L	SUR
RW-6	8260B	1,4-Dioxane	3.64		3.64	J	µg/L	SUR
MW-6	8260B	1,4-Dioxane	2.72	J	2.72	J	µg/L	SUR
RW-19	8260B	All Compounds				J/UJ	µg/L	SUR
POC-1B	8260B	All Compounds				J/UJ	µg/L	SUR
POC-1B	8260B	1,4-Dioxane	10.5		10.5	J	µg/L	SUR
POC-2A	8260B	All Compounds				J/UJ	µg/L	SUR
POC-2A	8260B	1,4-Dioxane	22.3		22.3	J	µg/L	SUR
POC-2B	8260B	Acetone	39.4	J	39.4	U	µg/L	EB TB
POC-2B	8260B	Tetrachloroethene	3.05		3.05	J	µg/L	TB
POC-2B	8260B	All Compounds				J/UJ	µg/L	SUR
DUP-01	8260B	Trichloroethene	0.935		0.935	U	µg/L	EB
DUP-02	8260B	1,2-Dichloroethane	1.70		1.70	J	µg/L	FD
DUP-02	8260B	trans-1,2-Dichloroethene	2.79		2.79	J	µg/L	FD
DUP-02	8260B	1,1,2-Trichloroethane	5.11		5.11	J	µg/L	FD
DUP-02	8260B	Trichloroethylene	25.4		25.4	J	µg/L	FD

[1]: USEPA-defined data validation qualifiers applied in this data evaluation:

J: The associated numerical value is the approximate concentration of the analyte in the sample.

UJ: The analyte was not detected; however, the reported quantitation limit is approximated and may be inaccurate or imprecise.

U: The analyte was not detected above the level of the reported sample quantitation limit.

R: Rejected

[2]: Reason Codes:

EB: Equipment blank contamination.

TB: Trip blank contamination.

SUR: The surrogate recovery was outside of the quality control limits.

MS: The matrix spike recovery was outside of the quality control limits.

FD: The field duplicate %RPD was outside of the quality control limits.

SIC: The sample integrity was compromised.

Table 2A
Field Precision

Method	Compound	MW-36	DUP-01-09022015	Units	% RPD
8260B	cis-1,2-Dichloroethene	ND	0.376 J	µg/L	NC*

% RPD: Relative percent difference between the primary sample result and the sample duplicate result.

* The primary result was non-detect and the field duplicate result was below the reporting limit. Based on laboratory precision, the results are acceptable.

ND: Analyte not detected.
NC: RPD could not be calculated.

Table 2B
Field Precision

Method	Compound	RW-4	DUP-02-09032015	Units	% RPD
6010C	Chromium	14.9	15.5	µg/L	4.0
6010C	Nickel	10.2	8.6 J	µg/L	17
8260B	Acetone	64.2	56.5	µg/L	13
8260B	Chloroform	0.497 J	0.832	µg/L	50 *
8260B	**1,2-Dichloroethane**	**0.716**	**1.7**	**µg/L**	**81**
8260B	1,1-Dichloroethene	13.3	14.2	µg/L	6.6
8260B	cis-1,2-Dichloroethene	6700	7140	µg/L	6.4
8260B	**trans-1,2-Dichloroethylene**	**2.02**	**2.79**	**µg/L**	**32**
8260B	1,2-Dichloropropane	0.375 J	0.588	µg/L	44 *
8260B	2-Butanone	62.6	62.4	µg/L	0.32
8260B	**1,1,2-Trichloroethane**	**2.13**	**5.11**	**µg/L**	**82**
8260B	**Trichloroethylene**	**17.7**	**25.4**	**µg/L**	**36**
8260B	Vinyl Chloride	1.48	1.70	µg/L	14
8260B	1,4-Dioxane	6.12	5.30	µg/L	14

% RPD: Relative percent difference between the primary sample result and the sample duplicate result.

* The primary result was non-detect and the field duplicate result was below the reporting limit. Based on laboratory precision, the results are acceptable.

ANALYTICAL REPORT

September 17, 2015

AECOM, Inc - Raleigh, NC

Sample Delivery Group:	L787282
Samples Received:	09/05/2015
Project Number:	60341618.2
Description:	Parker Wake Forest
Site:	WAKE FOREST, NC
Report To:	Mr. Bob Wyrick 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607

Entire Report Reviewed By:

Terrie Fudge
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

[1]Cp: Cover Page 1

[2]Tc: Table of Contents 2

[3]Ss: Sample Summary 4

[4]Cn: Case Narrative 11

[5]Sr: Sample Results 12

MW-3 L787282-01 12

MW-6 L787282-02 14

MW-6 L787282-03 16

MW-6DR3 L787282-04 17

MW-6DR3 L787282-05 19

MW-8 L787282-06 20

MW-8D L787282-07 22

MW-8DR L787282-08 24

MW-13 L787282-09 26

MW-13 L787282-10 28

MW-21 L787282-11 29

MW-21D L787282-12 31

MW-29 L787282-13 33

MW-29 L787282-14 35

MW-32 L787282-15 36

MW-32 L787282-16 38

MW-33 L787282-17 39

MW-33 L787282-18 41

MW-34 L787282-19 42

MW-34 L787282-20 44

MW-36 L787282-21 45

MW-38 L787282-22 47

MW-39D L787282-23 49

MW-40D L787282-24 51

RW-4 L787282-25 53

RW-4 L787282-26 55

RW-6 L787282-27 56

RW-6 L787282-28 58

RW-19 L787282-29 59

RW-19 L787282-30 61

POC-1A L787282-31 62

POC-1A L787282-32 64

POC-1B L787282-33 65

POC-1B L787282-34 67

POC-2A L787282-35 68
POC-2A L787282-36 70
POC-2B L787282-37 71
POC-2B L787282-38 73
ANDREWS-WSW L787282-39 74
ANDREWS-WSW L787282-40 76
PERRY-WSW L787282-41 77
PERRY-WSW L787282-42 79
DUP-01-09022015 L787282-43 80
DUP-02-09032015 L787282-44 82
DUP-02-09032015 L787282-45 84
EB-01-09022015 L787282-46 85
EB-01-09022015 L787282-47 87
TRIP BLANK L787282-48 88

[6]Qc: Quality Control Summary 90

Metals (ICP) by Method 6010C 90
Volatile Organic Compounds (GC/MS) by Method 8260B 91

[7]Gl: Glossary of Terms 117

[8]Al: Accreditations & Locations 118

[9]Sc: Chain of Custody 119

MW-3 L787282-01 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 09:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 16:52	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 14:05	09/12/15 14:05	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	10	09/15/15 16:49	09/15/15 16:49	KLO

MW-6 L787282-02 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 14:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 14:25	09/12/15 14:25	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	50	09/15/15 17:09	09/15/15 17:09	KLO

MW-6 L787282-03 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 14:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 16:43	09/06/15 16:43	JC

MW-6DR3 L787282-04 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 13:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	1	09/15/15 14:49	09/15/15 14:49	KLO

MW-6DR3 L787282-05 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 13:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 18:44	09/06/15 18:44	JC

MW-8 L787282-06 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 13:35 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 15:05	09/12/15 15:05	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	1	09/15/15 17:29	09/15/15 17:29	KLO

MW-8D L787282-07 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 14:40 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 15:25	09/12/15 15:25	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	1	09/15/15 17:49	09/15/15 17:49	KLO

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

MW-8DR L787282-08 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 14:10 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 15:46	09/12/15 15:46	MCB

MW-13 L787282-09 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 13:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 16:06	09/12/15 16:06	MCB

MW-13 L787282-10 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 13:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 19:08	09/06/15 19:08	JC

MW-21 L787282-11 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 12:35 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 16:26	09/12/15 16:26	MCB

MW-21D L787282-12 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 12:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 16:46	09/12/15 16:46	MCB

MW-29 L787282-13 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 12:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 17:06	09/12/15 17:06	MCB

MW-29 L787282-14 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 12:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 19:32	09/06/15 19:32	JC

MW-32 L787282-15 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 10:55 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 17:26	09/12/15 17:26	MCB

MW-32 L787282-16 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 10:55 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 19:56	09/06/15 19:56	JC

MW-33 L787282-17 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 12:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 17:46	09/12/15 17:46	MCB

MW-33 L787282-18 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 12:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 20:21	09/06/15 20:21	JC

MW-34 L787282-19 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 13:45 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 18:06	09/12/15 18:06	MCB

MW-34 L787282-20 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 13:45 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 20:45	09/06/15 20:45	JC

MW-36 L787282-21 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 08:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 18:26	09/12/15 18:26	MCB

MW-38 L787282-22 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 10:50 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 18:46	09/12/15 18:46	MCB

MW-39D L787282-23 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 09:55 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 19:06	09/12/15 19:06	MCB

MW-40D L787282-24 GW

Collected by: A. C. Whieherd | Collected date/time: 09/01/15 10:20 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 19:26	09/12/15 19:26	MCB

RW-4 L787282-25 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 15:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 16:55	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 19:46	09/12/15 19:46	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	100	09/15/15 18:08	09/15/15 18:08	KLO

RW-4 L787282-26 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 15:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814728	1	09/11/15 17:53	09/11/15 17:53	JC

RW-6 L787282-27 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 14:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 16:58	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 20:07	09/12/15 20:07	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	25	09/15/15 18:28	09/15/15 18:28	KLO

RW-6 L787282-28 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 14:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815066	1	09/14/15 15:04	09/14/15 15:04	JC

RW-19 L787282-29 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 13:50 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:01	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813810	1	09/12/15 20:27	09/12/15 20:27	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815223	5	09/15/15 18:47	09/15/15 18:47	KLO

RW-19 L787282-30 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 13:50 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 21:57	09/06/15 21:57	JC

POC-1A L787282-31 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 11:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:04	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 04:29	09/09/15 04:29	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	10	09/10/15 21:25	09/10/15 21:25	MCB

POC-1A L787282-32 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 11:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 22:21	09/06/15 22:21	JC

POC-1B L787282-33 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 10:10 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:07	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 04:50	09/09/15 04:50	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	100	09/10/15 21:45	09/10/15 21:45	MCB

POC-1B L787282-34 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 10:10 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815066	1	09/14/15 15:43	09/14/15 15:43	JC

POC-2A L787282-35 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 11:45 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:10	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 05:11	09/09/15 05:11	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	100	09/10/15 19:25	09/10/15 19:25	MCB

POC-2A L787282-36 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 11:45 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815066	1	09/14/15 16:07	09/14/15 16:07	JC

POC-2B L787282-37 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 12:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:13	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	5	09/09/15 05:32	09/09/15 05:32	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	500	09/10/15 19:45	09/10/15 19:45	MCB

POC-2B L787282-38 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 12:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815066	10	09/14/15 16:31	09/14/15 16:31	JC

ANDREWS-WSW L787282-39 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 11:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 05:52	09/09/15 05:52	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	1	09/10/15 20:05	09/10/15 20:05	MCB

ANDREWS-WSW L787282-40 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 11:15 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/06/15 23:57	09/06/15 23:57	JC

PERRY-WSW L787282-41 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 11:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 06:13	09/09/15 06:13	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	1	09/10/15 20:25	09/10/15 20:25	MCB

PERRY-WSW L787282-42 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 11:30 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG813827	1	09/07/15 00:21	09/07/15 00:21	JC

DUP-01-09022015 L787282-43 GW

Collected by: A. C. Whieherd | Collected date/time: 09/02/15 00:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 06:34	09/09/15 06:34	MCB

DUP-02-09032015 L787282-44 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 00:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:22	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 06:55	09/09/15 06:55	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	100	09/10/15 20:45	09/10/15 20:45	MCB

DUP-02-09032015 L787282-45 GW

Collected by: A. C. Whieherd | Collected date/time: 09/03/15 00:00 | Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815066	1	09/14/15 16:55	09/14/15 16:55	JC

EB-01-09022015 L787282-46 GW

Collected by: A. C. Whieherd
Collected date/time: 09/02/15 07:30
Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICP) by Method 6010C	WG814626	1	09/11/15 10:36	09/11/15 17:25	RDS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 07:16	09/09/15 07:16	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814394	1	09/10/15 21:05	09/10/15 21:05	MCB

EB-01-09022015 L787282-47 GW

Collected by: A. C. Whieherd
Collected date/time: 09/02/15 07:30
Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG815312	1	09/15/15 14:16	09/15/15 14:16	JC

TRIP BLANK L787282-48 GW

Collected by: A. C. Whieherd
Collected date/time: 09/02/15 00:00
Received date/time: 09/05/15 07:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814108	1	09/09/15 01:22	09/09/15 01:22	MCB

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Terrie Fudge

Terrie Fudge
Technical Service Representative

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	4.21	J	1.40	10.0	1	09/11/2015 16:52	WG814626
Nickel	6.29	J	4.90	10.0	1	09/11/2015 16:52	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	J3	1.05	25.0	1	09/12/2015 14:05	WG813810
Acrylonitrile	U	J3 J5	0.873	2.50	1	09/12/2015 14:05	WG813810
Benzene	U	J5	0.0896	0.500	1	09/12/2015 14:05	WG813810
Bromobenzene	U	J5	0.133	0.500	1	09/12/2015 14:05	WG813810
Bromodichloromethane	U	J5	0.0800	0.500	1	09/12/2015 14:05	WG813810
Bromochloromethane	U	J5	0.145	0.500	1	09/12/2015 14:05	WG813810
Bromoform	U	J5	0.186	0.500	1	09/12/2015 14:05	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 14:05	WG813810
n-Butylbenzene	U	J5	0.143	0.500	1	09/12/2015 14:05	WG813810
sec-Butylbenzene	U	J5	0.134	0.500	1	09/12/2015 14:05	WG813810
tert-Butylbenzene	U	J5	0.183	0.500	1	09/12/2015 14:05	WG813810
Carbon disulfide	U	J5	0.101	0.500	1	09/12/2015 14:05	WG813810
Carbon tetrachloride	U	J5	0.159	0.500	1	09/12/2015 14:05	WG813810
Chlorobenzene	U	J5	0.140	0.500	1	09/12/2015 14:05	WG813810
Chlorodibromomethane	U	J5	0.128	0.500	1	09/12/2015 14:05	WG813810
Chloroethane	U	J5	0.141	0.500	1	09/12/2015 14:05	WG813810
2-Chloroethyl vinyl ether	U	J3 J6	0.877	2.50	1	09/12/2015 14:05	WG813810
Chloroform	0.499	J J5	0.0860	0.500	1	09/12/2015 14:05	WG813810
Chloromethane	U	J5	0.153	0.500	1	09/12/2015 14:05	WG813810
2-Chlorotoluene	U	J5	0.111	0.500	1	09/12/2015 14:05	WG813810
4-Chlorotoluene	U	J5	0.0972	0.500	1	09/12/2015 14:05	WG813810
1,2-Dibromo-3-Chloropropane	U	J5	0.325	1.00	1	09/12/2015 14:05	WG813810
1,2-Dibromoethane	U	J5	0.193	0.500	1	09/12/2015 14:05	WG813810
Dibromomethane	U	J5	0.117	0.500	1	09/12/2015 14:05	WG813810
1,2-Dichlorobenzene	U	J5	0.101	0.500	1	09/12/2015 14:05	WG813810
1,3-Dichlorobenzene	U	J5	0.130	0.500	1	09/12/2015 14:05	WG813810
1,4-Dichlorobenzene	U	J5	0.121	0.500	1	09/12/2015 14:05	WG813810
Dichlorodifluoromethane	U	J5	0.127	0.500	1	09/12/2015 14:05	WG813810
1,1-Dichloroethane	U	J5	0.114	0.500	1	09/12/2015 14:05	WG813810
1,2-Dichloroethane	U	J5	0.108	0.500	1	09/12/2015 14:05	WG813810
1,1-Dichloroethene	U	J5	0.188	0.500	1	09/12/2015 14:05	WG813810
cis-1,2-Dichloroethene	20.4	J5	0.0933	0.500	1	09/12/2015 14:05	WG813810
trans-1,2-Dichloroethene	0.513	J5	0.152	0.500	1	09/12/2015 14:05	WG813810
1,2-Dichloropropane	U	J5	0.190	0.500	1	09/12/2015 14:05	WG813810
1,1-Dichloropropene	U	J5	0.128	0.500	1	09/12/2015 14:05	WG813810
1,3-Dichloropropane	U	J5	0.147	0.500	1	09/12/2015 14:05	WG813810
cis-1,3-Dichloropropene	U	J5	0.0976	0.500	1	09/12/2015 14:05	WG813810
trans-1,3-Dichloropropene	U	J5	0.222	0.500	1	09/12/2015 14:05	WG813810
trans-1,4-Dichloro-2-butene	U	J5	0.257	5.00	1	09/12/2015 14:05	WG813810
2,2-Dichloropropane	U	J5	0.0929	0.500	1	09/12/2015 14:05	WG813810
Di-isopropyl ether	U	J5	0.0924	0.500	1	09/12/2015 14:05	WG813810
Ethylbenzene	U	J5	0.158	0.500	1	09/12/2015 14:05	WG813810
Hexachloro-1,3-butadiene	U	J5	0.157	1.00	1	09/12/2015 14:05	WG813810
2-Hexanone	U	J5	0.757	2.50	1	09/12/2015 14:05	WG813810
n-Hexane	U	J5	0.305	1.00	1	09/12/2015 14:05	WG813810
Iodomethane	U	J5	0.377	10.0	1	09/12/2015 14:05	WG813810
Isopropylbenzene	U	J5	0.126	0.500	1	09/12/2015 14:05	WG813810
p-Isopropyltoluene	U	J5	0.138	0.500	1	09/12/2015 14:05	WG813810
2-Butanone (MEK)	U	J3 J5	1.28	2.50	1	09/12/2015 14:05	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U	J5	1.07	2.50	1	09/12/2015 14:05	WG813810
4-Methyl-2-pentanone (MIBK)	U	J5	0.823	2.50	1	09/12/2015 14:05	WG813810
Methyl tert-butyl ether	U	J5	0.102	0.500	1	09/12/2015 14:05	WG813810
Naphthalene	0.430	J J5	0.174	0.500	1	09/12/2015 14:05	WG813810
n-Propylbenzene	U	J5	0.162	0.500	1	09/12/2015 14:05	WG813810
Styrene	U	J5	0.117	0.500	1	09/12/2015 14:05	WG813810
1,1,1,2-Tetrachloroethane	U	J5	0.120	0.500	1	09/12/2015 14:05	WG813810
1,1,2,2-Tetrachloroethane	U	J5	0.130	0.500	1	09/12/2015 14:05	WG813810
1,1,2-Trichlorotrifluoroethane	U	J5	0.164	0.500	1	09/12/2015 14:05	WG813810
Tetrachloroethene	0.886	J5	0.199	0.500	1	09/12/2015 14:05	WG813810
Toluene	U	J5	0.102	0.500	1	09/12/2015 14:05	WG813810
1,2,3-Trichlorobenzene	U	J5	0.164	0.500	1	09/12/2015 14:05	WG813810
1,2,4-Trichlorobenzene	U	J5	0.355	0.500	1	09/12/2015 14:05	WG813810
1,1,1-Trichloroethane	U	J5	0.0940	0.500	1	09/12/2015 14:05	WG813810
1,1,2-Trichloroethane	U	J5	0.186	0.500	1	09/12/2015 14:05	WG813810
Trichloroethene	386		1.53	5.00	10	09/15/2015 16:49	WG815223
Trichlorofluoromethane	U	J5	0.130	0.500	1	09/12/2015 14:05	WG813810
1,2,3-Trichloropropane	U	J5	0.247	2.50	1	09/12/2015 14:05	WG813810
1,2,4-Trimethylbenzene	U	J5	0.123	0.500	1	09/12/2015 14:05	WG813810
1,2,3-Trimethylbenzene	U	J5	0.0739	0.500	1	09/12/2015 14:05	WG813810
1,3,5-Trimethylbenzene	U	J5	0.124	0.500	1	09/12/2015 14:05	WG813810
Vinyl acetate	U	J5	0.645	2.50	1	09/12/2015 14:05	WG813810
Vinyl chloride	U	J5	0.118	0.500	1	09/12/2015 14:05	WG813810
Xylenes, Total	U	J5	0.316	1.50	1	09/12/2015 14:05	WG813810
(S) Toluene-d8	*97.7*			*90.0-115*		*09/12/2015 14:05*	WG813810
(S) Dibromofluoromethane	*94.8*			*79.0-121*		*09/12/2015 14:05*	WG813810
(S) 4-Bromofluorobenzene	*98.1*			*80.1-120*		*09/12/2015 14:05*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 14:25	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 14:25	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 14:25	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 14:25	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 14:25	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 14:25	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 14:25	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 14:25	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 14:25	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 14:25	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 14:25	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 14:25	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 14:25	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 14:25	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 14:25	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 14:25	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 14:25	WG813810
Chloroform	1.28		0.0860	0.500	1	09/12/2015 14:25	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 14:25	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 14:25	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 14:25	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 14:25	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 14:25	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 14:25	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 14:25	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 14:25	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 14:25	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 14:25	WG813810
1,1-Dichloroethane	0.401	J	0.114	0.500	1	09/12/2015 14:25	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 14:25	WG813810
1,1-Dichloroethene	1.21		0.188	0.500	1	09/12/2015 14:25	WG813810
cis-1,2-Dichloroethene	440		4.66	25.0	50	09/15/2015 17:09	WG815223
trans-1,2-Dichloroethene	19.4		0.152	0.500	1	09/12/2015 14:25	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 14:25	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 14:25	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 14:25	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 14:25	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 14:25	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 14:25	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 14:25	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 14:25	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 14:25	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 14:25	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 14:25	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 14:25	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 14:25	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 14:25	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 14:25	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 14:25	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 14:25	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 14:25	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 14:25	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 14:25	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 14:25	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 14:25	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 14:25	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 14:25	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 14:25	WG813810
Tetrachloroethene	4.12		0.199	0.500	1	09/12/2015 14:25	WG813810
Toluene	0.301	J	0.102	0.500	1	09/12/2015 14:25	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 14:25	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 14:25	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 14:25	WG813810
1,1,2-Trichloroethane	2.11		0.186	0.500	1	09/12/2015 14:25	WG813810
Trichloroethene	1720		7.65	25.0	50	09/15/2015 17:09	WG815223
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 14:25	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 14:25	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 14:25	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 14:25	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 14:25	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 14:25	WG813810
Vinyl chloride	0.765		0.118	0.500	1	09/12/2015 14:25	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 14:25	WG813810
(S) Toluene-d8	*100*			*90.0-115*		*09/12/2015 14:25*	WG813810
(S) Dibromofluoromethane	*94.3*			*79.0-121*		*09/12/2015 14:25*	WG813810
(S) 4-Bromofluorobenzene	*98.6*			*80.1-120*		*09/12/2015 14:25*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	2.72	J J5	0.597	3.00	1	09/06/2015 16:43	WG813827
(S) Toluene-d8	*220*	J1		*70.0-130*		*09/06/2015 16:43*	WG813827

Sample Narrative:

8260B L787282-03 WG813827: Surrogate failure confirmed.

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	J3 J6	1.05	25.0	1	09/15/2015 14:49	WG815223
Acrylonitrile	U	J3	0.873	2.50	1	09/15/2015 14:49	WG815223
Benzene	U		0.0896	0.500	1	09/15/2015 14:49	WG815223
Bromobenzene	U		0.133	0.500	1	09/15/2015 14:49	WG815223
Bromodichloromethane	U		0.0800	0.500	1	09/15/2015 14:49	WG815223
Bromochloromethane	U		0.145	0.500	1	09/15/2015 14:49	WG815223
Bromoform	U		0.186	0.500	1	09/15/2015 14:49	WG815223
Bromomethane	U		0.157	0.500	1	09/15/2015 14:49	WG815223
n-Butylbenzene	U		0.143	0.500	1	09/15/2015 14:49	WG815223
sec-Butylbenzene	U		0.134	0.500	1	09/15/2015 14:49	WG815223
tert-Butylbenzene	U		0.183	0.500	1	09/15/2015 14:49	WG815223
Carbon disulfide	U		0.101	0.500	1	09/15/2015 14:49	WG815223
Carbon tetrachloride	U		0.159	0.500	1	09/15/2015 14:49	WG815223
Chlorobenzene	U		0.140	0.500	1	09/15/2015 14:49	WG815223
Chlorodibromomethane	U		0.128	0.500	1	09/15/2015 14:49	WG815223
Chloroethane	U		0.141	0.500	1	09/15/2015 14:49	WG815223
2-Chloroethyl vinyl ether	U	J3 J6	0.877	2.50	1	09/15/2015 14:49	WG815223
Chloroform	0.648		0.0860	0.500	1	09/15/2015 14:49	WG815223
Chloromethane	U		0.153	0.500	1	09/15/2015 14:49	WG815223
2-Chlorotoluene	U		0.111	0.500	1	09/15/2015 14:49	WG815223
4-Chlorotoluene	U		0.0972	0.500	1	09/15/2015 14:49	WG815223
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/15/2015 14:49	WG815223
1,2-Dibromoethane	U		0.193	0.500	1	09/15/2015 14:49	WG815223
Dibromomethane	U		0.117	0.500	1	09/15/2015 14:49	WG815223
1,2-Dichlorobenzene	U		0.101	0.500	1	09/15/2015 14:49	WG815223
1,3-Dichlorobenzene	U		0.130	0.500	1	09/15/2015 14:49	WG815223
1,4-Dichlorobenzene	U		0.121	0.500	1	09/15/2015 14:49	WG815223
Dichlorodifluoromethane	U		0.127	0.500	1	09/15/2015 14:49	WG815223
1,1-Dichloroethane	U		0.114	0.500	1	09/15/2015 14:49	WG815223
1,2-Dichloroethane	U		0.108	0.500	1	09/15/2015 14:49	WG815223
1,1-Dichloroethene	U		0.188	0.500	1	09/15/2015 14:49	WG815223
cis-1,2-Dichloroethene	1.14		0.0933	0.500	1	09/15/2015 14:49	WG815223
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/15/2015 14:49	WG815223
1,2-Dichloropropane	U		0.190	0.500	1	09/15/2015 14:49	WG815223
1,1-Dichloropropene	U		0.128	0.500	1	09/15/2015 14:49	WG815223
1,3-Dichloropropane	U		0.147	0.500	1	09/15/2015 14:49	WG815223
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/15/2015 14:49	WG815223
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/15/2015 14:49	WG815223
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/15/2015 14:49	WG815223
2,2-Dichloropropane	U		0.0929	0.500	1	09/15/2015 14:49	WG815223
Di-isopropyl ether	U		0.0924	0.500	1	09/15/2015 14:49	WG815223
Ethylbenzene	U		0.158	0.500	1	09/15/2015 14:49	WG815223
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/15/2015 14:49	WG815223
2-Hexanone	U		0.757	2.50	1	09/15/2015 14:49	WG815223
n-Hexane	U		0.305	1.00	1	09/15/2015 14:49	WG815223
Iodomethane	U		0.377	10.0	1	09/15/2015 14:49	WG815223
Isopropylbenzene	U		0.126	0.500	1	09/15/2015 14:49	WG815223
p-Isopropyltoluene	U		0.138	0.500	1	09/15/2015 14:49	WG815223
2-Butanone (MEK)	U	J3 J6	1.28	2.50	1	09/15/2015 14:49	WG815223
Methylene Chloride	U		1.07	2.50	1	09/15/2015 14:49	WG815223
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/15/2015 14:49	WG815223
Methyl tert-butyl ether	U		0.102	0.500	1	09/15/2015 14:49	WG815223
Naphthalene	U		0.174	0.500	1	09/15/2015 14:49	WG815223
n-Propylbenzene	U		0.162	0.500	1	09/15/2015 14:49	WG815223
Styrene	U		0.117	0.500	1	09/15/2015 14:49	WG815223
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/15/2015 14:49	WG815223

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/15/2015 14:49	WG815223
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/15/2015 14:49	WG815223
Tetrachloroethene	U		0.199	0.500	1	09/15/2015 14:49	WG815223
Toluene	1.18		0.102	0.500	1	09/15/2015 14:49	WG815223
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/15/2015 14:49	WG815223
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/15/2015 14:49	WG815223
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/15/2015 14:49	WG815223
1,1,2-Trichloroethane	U		0.186	0.500	1	09/15/2015 14:49	WG815223
Trichloroethene	124	V	0.153	0.500	1	09/15/2015 14:49	WG815223
Trichlorofluoromethane	U		0.130	0.500	1	09/15/2015 14:49	WG815223
1,2,3-Trichloropropane	U		0.247	2.50	1	09/15/2015 14:49	WG815223
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/15/2015 14:49	WG815223
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/15/2015 14:49	WG815223
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/15/2015 14:49	WG815223
Vinyl acetate	U		0.645	2.50	1	09/15/2015 14:49	WG815223
Vinyl chloride	U		0.118	0.500	1	09/15/2015 14:49	WG815223
Xylenes, Total	1.47	J	0.316	1.50	1	09/15/2015 14:49	WG815223
(S) Toluene-d8	*100*			*90.0-115*		*09/15/2015 14:49*	WG815223
(S) Dibromofluoromethane	*94.7*			*79.0-121*		*09/15/2015 14:49*	WG815223
(S) 4-Bromofluorobenzene	*93.9*			*80.1-120*		*09/15/2015 14:49*	WG815223

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/06/2015 18:44	WG813827
(S) Toluene-d8	*96.1*			*70.0-130*		*09/06/2015 18:44*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 15:05	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 15:05	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 15:05	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 15:05	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 15:05	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 15:05	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 15:05	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 15:05	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 15:05	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 15:05	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 15:05	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 15:05	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 15:05	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 15:05	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 15:05	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 15:05	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 15:05	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 15:05	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 15:05	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 15:05	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 15:05	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 15:05	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 15:05	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 15:05	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 15:05	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 15:05	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 15:05	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 15:05	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 15:05	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 15:05	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 15:05	WG813810
cis-1,2-Dichloroethene	6.41		0.0933	0.500	1	09/15/2015 17:29	WG815223
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 15:05	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 15:05	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 15:05	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 15:05	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 15:05	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 15:05	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 15:05	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 15:05	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 15:05	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 15:05	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 15:05	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 15:05	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 15:05	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 15:05	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 15:05	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 15:05	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 15:05	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 15:05	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 15:05	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 15:05	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 15:05	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 15:05	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 15:05	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 15:05	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 15:05	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 15:05	WG813810
Tetrachloroethene	6.45		0.199	0.500	1	09/12/2015 15:05	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 15:05	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 15:05	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 15:05	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 15:05	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 15:05	WG813810
Trichloroethene	10.1		0.153	0.500	1	09/15/2015 17:29	WG815223
Trichlorofluoromethane	1.42		0.130	0.500	1	09/12/2015 15:05	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 15:05	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 15:05	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 15:05	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 15:05	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 15:05	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 15:05	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 15:05	WG813810
(S) Toluene-d8	*103*			*90.0-115*		*09/12/2015 15:05*	WG813810
(S) Dibromofluoromethane	*93.6*			*79.0-121*		*09/12/2015 15:05*	WG813810
(S) 4-Bromofluorobenzene	*97.9*			*80.1-120*		*09/12/2015 15:05*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.08	J	1.05	25.0	1	09/12/2015 15:25	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 15:25	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 15:25	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 15:25	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 15:25	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 15:25	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 15:25	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 15:25	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 15:25	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 15:25	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 15:25	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 15:25	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 15:25	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 15:25	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 15:25	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 15:25	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 15:25	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 15:25	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 15:25	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 15:25	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 15:25	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 15:25	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 15:25	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 15:25	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 15:25	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 15:25	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 15:25	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 15:25	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 15:25	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 15:25	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 15:25	WG813810
cis-1,2-Dichloroethene	2.43		0.0933	0.500	1	09/15/2015 17:49	WG815223
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 15:25	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 15:25	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 15:25	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 15:25	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 15:25	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 15:25	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 15:25	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 15:25	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 15:25	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 15:25	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 15:25	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 15:25	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 15:25	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 15:25	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 15:25	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 15:25	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 15:25	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 15:25	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 15:25	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 15:25	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 15:25	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 15:25	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 15:25	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 15:25	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 15:25	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 15:25	WG813810
Tetrachloroethene	0.510		0.199	0.500	1	09/12/2015 15:25	WG813810
Toluene	0.396	J	0.102	0.500	1	09/12/2015 15:25	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 15:25	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 15:25	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 15:25	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 15:25	WG813810
Trichloroethene	3.85		0.153	0.500	1	09/15/2015 17:49	WG815223
Trichlorofluoromethane	0.433	J	0.130	0.500	1	09/12/2015 15:25	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 15:25	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 15:25	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 15:25	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 15:25	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 15:25	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 15:25	WG813810
Xylenes, Total	0.400	J	0.316	1.50	1	09/12/2015 15:25	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 15:25*	WG813810
(S) Dibromofluoromethane	*94.8*			*79.0-121*		*09/12/2015 15:25*	WG813810
(S) 4-Bromofluorobenzene	*98.0*			*80.1-120*		*09/12/2015 15:25*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 15:46	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 15:46	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 15:46	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 15:46	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 15:46	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 15:46	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 15:46	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 15:46	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 15:46	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 15:46	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 15:46	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 15:46	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 15:46	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 15:46	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 15:46	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 15:46	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 15:46	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 15:46	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 15:46	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 15:46	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 15:46	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 15:46	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 15:46	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 15:46	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 15:46	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 15:46	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 15:46	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 15:46	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 15:46	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 15:46	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 15:46	WG813810
cis-1,2-Dichloroethene	9.00		0.0933	0.500	1	09/12/2015 15:46	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 15:46	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 15:46	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 15:46	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 15:46	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 15:46	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 15:46	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 15:46	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 15:46	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 15:46	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 15:46	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 15:46	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 15:46	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 15:46	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 15:46	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 15:46	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 15:46	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 15:46	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 15:46	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 15:46	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 15:46	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 15:46	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 15:46	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 15:46	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 15:46	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 15:46	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 15:46	WG813810
Tetrachloroethene	1.92		0.199	0.500	1	09/12/2015 15:46	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 15:46	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 15:46	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 15:46	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 15:46	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 15:46	WG813810
Trichloroethene	22.3		0.153	0.500	1	09/12/2015 15:46	WG813810
Trichlorofluoromethane	2.00		0.130	0.500	1	09/12/2015 15:46	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 15:46	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 15:46	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 15:46	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 15:46	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 15:46	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 15:46	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 15:46	WG813810
(S) Toluene-d8	*100*			*90.0-115*		*09/12/2015 15:46*	WG813810
(S) Dibromofluoromethane	*95.5*			*79.0-121*		*09/12/2015 15:46*	WG813810
(S) 4-Bromofluorobenzene	*97.2*			*80.1-120*		*09/12/2015 15:46*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.15	J	1.05	25.0	1	09/12/2015 16:06	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 16:06	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 16:06	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 16:06	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 16:06	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 16:06	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 16:06	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 16:06	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 16:06	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 16:06	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 16:06	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 16:06	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 16:06	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 16:06	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 16:06	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 16:06	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 16:06	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 16:06	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 16:06	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 16:06	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 16:06	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 16:06	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 16:06	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 16:06	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 16:06	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 16:06	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 16:06	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 16:06	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 16:06	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 16:06	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 16:06	WG813810
cis-1,2-Dichloroethene	0.877		0.0933	0.500	1	09/12/2015 16:06	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 16:06	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 16:06	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 16:06	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 16:06	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 16:06	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 16:06	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 16:06	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 16:06	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 16:06	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 16:06	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 16:06	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 16:06	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 16:06	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 16:06	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 16:06	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 16:06	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 16:06	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 16:06	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 16:06	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 16:06	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 16:06	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 16:06	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 16:06	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 16:06	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 16:06	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 16:06	WG813810
Tetrachloroethene	13.6		0.199	0.500	1	09/12/2015 16:06	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 16:06	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 16:06	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 16:06	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 16:06	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 16:06	WG813810
Trichloroethene	2.64		0.153	0.500	1	09/12/2015 16:06	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 16:06	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 16:06	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 16:06	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 16:06	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 16:06	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 16:06	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 16:06	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 16:06	WG813810
(S) Toluene-d8	*103*			*90.0-115*		*09/12/2015 16:06*	WG813810
(S) Dibromofluoromethane	*95.8*			*79.0-121*		*09/12/2015 16:06*	WG813810
(S) 4-Bromofluorobenzene	*99.3*			*80.1-120*		*09/12/2015 16:06*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/06/2015 19:08	WG813827
(S) Toluene-d8	*95.3*			*70.0-130*		*09/06/2015 19:08*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.22	J	1.05	25.0	1	09/12/2015 16:26	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 16:26	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 16:26	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 16:26	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 16:26	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 16:26	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 16:26	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 16:26	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 16:26	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 16:26	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 16:26	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 16:26	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 16:26	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 16:26	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 16:26	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 16:26	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 16:26	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 16:26	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 16:26	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 16:26	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 16:26	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 16:26	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 16:26	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 16:26	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 16:26	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 16:26	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 16:26	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 16:26	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 16:26	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 16:26	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 16:26	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 16:26	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 16:26	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 16:26	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 16:26	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 16:26	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 16:26	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 16:26	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 16:26	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 16:26	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 16:26	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 16:26	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 16:26	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 16:26	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 16:26	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 16:26	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 16:26	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 16:26	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 16:26	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 16:26	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 16:26	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 16:26	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 16:26	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 16:26	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 16:26	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 16:26	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 16:26	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 16:26	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 16:26	WG813810
Toluene	0.477	J	0.102	0.500	1	09/12/2015 16:26	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 16:26	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 16:26	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 16:26	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 16:26	WG813810
Trichloroethene	U		0.153	0.500	1	09/12/2015 16:26	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 16:26	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 16:26	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 16:26	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 16:26	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 16:26	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 16:26	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 16:26	WG813810
Xylenes, Total	0.412	J	0.316	1.50	1	09/12/2015 16:26	WG813810
(S) Toluene-d8	*103*			*90.0-115*		*09/12/2015 16:26*	WG813810
(S) Dibromofluoromethane	*95.0*			*79.0-121*		*09/12/2015 16:26*	WG813810
(S) 4-Bromofluorobenzene	*99.7*			*80.1-120*		*09/12/2015 16:26*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	5.28	J	1.05	25.0	1	09/12/2015 16:46	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 16:46	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 16:46	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 16:46	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 16:46	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 16:46	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 16:46	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 16:46	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 16:46	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 16:46	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 16:46	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 16:46	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 16:46	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 16:46	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 16:46	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 16:46	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 16:46	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 16:46	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 16:46	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 16:46	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 16:46	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 16:46	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 16:46	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 16:46	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 16:46	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 16:46	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 16:46	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 16:46	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 16:46	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 16:46	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 16:46	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 16:46	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 16:46	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 16:46	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 16:46	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 16:46	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 16:46	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 16:46	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 16:46	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 16:46	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 16:46	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 16:46	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 16:46	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 16:46	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 16:46	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 16:46	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 16:46	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 16:46	WG813810
2-Butanone (MEK)	1.89	J	1.28	2.50	1	09/12/2015 16:46	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 16:46	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 16:46	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 16:46	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 16:46	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 16:46	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 16:46	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 16:46	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 16:46	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 16:46	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 16:46	WG813810
Toluene	4.50		0.102	0.500	1	09/12/2015 16:46	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 16:46	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 16:46	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 16:46	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 16:46	WG813810
Trichloroethene	U		0.153	0.500	1	09/12/2015 16:46	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 16:46	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 16:46	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 16:46	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 16:46	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 16:46	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 16:46	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 16:46	WG813810
Xylenes, Total	0.874	J	0.316	1.50	1	09/12/2015 16:46	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 16:46*	WG813810
(S) Dibromofluoromethane	*95.2*			*79.0-121*		*09/12/2015 16:46*	WG813810
(S) 4-Bromofluorobenzene	*98.4*			*80.1-120*		*09/12/2015 16:46*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 17:06	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 17:06	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 17:06	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 17:06	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 17:06	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 17:06	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 17:06	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 17:06	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 17:06	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 17:06	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 17:06	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 17:06	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 17:06	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 17:06	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 17:06	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 17:06	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 17:06	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 17:06	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 17:06	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 17:06	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 17:06	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 17:06	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 17:06	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 17:06	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 17:06	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 17:06	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 17:06	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 17:06	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 17:06	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 17:06	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 17:06	WG813810
cis-1,2-Dichloroethene	3.19		0.0933	0.500	1	09/12/2015 17:06	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 17:06	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 17:06	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 17:06	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 17:06	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 17:06	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 17:06	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 17:06	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 17:06	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 17:06	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 17:06	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 17:06	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 17:06	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 17:06	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 17:06	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 17:06	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 17:06	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 17:06	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 17:06	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 17:06	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 17:06	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 17:06	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 17:06	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 17:06	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 17:06	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 17:06	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 17:06	WG813810
Tetrachloroethene	1.25		0.199	0.500	1	09/12/2015 17:06	WG813810
Toluene	0.959		0.102	0.500	1	09/12/2015 17:06	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 17:06	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 17:06	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 17:06	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 17:06	WG813810
Trichloroethene	6.19		0.153	0.500	1	09/12/2015 17:06	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 17:06	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 17:06	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 17:06	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 17:06	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 17:06	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 17:06	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 17:06	WG813810
Xylenes, Total	1.26	J	0.316	1.50	1	09/12/2015 17:06	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 17:06*	WG813810
(S) Dibromofluoromethane	*96.4*			*79.0-121*		*09/12/2015 17:06*	WG813810
(S) 4-Bromofluorobenzene	*98.5*			*80.1-120*		*09/12/2015 17:06*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/06/2015 19:32	WG813827
(S) Toluene-d8	*95.1*			*70.0-130*		*09/06/2015 19:32*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 17:26	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 17:26	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 17:26	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 17:26	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 17:26	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 17:26	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 17:26	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 17:26	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 17:26	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 17:26	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 17:26	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 17:26	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 17:26	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 17:26	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 17:26	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 17:26	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 17:26	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 17:26	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 17:26	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 17:26	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 17:26	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 17:26	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 17:26	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 17:26	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 17:26	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 17:26	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 17:26	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 17:26	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 17:26	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 17:26	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 17:26	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 17:26	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 17:26	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 17:26	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 17:26	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 17:26	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 17:26	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 17:26	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 17:26	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 17:26	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 17:26	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 17:26	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 17:26	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 17:26	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 17:26	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 17:26	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 17:26	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 17:26	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 17:26	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 17:26	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 17:26	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 17:26	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 17:26	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 17:26	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 17:26	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 17:26	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 17:26	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 17:26	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 17:26	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 17:26	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 17:26	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 17:26	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 17:26	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 17:26	WG813810
Trichloroethene	U		0.153	0.500	1	09/12/2015 17:26	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 17:26	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 17:26	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 17:26	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 17:26	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 17:26	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 17:26	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 17:26	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 17:26	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 17:26*	WG813810
(S) Dibromofluoromethane	*88.6*			*79.0-121*		*09/12/2015 17:26*	WG813810
(S) 4-Bromofluorobenzene	*97.9*			*80.1-120*		*09/12/2015 17:26*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/06/2015 19:56	WG813827
(S) Toluene-d8	*94.9*			*70.0-130*		*09/06/2015 19:56*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 17:46	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 17:46	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 17:46	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 17:46	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 17:46	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 17:46	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 17:46	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 17:46	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 17:46	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 17:46	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 17:46	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 17:46	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 17:46	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 17:46	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 17:46	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 17:46	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 17:46	WG813810
Chloroform	2.16		0.0860	0.500	1	09/12/2015 17:46	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 17:46	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 17:46	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 17:46	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 17:46	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 17:46	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 17:46	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 17:46	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 17:46	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 17:46	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 17:46	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 17:46	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 17:46	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 17:46	WG813810
cis-1,2-Dichloroethene	4.70		0.0933	0.500	1	09/12/2015 17:46	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 17:46	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 17:46	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 17:46	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 17:46	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 17:46	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 17:46	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 17:46	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 17:46	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 17:46	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 17:46	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 17:46	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 17:46	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 17:46	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 17:46	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 17:46	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 17:46	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 17:46	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 17:46	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 17:46	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 17:46	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 17:46	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 17:46	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 17:46	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 17:46	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 17:46	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 17:46	WG813810
Tetrachloroethene	0.834		0.199	0.500	1	09/12/2015 17:46	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 17:46	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 17:46	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 17:46	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 17:46	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 17:46	WG813810
Trichloroethene	41.6		0.153	0.500	1	09/12/2015 17:46	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 17:46	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 17:46	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 17:46	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 17:46	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 17:46	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 17:46	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 17:46	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 17:46	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 17:46*	WG813810
(S) Dibromofluoromethane	*91.4*			*79.0-121*		*09/12/2015 17:46*	WG813810
(S) 4-Bromofluorobenzene	*97.7*			*80.1-120*		*09/12/2015 17:46*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	9.02		0.597	3.00	1	09/06/2015 20:21	WG813827
(S) Toluene-d8	*94.5*			*70.0-130*		*09/06/2015 20:21*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.09	J	1.05	25.0	1	09/12/2015 18:06	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 18:06	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 18:06	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 18:06	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 18:06	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 18:06	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 18:06	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 18:06	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 18:06	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 18:06	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 18:06	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 18:06	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 18:06	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 18:06	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 18:06	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 18:06	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 18:06	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 18:06	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 18:06	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 18:06	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 18:06	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 18:06	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 18:06	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 18:06	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 18:06	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 18:06	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 18:06	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 18:06	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 18:06	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 18:06	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 18:06	WG813810
cis-1,2-Dichloroethene	5.03		0.0933	0.500	1	09/12/2015 18:06	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 18:06	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 18:06	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 18:06	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 18:06	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 18:06	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 18:06	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 18:06	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 18:06	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 18:06	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 18:06	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 18:06	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 18:06	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 18:06	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 18:06	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 18:06	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 18:06	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 18:06	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 18:06	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 18:06	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 18:06	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 18:06	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 18:06	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 18:06	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 18:06	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 18:06	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 18:06	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 18:06	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 18:06	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 18:06	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 18:06	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 18:06	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 18:06	WG813810
Trichloroethene	20.5		0.153	0.500	1	09/12/2015 18:06	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 18:06	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 18:06	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 18:06	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 18:06	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 18:06	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 18:06	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 18:06	WG813810
Xylenes, Total	0.437	J	0.316	1.50	1	09/12/2015 18:06	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 18:06*	WG813810
(S) Dibromofluoromethane	*91.9*			*79.0-121*		*09/12/2015 18:06*	WG813810
(S) 4-Bromofluorobenzene	*89.5*			*80.1-120*		*09/12/2015 18:06*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	6.62		0.597	3.00	1	09/06/2015 20:45	WG813827
(S) Toluene-d8	*94.5*			*70.0-130*		*09/06/2015 20:45*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 18:26	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 18:26	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 18:26	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 18:26	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 18:26	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 18:26	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 18:26	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 18:26	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 18:26	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 18:26	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 18:26	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 18:26	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 18:26	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 18:26	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 18:26	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 18:26	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 18:26	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 18:26	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 18:26	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 18:26	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 18:26	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 18:26	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 18:26	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 18:26	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 18:26	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 18:26	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 18:26	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 18:26	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 18:26	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 18:26	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 18:26	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 18:26	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 18:26	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 18:26	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 18:26	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 18:26	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 18:26	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 18:26	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 18:26	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 18:26	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 18:26	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 18:26	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 18:26	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 18:26	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 18:26	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 18:26	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 18:26	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 18:26	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 18:26	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 18:26	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 18:26	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 18:26	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 18:26	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 18:26	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 18:26	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 18:26	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 18:26	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 18:26	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 18:26	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 18:26	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 18:26	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 18:26	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 18:26	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 18:26	WG813810
Trichloroethene	0.312	J	0.153	0.500	1	09/12/2015 18:26	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 18:26	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 18:26	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 18:26	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 18:26	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 18:26	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 18:26	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 18:26	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 18:26	WG813810
(S) Toluene-d8	*100*			*90.0-115*		*09/12/2015 18:26*	WG813810
(S) Dibromofluoromethane	*91.0*			*79.0-121*		*09/12/2015 18:26*	WG813810
(S) 4-Bromofluorobenzene	*64.6*	J2		*80.1-120*		*09/12/2015 18:26*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 18:46	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 18:46	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 18:46	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 18:46	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 18:46	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 18:46	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 18:46	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 18:46	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 18:46	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 18:46	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 18:46	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 18:46	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 18:46	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 18:46	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 18:46	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 18:46	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 18:46	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 18:46	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 18:46	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 18:46	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 18:46	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 18:46	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 18:46	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 18:46	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 18:46	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 18:46	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 18:46	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 18:46	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 18:46	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 18:46	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 18:46	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 18:46	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 18:46	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 18:46	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 18:46	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 18:46	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 18:46	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 18:46	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 18:46	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 18:46	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 18:46	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 18:46	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 18:46	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 18:46	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 18:46	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 18:46	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 18:46	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 18:46	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 18:46	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 18:46	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 18:46	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 18:46	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 18:46	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 18:46	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 18:46	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 18:46	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 18:46	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 18:46	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 18:46	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 18:46	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 18:46	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 18:46	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 18:46	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 18:46	WG813810
Trichloroethene	10.9		0.153	0.500	1	09/12/2015 18:46	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 18:46	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 18:46	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 18:46	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 18:46	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 18:46	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 18:46	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 18:46	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 18:46	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 18:46*	WG813810
(S) Dibromofluoromethane	*94.0*			*79.0-121*		*09/12/2015 18:46*	WG813810
(S) 4-Bromofluorobenzene	*73.6*	J2		*80.1-120*		*09/12/2015 18:46*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 19:06	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 19:06	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 19:06	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 19:06	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 19:06	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 19:06	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 19:06	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 19:06	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 19:06	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 19:06	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 19:06	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 19:06	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 19:06	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 19:06	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 19:06	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 19:06	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 19:06	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 19:06	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 19:06	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 19:06	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 19:06	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 19:06	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 19:06	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 19:06	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 19:06	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 19:06	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 19:06	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 19:06	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 19:06	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 19:06	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 19:06	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 19:06	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 19:06	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 19:06	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 19:06	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 19:06	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 19:06	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 19:06	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 19:06	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 19:06	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 19:06	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 19:06	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 19:06	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 19:06	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 19:06	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 19:06	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 19:06	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 19:06	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 19:06	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 19:06	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 19:06	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 19:06	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 19:06	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 19:06	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 19:06	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 19:06	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 19:06	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 19:06	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 19:06	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 19:06	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 19:06	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 19:06	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 19:06	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 19:06	WG813810
Trichloroethene	U		0.153	0.500	1	09/12/2015 19:06	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 19:06	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 19:06	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 19:06	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 19:06	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 19:06	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 19:06	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 19:06	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 19:06	WG813810
(S) Toluene-d8	*101*			*90.0-115*		*09/12/2015 19:06*	WG813810
(S) Dibromofluoromethane	*90.4*			*79.0-121*		*09/12/2015 19:06*	WG813810
(S) 4-Bromofluorobenzene	*71.8*	J2		*80.1-120*		*09/12/2015 19:06*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 19:26	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 19:26	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 19:26	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 19:26	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 19:26	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 19:26	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 19:26	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 19:26	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 19:26	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 19:26	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 19:26	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 19:26	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 19:26	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 19:26	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 19:26	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 19:26	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 19:26	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 19:26	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 19:26	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 19:26	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 19:26	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 19:26	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 19:26	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 19:26	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 19:26	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 19:26	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 19:26	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 19:26	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 19:26	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 19:26	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 19:26	WG813810
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/12/2015 19:26	WG813810
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 19:26	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 19:26	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 19:26	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 19:26	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 19:26	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 19:26	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 19:26	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 19:26	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 19:26	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 19:26	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 19:26	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 19:26	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 19:26	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 19:26	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 19:26	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 19:26	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 19:26	WG813810
Methylene Chloride	U		1.07	2.50	1	09/12/2015 19:26	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 19:26	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 19:26	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 19:26	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 19:26	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 19:26	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 19:26	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 19:26	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 19:26	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 19:26	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 19:26	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 19:26	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 19:26	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 19:26	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 19:26	WG813810
Trichloroethene	0.768		0.153	0.500	1	09/12/2015 19:26	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 19:26	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 19:26	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 19:26	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 19:26	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 19:26	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 19:26	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 19:26	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 19:26	WG813810
(S) Toluene-d8	*101*			*90.0-115*		*09/12/2015 19:26*	WG813810
(S) Dibromofluoromethane	*88.8*			*79.0-121*		*09/12/2015 19:26*	WG813810
(S) 4-Bromofluorobenzene	*76.0*	J2		*80.1-120*		*09/12/2015 19:26*	WG813810

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	14.9		1.40	10.0	1	09/11/2015 16:55	WG814626
Nickel	10.2		4.90	10.0	1	09/11/2015 16:55	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	64.2		1.05	25.0	1	09/12/2015 19:46	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 19:46	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 19:46	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 19:46	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 19:46	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 19:46	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 19:46	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 19:46	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 19:46	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 19:46	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 19:46	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 19:46	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 19:46	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 19:46	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 19:46	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 19:46	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 19:46	WG813810
Chloroform	0.497	J	0.0860	0.500	1	09/12/2015 19:46	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 19:46	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 19:46	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 19:46	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 19:46	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 19:46	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 19:46	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 19:46	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 19:46	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 19:46	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 19:46	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 19:46	WG813810
1,2-Dichloroethane	0.716		0.108	0.500	1	09/12/2015 19:46	WG813810
1,1-Dichloroethene	13.3		0.188	0.500	1	09/12/2015 19:46	WG813810
cis-1,2-Dichloroethene	6700		9.33	50.0	100	09/15/2015 18:08	WG815223
trans-1,2-Dichloroethene	2.02		0.152	0.500	1	09/12/2015 19:46	WG813810
1,2-Dichloropropane	0.375	J	0.190	0.500	1	09/12/2015 19:46	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 19:46	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 19:46	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 19:46	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 19:46	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 19:46	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 19:46	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 19:46	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 19:46	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 19:46	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 19:46	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 19:46	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 19:46	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 19:46	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 19:46	WG813810
2-Butanone (MEK)	62.6		1.28	2.50	1	09/12/2015 19:46	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/12/2015 19:46	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 19:46	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 19:46	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 19:46	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 19:46	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 19:46	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 19:46	WG813810
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 19:46	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 19:46	WG813810
Tetrachloroethene	U		0.199	0.500	1	09/12/2015 19:46	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 19:46	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 19:46	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 19:46	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 19:46	WG813810
1,1,2-Trichloroethane	2.13		0.186	0.500	1	09/12/2015 19:46	WG813810
Trichloroethene	17.7		0.153	0.500	1	09/12/2015 19:46	WG813810
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 19:46	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 19:46	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 19:46	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 19:46	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 19:46	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 19:46	WG813810
Vinyl chloride	1.48		0.118	0.500	1	09/12/2015 19:46	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 19:46	WG813810
(S) Toluene-d8	*102*			*90.0-115*		*09/12/2015 19:46*	WG813810
(S) Dibromofluoromethane	*94.0*			*79.0-121*		*09/12/2015 19:46*	WG813810
(S) 4-Bromofluorobenzene	*74.7*	J2		*80.1-120*		*09/12/2015 19:46*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	6.12		0.597	3.00	1	09/11/2015 17:53	WG814728
(S) Toluene-d8	*95.4*			*70.0-130*		*09/11/2015 17:53*	WG814728

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	U		1.40	10.0	1	09/11/2015 16:58	WG814626
Nickel	U		4.90	10.0	1	09/11/2015 16:58	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	6.27	J	1.05	25.0	1	09/12/2015 20:07	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 20:07	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 20:07	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 20:07	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 20:07	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 20:07	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 20:07	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 20:07	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 20:07	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 20:07	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 20:07	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 20:07	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 20:07	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 20:07	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 20:07	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 20:07	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 20:07	WG813810
Chloroform	0.962		0.0860	0.500	1	09/12/2015 20:07	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 20:07	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 20:07	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 20:07	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 20:07	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 20:07	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 20:07	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 20:07	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 20:07	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 20:07	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 20:07	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 20:07	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 20:07	WG813810
1,1-Dichloroethene	4.46		0.188	0.500	1	09/12/2015 20:07	WG813810
cis-1,2-Dichloroethene	1500		2.33	12.5	25	09/15/2015 18:28	WG815223
trans-1,2-Dichloroethene	2.87		0.152	0.500	1	09/12/2015 20:07	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 20:07	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 20:07	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 20:07	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 20:07	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 20:07	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 20:07	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 20:07	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 20:07	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 20:07	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 20:07	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 20:07	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 20:07	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 20:07	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 20:07	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 20:07	WG813810
2-Butanone (MEK)	9.30		1.28	2.50	1	09/12/2015 20:07	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/12/2015 20:07	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 20:07	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 20:07	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 20:07	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 20:07	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 20:07	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 20:07	WG813810
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 20:07	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 20:07	WG813810
Tetrachloroethene	2.36		0.199	0.500	1	09/12/2015 20:07	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 20:07	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 20:07	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 20:07	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 20:07	WG813810
1,1,2-Trichloroethane	1.00		0.186	0.500	1	09/12/2015 20:07	WG813810
Trichloroethene	983		3.82	12.5	25	09/15/2015 18:28	WG815223
Trichlorofluoromethane	U		0.130	0.500	1	09/12/2015 20:07	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 20:07	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 20:07	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 20:07	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 20:07	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 20:07	WG813810
Vinyl chloride	0.905		0.118	0.500	1	09/12/2015 20:07	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 20:07	WG813810
(S) Toluene-d8	*94.4*			*90.0-115*		*09/12/2015 20:07*	WG813810
(S) Dibromofluoromethane	*92.6*			*79.0-121*		*09/12/2015 20:07*	WG813810
(S) 4-Bromofluorobenzene	*74.5*	J2		*80.1-120*		*09/12/2015 20:07*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	3.64		0.597	3.00	1	09/14/2015 15:04	WG815066
(S) Toluene-d8	*153*	J1		*70.0-130*		*09/14/2015 15:04*	WG815066

Sample Narrative:

8260B L787282-28 WG815066: Surrogate failure confirmed.

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	U		1.40	10.0	1	09/11/2015 17:01	WG814626
Nickel	U		4.90	10.0	1	09/11/2015 17:01	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/12/2015 20:27	WG813810
Acrylonitrile	U		0.873	2.50	1	09/12/2015 20:27	WG813810
Benzene	U		0.0896	0.500	1	09/12/2015 20:27	WG813810
Bromobenzene	U		0.133	0.500	1	09/12/2015 20:27	WG813810
Bromodichloromethane	U		0.0800	0.500	1	09/12/2015 20:27	WG813810
Bromochloromethane	U		0.145	0.500	1	09/12/2015 20:27	WG813810
Bromoform	U		0.186	0.500	1	09/12/2015 20:27	WG813810
Bromomethane	U		0.157	0.500	1	09/12/2015 20:27	WG813810
n-Butylbenzene	U		0.143	0.500	1	09/12/2015 20:27	WG813810
sec-Butylbenzene	U		0.134	0.500	1	09/12/2015 20:27	WG813810
tert-Butylbenzene	U		0.183	0.500	1	09/12/2015 20:27	WG813810
Carbon disulfide	U		0.101	0.500	1	09/12/2015 20:27	WG813810
Carbon tetrachloride	U		0.159	0.500	1	09/12/2015 20:27	WG813810
Chlorobenzene	U		0.140	0.500	1	09/12/2015 20:27	WG813810
Chlorodibromomethane	U		0.128	0.500	1	09/12/2015 20:27	WG813810
Chloroethane	U		0.141	0.500	1	09/12/2015 20:27	WG813810
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/12/2015 20:27	WG813810
Chloroform	U		0.0860	0.500	1	09/12/2015 20:27	WG813810
Chloromethane	U		0.153	0.500	1	09/12/2015 20:27	WG813810
2-Chlorotoluene	U		0.111	0.500	1	09/12/2015 20:27	WG813810
4-Chlorotoluene	U		0.0972	0.500	1	09/12/2015 20:27	WG813810
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/12/2015 20:27	WG813810
1,2-Dibromoethane	U		0.193	0.500	1	09/12/2015 20:27	WG813810
Dibromomethane	U		0.117	0.500	1	09/12/2015 20:27	WG813810
1,2-Dichlorobenzene	U		0.101	0.500	1	09/12/2015 20:27	WG813810
1,3-Dichlorobenzene	U		0.130	0.500	1	09/12/2015 20:27	WG813810
1,4-Dichlorobenzene	U		0.121	0.500	1	09/12/2015 20:27	WG813810
Dichlorodifluoromethane	U		0.127	0.500	1	09/12/2015 20:27	WG813810
1,1-Dichloroethane	U		0.114	0.500	1	09/12/2015 20:27	WG813810
1,2-Dichloroethane	U		0.108	0.500	1	09/12/2015 20:27	WG813810
1,1-Dichloroethene	U		0.188	0.500	1	09/12/2015 20:27	WG813810
cis-1,2-Dichloroethene	12.7		0.466	2.50	5	09/15/2015 18:47	WG815223
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/12/2015 20:27	WG813810
1,2-Dichloropropane	U		0.190	0.500	1	09/12/2015 20:27	WG813810
1,1-Dichloropropene	U		0.128	0.500	1	09/12/2015 20:27	WG813810
1,3-Dichloropropane	U		0.147	0.500	1	09/12/2015 20:27	WG813810
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/12/2015 20:27	WG813810
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/12/2015 20:27	WG813810
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/12/2015 20:27	WG813810
2,2-Dichloropropane	U		0.0929	0.500	1	09/12/2015 20:27	WG813810
Di-isopropyl ether	U		0.0924	0.500	1	09/12/2015 20:27	WG813810
Ethylbenzene	U		0.158	0.500	1	09/12/2015 20:27	WG813810
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/12/2015 20:27	WG813810
2-Hexanone	U		0.757	2.50	1	09/12/2015 20:27	WG813810
n-Hexane	U		0.305	1.00	1	09/12/2015 20:27	WG813810
Iodomethane	U		0.377	10.0	1	09/12/2015 20:27	WG813810
Isopropylbenzene	U		0.126	0.500	1	09/12/2015 20:27	WG813810
p-Isopropyltoluene	U		0.138	0.500	1	09/12/2015 20:27	WG813810
2-Butanone (MEK)	U		1.28	2.50	1	09/12/2015 20:27	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/12/2015 20:27	WG813810
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/12/2015 20:27	WG813810
Methyl tert-butyl ether	U		0.102	0.500	1	09/12/2015 20:27	WG813810
Naphthalene	U		0.174	0.500	1	09/12/2015 20:27	WG813810
n-Propylbenzene	U		0.162	0.500	1	09/12/2015 20:27	WG813810
Styrene	U		0.117	0.500	1	09/12/2015 20:27	WG813810
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/12/2015 20:27	WG813810
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/12/2015 20:27	WG813810
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/12/2015 20:27	WG813810
Tetrachloroethene	12.5		0.199	0.500	1	09/12/2015 20:27	WG813810
Toluene	U		0.102	0.500	1	09/12/2015 20:27	WG813810
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/12/2015 20:27	WG813810
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/12/2015 20:27	WG813810
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/12/2015 20:27	WG813810
1,1,2-Trichloroethane	U		0.186	0.500	1	09/12/2015 20:27	WG813810
Trichloroethene	283		0.765	2.50	5	09/15/2015 18:47	WG815223
Trichlorofluoromethane	1.14		0.130	0.500	1	09/12/2015 20:27	WG813810
1,2,3-Trichloropropane	U		0.247	2.50	1	09/12/2015 20:27	WG813810
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/12/2015 20:27	WG813810
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/12/2015 20:27	WG813810
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/12/2015 20:27	WG813810
Vinyl acetate	U		0.645	2.50	1	09/12/2015 20:27	WG813810
Vinyl chloride	U		0.118	0.500	1	09/12/2015 20:27	WG813810
Xylenes, Total	U		0.316	1.50	1	09/12/2015 20:27	WG813810
(S) Toluene-d8	*96.6*			*90.0-115*		*09/12/2015 20:27*	WG813810
(S) Dibromofluoromethane	*90.7*			*79.0-121*		*09/12/2015 20:27*	WG813810
(S) 4-Bromofluorobenzene	*74.1*	J2		*80.1-120*		*09/12/2015 20:27*	WG813810

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.706	J	0.597	3.00	1	09/06/2015 21:57	WG813827
(S) Toluene-d8	*99.7*			*70.0-130*		*09/06/2015 21:57*	WG813827

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	21.8		1.40	10.0	1	09/11/2015 17:04	WG814626
Nickel	16.4		4.90	10.0	1	09/11/2015 17:04	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/09/2015 04:29	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 04:29	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 04:29	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 04:29	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 04:29	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 04:29	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 04:29	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 04:29	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 04:29	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 04:29	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 04:29	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 04:29	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 04:29	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 04:29	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 04:29	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 04:29	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 04:29	WG814108
Chloroform	U		0.0860	0.500	1	09/09/2015 04:29	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 04:29	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 04:29	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 04:29	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 04:29	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 04:29	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 04:29	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 04:29	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 04:29	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 04:29	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 04:29	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 04:29	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 04:29	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 04:29	WG814108
cis-1,2-Dichloroethene	3.59		0.0933	0.500	1	09/09/2015 04:29	WG814108
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/09/2015 04:29	WG814108
1,2-Dichloropropane	U		0.190	0.500	1	09/09/2015 04:29	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 04:29	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 04:29	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 04:29	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 04:29	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 04:29	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 04:29	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 04:29	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 04:29	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 04:29	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 04:29	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 04:29	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 04:29	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 04:29	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 04:29	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 04:29	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/09/2015 04:29	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 04:29	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 04:29	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 04:29	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 04:29	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 04:29	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 04:29	WG814108
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 04:29	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 04:29	WG814108
Tetrachloroethene	0.791		0.199	0.500	1	09/09/2015 04:29	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 04:29	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 04:29	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 04:29	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 04:29	WG814108
1,1,2-Trichloroethane	U		0.186	0.500	1	09/09/2015 04:29	WG814108
Trichloroethene	214		1.53	5.00	10	09/10/2015 21:25	WG814394
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 04:29	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 04:29	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 04:29	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 04:29	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 04:29	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 04:29	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 04:29	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 04:29	WG814108
(S) Toluene-d8	*92.0*			*90.0-115*		*09/09/2015 04:29*	WG814108
(S) Dibromofluoromethane	*92.0*			*79.0-121*		*09/09/2015 04:29*	WG814108
(S) 4-Bromofluorobenzene	*110*			*80.1-120*		*09/09/2015 04:29*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	0.879	J	0.597	3.00	1	09/06/2015 22:21	WG813827
(S) Toluene-d8	*97.2*			*70.0-130*		*09/06/2015 22:21*	WG813827

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	8.42	J	1.40	10.0	1	09/11/2015 17:07	WG814626
Nickel	U		4.90	10.0	1	09/11/2015 17:07	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/09/2015 04:50	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 04:50	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 04:50	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 04:50	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 04:50	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 04:50	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 04:50	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 04:50	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 04:50	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 04:50	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 04:50	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 04:50	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 04:50	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 04:50	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 04:50	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 04:50	WG814108
2-Chloroethyl vinyl ether	1.69	J	0.877	2.50	1	09/09/2015 04:50	WG814108
Chloroform	2.59		0.0860	0.500	1	09/09/2015 04:50	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 04:50	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 04:50	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 04:50	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 04:50	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 04:50	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 04:50	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 04:50	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 04:50	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 04:50	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 04:50	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 04:50	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 04:50	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 04:50	WG814108
cis-1,2-Dichloroethene	8.47		0.0933	0.500	1	09/09/2015 04:50	WG814108
trans-1,2-Dichloroethene	0.843		0.152	0.500	1	09/09/2015 04:50	WG814108
1,2-Dichloropropane	0.342	J	0.190	0.500	1	09/09/2015 04:50	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 04:50	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 04:50	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 04:50	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 04:50	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 04:50	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 04:50	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 04:50	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 04:50	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 04:50	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 04:50	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 04:50	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 04:50	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 04:50	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 04:50	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 04:50	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/09/2015 04:50	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 04:50	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 04:50	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 04:50	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 04:50	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 04:50	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 04:50	WG814108
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 04:50	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 04:50	WG814108
Tetrachloroethene	4.46		0.199	0.500	1	09/09/2015 04:50	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 04:50	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 04:50	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 04:50	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 04:50	WG814108
1,1,2-Trichloroethane	7.11		0.186	0.500	1	09/09/2015 04:50	WG814108
Trichloroethene	4470		15.3	50.0	100	09/10/2015 21:45	WG814394
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 04:50	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 04:50	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 04:50	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 04:50	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 04:50	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 04:50	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 04:50	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 04:50	WG814108
(S) Toluene-d8	*66.8*	J2		*90.0-115*		*09/09/2015 04:50*	WG814108
(S) Dibromofluoromethane	*92.7*			*79.0-121*		*09/09/2015 04:50*	WG814108
(S) 4-Bromofluorobenzene	*108*			*80.1-120*		*09/09/2015 04:50*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	10.5		0.597	3.00	1	09/14/2015 15:43	WG815066
(S) Toluene-d8	*526*	J1		*70.0-130*		*09/14/2015 15:43*	WG815066

Sample Narrative:

8260B L787282-34 WG815066: Previous run also had failing IS/SURR recovery. Matrix effect.

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	5.62	J	1.40	10.0	1	09/11/2015 17:10	WG814626
Nickel	U		4.90	10.0	1	09/11/2015 17:10	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	17.8	J	1.05	25.0	1	09/09/2015 05:11	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 05:11	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 05:11	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 05:11	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 05:11	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 05:11	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 05:11	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 05:11	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 05:11	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 05:11	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 05:11	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 05:11	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 05:11	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 05:11	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 05:11	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 05:11	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 05:11	WG814108
Chloroform	1.78		0.0860	0.500	1	09/09/2015 05:11	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 05:11	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 05:11	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 05:11	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 05:11	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 05:11	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 05:11	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 05:11	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 05:11	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 05:11	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 05:11	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 05:11	WG814108
1,2-Dichloroethane	0.749		0.108	0.500	1	09/09/2015 05:11	WG814108
1,1-Dichloroethene	5.39		0.188	0.500	1	09/09/2015 05:11	WG814108
cis-1,2-Dichloroethene	2830		9.33	50.0	100	09/10/2015 19:25	WG814394
trans-1,2-Dichloroethene	3.17		0.152	0.500	1	09/09/2015 05:11	WG814108
1,2-Dichloropropane	0.346	J	0.190	0.500	1	09/09/2015 05:11	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 05:11	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 05:11	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 05:11	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 05:11	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 05:11	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 05:11	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 05:11	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 05:11	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 05:11	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 05:11	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 05:11	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 05:11	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 05:11	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 05:11	WG814108
2-Butanone (MEK)	21.0		1.28	2.50	1	09/09/2015 05:11	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	1.16	J	1.07	2.50	1	09/09/2015 05:11	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 05:11	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 05:11	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 05:11	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 05:11	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 05:11	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 05:11	WG814108
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 05:11	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 05:11	WG814108
Tetrachloroethene	2.85		0.199	0.500	1	09/09/2015 05:11	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 05:11	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 05:11	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 05:11	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 05:11	WG814108
1,1,2-Trichloroethane	7.25		0.186	0.500	1	09/09/2015 05:11	WG814108
Trichloroethene	1980		15.3	50.0	100	09/10/2015 19:25	WG814394
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 05:11	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 05:11	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 05:11	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 05:11	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 05:11	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 05:11	WG814108
Vinyl chloride	0.830		0.118	0.500	1	09/09/2015 05:11	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 05:11	WG814108
(S) Toluene-d8	*75.0*	J2		*90.0-115*		*09/09/2015 05:11*	WG814108
(S) Dibromofluoromethane	*91.3*			*79.0-121*		*09/09/2015 05:11*	WG814108
(S) 4-Bromofluorobenzene	*107*			*80.1-120*		*09/09/2015 05:11*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	22.3		0.597	3.00	1	09/14/2015 16:07	WG815066
(S) Toluene-d8	*253*	J1		*70.0-130*		*09/14/2015 16:07*	WG815066

Sample Narrative:

8260B L787282-36 WG815066: Previous run also had failing IS/SURR recovery. Matrix effect.

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	143		1.40	10.0	1	09/11/2015 17:13	WG814626
Nickel	146		4.90	10.0	1	09/11/2015 17:13	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	39.4	J	5.25	125	5	09/09/2015 05:32	WG814108
Acrylonitrile	U		4.36	12.5	5	09/09/2015 05:32	WG814108
Benzene	U		0.448	2.50	5	09/09/2015 05:32	WG814108
Bromobenzene	U		0.665	2.50	5	09/09/2015 05:32	WG814108
Bromodichloromethane	U		0.400	2.50	5	09/09/2015 05:32	WG814108
Bromochloromethane	U		0.725	2.50	5	09/09/2015 05:32	WG814108
Bromoform	U		0.930	2.50	5	09/09/2015 05:32	WG814108
Bromomethane	U		0.785	2.50	5	09/09/2015 05:32	WG814108
n-Butylbenzene	U		0.715	2.50	5	09/09/2015 05:32	WG814108
sec-Butylbenzene	U		0.670	2.50	5	09/09/2015 05:32	WG814108
tert-Butylbenzene	U		0.915	2.50	5	09/09/2015 05:32	WG814108
Carbon disulfide	U		0.505	2.50	5	09/09/2015 05:32	WG814108
Carbon tetrachloride	U		0.795	2.50	5	09/09/2015 05:32	WG814108
Chlorobenzene	U		0.700	2.50	5	09/09/2015 05:32	WG814108
Chlorodibromomethane	U		0.640	2.50	5	09/09/2015 05:32	WG814108
Chloroethane	U		0.705	2.50	5	09/09/2015 05:32	WG814108
2-Chloroethyl vinyl ether	5.19	J	4.38	12.5	5	09/09/2015 05:32	WG814108
Chloroform	4.21		0.430	2.50	5	09/09/2015 05:32	WG814108
Chloromethane	U		0.765	2.50	5	09/09/2015 05:32	WG814108
2-Chlorotoluene	U		0.555	2.50	5	09/09/2015 05:32	WG814108
4-Chlorotoluene	U		0.486	2.50	5	09/09/2015 05:32	WG814108
1,2-Dibromo-3-Chloropropane	U		1.62	5.00	5	09/09/2015 05:32	WG814108
1,2-Dibromoethane	U		0.965	2.50	5	09/09/2015 05:32	WG814108
Dibromomethane	U		0.585	2.50	5	09/09/2015 05:32	WG814108
1,2-Dichlorobenzene	U		0.505	2.50	5	09/09/2015 05:32	WG814108
1,3-Dichlorobenzene	U		0.650	2.50	5	09/09/2015 05:32	WG814108
1,4-Dichlorobenzene	U		0.605	2.50	5	09/09/2015 05:32	WG814108
Dichlorodifluoromethane	U		0.635	2.50	5	09/09/2015 05:32	WG814108
1,1-Dichloroethane	U		0.570	2.50	5	09/09/2015 05:32	WG814108
1,2-Dichloroethane	1.46	J	0.540	2.50	5	09/09/2015 05:32	WG814108
1,1-Dichloroethene	13.0		0.940	2.50	5	09/09/2015 05:32	WG814108
cis-1,2-Dichloroethene	10600		46.6	250	500	09/10/2015 19:45	WG814394
trans-1,2-Dichloroethene	4.97		0.760	2.50	5	09/09/2015 05:32	WG814108
1,2-Dichloropropane	1.38	J	0.950	2.50	5	09/09/2015 05:32	WG814108
1,1-Dichloropropene	U		0.640	2.50	5	09/09/2015 05:32	WG814108
1,3-Dichloropropane	U		0.735	2.50	5	09/09/2015 05:32	WG814108
cis-1,3-Dichloropropene	U		0.488	2.50	5	09/09/2015 05:32	WG814108
trans-1,3-Dichloropropene	U		1.11	2.50	5	09/09/2015 05:32	WG814108
trans-1,4-Dichloro-2-butene	U		1.28	25.0	5	09/09/2015 05:32	WG814108
2,2-Dichloropropane	U		0.464	2.50	5	09/09/2015 05:32	WG814108
Di-isopropyl ether	U		0.462	2.50	5	09/09/2015 05:32	WG814108
Ethylbenzene	U		0.790	2.50	5	09/09/2015 05:32	WG814108
Hexachloro-1,3-butadiene	U		0.785	5.00	5	09/09/2015 05:32	WG814108
2-Hexanone	U		3.78	12.5	5	09/09/2015 05:32	WG814108
n-Hexane	U		1.52	5.00	5	09/09/2015 05:32	WG814108
Iodomethane	U		1.88	50.0	5	09/09/2015 05:32	WG814108
Isopropylbenzene	U		0.630	2.50	5	09/09/2015 05:32	WG814108
p-Isopropyltoluene	U		0.690	2.50	5	09/09/2015 05:32	WG814108
2-Butanone (MEK)	207		6.40	12.5	5	09/09/2015 05:32	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		5.35	12.5	5	09/09/2015 05:32	WG814108
4-Methyl-2-pentanone (MIBK)	U		4.12	12.5	5	09/09/2015 05:32	WG814108
Methyl tert-butyl ether	U		0.510	2.50	5	09/09/2015 05:32	WG814108
Naphthalene	1.18	J	0.870	2.50	5	09/09/2015 05:32	WG814108
n-Propylbenzene	U		0.810	2.50	5	09/09/2015 05:32	WG814108
Styrene	U		0.585	2.50	5	09/09/2015 05:32	WG814108
1,1,1,2-Tetrachloroethane	U		0.600	2.50	5	09/09/2015 05:32	WG814108
1,1,2,2-Tetrachloroethane	U		0.650	2.50	5	09/09/2015 05:32	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.820	2.50	5	09/09/2015 05:32	WG814108
Tetrachloroethene	3.05		0.995	2.50	5	09/09/2015 05:32	WG814108
Toluene	1.43	J	0.510	2.50	5	09/09/2015 05:32	WG814108
1,2,3-Trichlorobenzene	U		0.820	2.50	5	09/09/2015 05:32	WG814108
1,2,4-Trichlorobenzene	U		1.78	2.50	5	09/09/2015 05:32	WG814108
1,1,1-Trichloroethane	U		0.470	2.50	5	09/09/2015 05:32	WG814108
1,1,2-Trichloroethane	16.7		0.930	2.50	5	09/09/2015 05:32	WG814108
Trichloroethene	2510		76.5	250	500	09/10/2015 19:45	WG814394
Trichlorofluoromethane	U		0.650	2.50	5	09/09/2015 05:32	WG814108
1,2,3-Trichloropropane	U		1.24	12.5	5	09/09/2015 05:32	WG814108
1,2,4-Trimethylbenzene	0.791	J	0.615	2.50	5	09/09/2015 05:32	WG814108
1,2,3-Trimethylbenzene	0.403	J	0.370	2.50	5	09/09/2015 05:32	WG814108
1,3,5-Trimethylbenzene	U		0.620	2.50	5	09/09/2015 05:32	WG814108
Vinyl acetate	U		3.22	12.5	5	09/09/2015 05:32	WG814108
Vinyl chloride	2.20	J	0.590	2.50	5	09/09/2015 05:32	WG814108
Xylenes, Total	U		1.58	7.50	5	09/09/2015 05:32	WG814108
(S) Toluene-d8	*87.5*	J2		*90.0-115*		*09/09/2015 05:32*	WG814108
(S) Dibromofluoromethane	*89.1*			*79.0-121*		*09/09/2015 05:32*	WG814108
(S) 4-Bromofluorobenzene	*110*			*80.1-120*		*09/09/2015 05:32*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		5.97	30.0	10	09/14/2015 16:31	WG815066
(S) Toluene-d8	*97.0*			*70.0-130*		*09/14/2015 16:31*	WG815066

Sample Narrative:

8260B L787282-38 WG815066: Matrix interference when ran at a lower dilution.

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/09/2015 05:52	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 05:52	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 05:52	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 05:52	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 05:52	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 05:52	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 05:52	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 05:52	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 05:52	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 05:52	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 05:52	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 05:52	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 05:52	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 05:52	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 05:52	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 05:52	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 05:52	WG814108
Chloroform	U		0.0860	0.500	1	09/09/2015 05:52	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 05:52	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 05:52	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 05:52	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 05:52	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 05:52	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 05:52	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 05:52	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 05:52	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 05:52	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 05:52	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 05:52	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 05:52	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 05:52	WG814108
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/10/2015 20:05	WG814394
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/09/2015 05:52	WG814108
1,2-Dichloropropane	U		0.190	0.500	1	09/09/2015 05:52	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 05:52	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 05:52	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 05:52	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 05:52	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 05:52	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 05:52	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 05:52	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 05:52	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 05:52	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 05:52	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 05:52	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 05:52	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 05:52	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 05:52	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 05:52	WG814108
Methylene Chloride	U		1.07	2.50	1	09/09/2015 05:52	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 05:52	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 05:52	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 05:52	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 05:52	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 05:52	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 05:52	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 05:52	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 05:52	WG814108
Tetrachloroethene	U		0.199	0.500	1	09/09/2015 05:52	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 05:52	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 05:52	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 05:52	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 05:52	WG814108
1,1,2-Trichloroethane	U		0.186	0.500	1	09/09/2015 05:52	WG814108
Trichloroethene	U		0.153	0.500	1	09/10/2015 20:05	WG814394
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 05:52	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 05:52	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 05:52	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 05:52	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 05:52	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 05:52	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 05:52	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 05:52	WG814108
(S) Toluene-d8	*96.0*			*90.0-115*		*09/09/2015 05:52*	WG814108
(S) Dibromofluoromethane	*92.8*			*79.0-121*		*09/09/2015 05:52*	WG814108
(S) 4-Bromofluorobenzene	*108*			*80.1-120*		*09/09/2015 05:52*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/06/2015 23:57	WG813827
(S) Toluene-d8	*95.0*			*70.0-130*		*09/06/2015 23:57*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/09/2015 06:13	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 06:13	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 06:13	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 06:13	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 06:13	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 06:13	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 06:13	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 06:13	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 06:13	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 06:13	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 06:13	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 06:13	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 06:13	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 06:13	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 06:13	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 06:13	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 06:13	WG814108
Chloroform	U		0.0860	0.500	1	09/09/2015 06:13	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 06:13	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 06:13	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 06:13	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 06:13	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 06:13	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 06:13	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 06:13	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 06:13	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 06:13	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 06:13	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 06:13	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 06:13	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 06:13	WG814108
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/10/2015 20:25	WG814394
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/09/2015 06:13	WG814108
1,2-Dichloropropane	U		0.190	0.500	1	09/09/2015 06:13	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 06:13	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 06:13	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 06:13	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 06:13	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 06:13	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 06:13	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 06:13	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 06:13	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 06:13	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 06:13	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 06:13	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 06:13	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 06:13	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 06:13	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 06:13	WG814108
Methylene Chloride	U		1.07	2.50	1	09/09/2015 06:13	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 06:13	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 06:13	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 06:13	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 06:13	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 06:13	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 06:13	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 06:13	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 06:13	WG814108
Tetrachloroethene	U		0.199	0.500	1	09/09/2015 06:13	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 06:13	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 06:13	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 06:13	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 06:13	WG814108
1,1,2-Trichloroethane	U		0.186	0.500	1	09/09/2015 06:13	WG814108
Trichloroethene	U		0.153	0.500	1	09/10/2015 20:25	WG814394
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 06:13	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 06:13	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 06:13	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 06:13	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 06:13	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 06:13	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 06:13	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 06:13	WG814108
(S) Toluene-d8	*96.1*			*90.0-115*		*09/09/2015 06:13*	WG814108
(S) Dibromofluoromethane	*93.9*			*79.0-121*		*09/09/2015 06:13*	WG814108
(S) 4-Bromofluorobenzene	*109*			*80.1-120*		*09/09/2015 06:13*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/07/2015 00:21	WG813827
(S) Toluene-d8	*95.1*			*70.0-130*		*09/07/2015 00:21*	WG813827

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	09/09/2015 06:34	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 06:34	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 06:34	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 06:34	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 06:34	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 06:34	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 06:34	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 06:34	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 06:34	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 06:34	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 06:34	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 06:34	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 06:34	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 06:34	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 06:34	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 06:34	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 06:34	WG814108
Chloroform	U		0.0860	0.500	1	09/09/2015 06:34	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 06:34	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 06:34	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 06:34	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 06:34	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 06:34	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 06:34	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 06:34	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 06:34	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 06:34	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 06:34	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 06:34	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 06:34	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 06:34	WG814108
cis-1,2-Dichloroethene	0.376	J	0.0933	0.500	1	09/09/2015 06:34	WG814108
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/09/2015 06:34	WG814108
1,2-Dichloropropane	U		0.190	0.500	1	09/09/2015 06:34	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 06:34	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 06:34	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 06:34	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 06:34	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 06:34	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 06:34	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 06:34	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 06:34	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 06:34	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 06:34	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 06:34	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 06:34	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 06:34	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 06:34	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 06:34	WG814108
Methylene Chloride	U		1.07	2.50	1	09/09/2015 06:34	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 06:34	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 06:34	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 06:34	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 06:34	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 06:34	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 06:34	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 06:34	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 06:34	WG814108
Tetrachloroethene	U		0.199	0.500	1	09/09/2015 06:34	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 06:34	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 06:34	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 06:34	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 06:34	WG814108
1,1,2-Trichloroethane	U		0.186	0.500	1	09/09/2015 06:34	WG814108
Trichloroethene	0.935		0.153	0.500	1	09/09/2015 06:34	WG814108
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 06:34	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 06:34	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 06:34	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 06:34	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 06:34	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 06:34	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 06:34	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 06:34	WG814108
(S) Toluene-d8	*96.2*			*90.0-115*		*09/09/2015 06:34*	WG814108
(S) Dibromofluoromethane	*87.8*			*79.0-121*		*09/09/2015 06:34*	WG814108
(S) 4-Bromofluorobenzene	*107*			*80.1-120*		*09/09/2015 06:34*	WG814108

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	15.5		1.40	10.0	1	09/11/2015 17:22	WG814626
Nickel	8.60	J	4.90	10.0	1	09/11/2015 17:22	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	56.5		1.05	25.0	1	09/09/2015 06:55	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 06:55	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 06:55	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 06:55	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 06:55	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 06:55	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 06:55	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 06:55	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 06:55	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 06:55	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 06:55	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 06:55	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 06:55	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 06:55	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 06:55	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 06:55	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 06:55	WG814108
Chloroform	0.832		0.0860	0.500	1	09/09/2015 06:55	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 06:55	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 06:55	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 06:55	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 06:55	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 06:55	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 06:55	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 06:55	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 06:55	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 06:55	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 06:55	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 06:55	WG814108
1,2-Dichloroethane	1.70		0.108	0.500	1	09/09/2015 06:55	WG814108
1,1-Dichloroethene	14.2		0.188	0.500	1	09/09/2015 06:55	WG814108
cis-1,2-Dichloroethene	7140		9.33	50.0	100	09/10/2015 20:45	WG814394
trans-1,2-Dichloroethene	2.79		0.152	0.500	1	09/09/2015 06:55	WG814108
1,2-Dichloropropane	0.588		0.190	0.500	1	09/09/2015 06:55	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 06:55	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 06:55	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 06:55	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 06:55	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 06:55	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 06:55	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 06:55	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 06:55	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 06:55	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 06:55	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 06:55	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 06:55	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 06:55	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 06:55	WG814108
2-Butanone (MEK)	62.4		1.28	2.50	1	09/09/2015 06:55	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/09/2015 06:55	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 06:55	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 06:55	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 06:55	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 06:55	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 06:55	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 06:55	WG814108
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 06:55	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 06:55	WG814108
Tetrachloroethene	U		0.199	0.500	1	09/09/2015 06:55	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 06:55	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 06:55	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 06:55	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 06:55	WG814108
1,1,2-Trichloroethane	5.11		0.186	0.500	1	09/09/2015 06:55	WG814108
Trichloroethene	25.4		0.153	0.500	1	09/09/2015 06:55	WG814108
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 06:55	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 06:55	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 06:55	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 06:55	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 06:55	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 06:55	WG814108
Vinyl chloride	1.70		0.118	0.500	1	09/09/2015 06:55	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 06:55	WG814108
(S) Toluene-d8	*94.2*			*90.0-115*		*09/09/2015 06:55*	WG814108
(S) Dibromofluoromethane	*93.6*			*79.0-121*		*09/09/2015 06:55*	WG814108
(S) 4-Bromofluorobenzene	*109*			*80.1-120*		*09/09/2015 06:55*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	5.30		0.597	3.00	1	09/14/2015 16:55	WG815066
(S) Toluene-d8	*95.0*			*70.0-130*		*09/14/2015 16:55*	WG815066

Metals (ICP) by Method 6010C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chromium	U		1.40	10.0	1	09/11/2015 17:25	WG814626
Nickel	U		4.90	10.0	1	09/11/2015 17:25	WG814626

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.10	J	1.05	25.0	1	09/09/2015 07:16	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 07:16	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 07:16	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 07:16	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 07:16	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 07:16	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 07:16	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 07:16	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 07:16	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 07:16	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 07:16	WG814108
Carbon disulfide	U		0.101	0.500	1	09/09/2015 07:16	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 07:16	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 07:16	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 07:16	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 07:16	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 07:16	WG814108
Chloroform	U		0.0860	0.500	1	09/09/2015 07:16	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 07:16	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 07:16	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 07:16	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 07:16	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 07:16	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 07:16	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 07:16	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 07:16	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 07:16	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 07:16	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 07:16	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 07:16	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 07:16	WG814108
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/10/2015 21:05	WG814394
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/09/2015 07:16	WG814108
1,2-Dichloropropane	U		0.190	0.500	1	09/09/2015 07:16	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 07:16	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 07:16	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 07:16	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 07:16	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 07:16	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 07:16	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 07:16	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 07:16	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 07:16	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 07:16	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 07:16	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 07:16	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 07:16	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 07:16	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 07:16	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		1.07	2.50	1	09/09/2015 07:16	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 07:16	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 07:16	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 07:16	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 07:16	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 07:16	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 07:16	WG814108
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 07:16	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 07:16	WG814108
Tetrachloroethene	U		0.199	0.500	1	09/09/2015 07:16	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 07:16	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 07:16	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 07:16	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 07:16	WG814108
1,1,2-Trichloroethane	U		0.186	0.500	1	09/09/2015 07:16	WG814108
Trichloroethene	0.454	J	0.153	0.500	1	09/09/2015 07:16	WG814108
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 07:16	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 07:16	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 07:16	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 07:16	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 07:16	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 07:16	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 07:16	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 07:16	WG814108
(S) Toluene-d8	*95.5*			*90.0-115*		*09/09/2015 07:16*	WG814108
(S) Dibromofluoromethane	*89.8*			*79.0-121*		*09/09/2015 07:16*	WG814108
(S) 4-Bromofluorobenzene	*107*			*80.1-120*		*09/09/2015 07:16*	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	09/15/2015 14:16	WG815312
(S) Toluene-d8	*95.9*			*70.0-130*		*09/15/2015 14:16*	WG815312

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	2.92	J	1.05	25.0	1	09/09/2015 01:22	WG814108
Acrylonitrile	U		0.873	2.50	1	09/09/2015 01:22	WG814108
Benzene	U		0.0896	0.500	1	09/09/2015 01:22	WG814108
Bromobenzene	U		0.133	0.500	1	09/09/2015 01:22	WG814108
Bromodichloromethane	U		0.0800	0.500	1	09/09/2015 01:22	WG814108
Bromochloromethane	U		0.145	0.500	1	09/09/2015 01:22	WG814108
Bromoform	U		0.186	0.500	1	09/09/2015 01:22	WG814108
Bromomethane	U		0.157	0.500	1	09/09/2015 01:22	WG814108
n-Butylbenzene	U		0.143	0.500	1	09/09/2015 01:22	WG814108
sec-Butylbenzene	U		0.134	0.500	1	09/09/2015 01:22	WG814108
tert-Butylbenzene	U		0.183	0.500	1	09/09/2015 01:22	WG814108
Carbon disulfide	0.481	J	0.101	0.500	1	09/09/2015 01:22	WG814108
Carbon tetrachloride	U		0.159	0.500	1	09/09/2015 01:22	WG814108
Chlorobenzene	U		0.140	0.500	1	09/09/2015 01:22	WG814108
Chlorodibromomethane	U		0.128	0.500	1	09/09/2015 01:22	WG814108
Chloroethane	U		0.141	0.500	1	09/09/2015 01:22	WG814108
2-Chloroethyl vinyl ether	U		0.877	2.50	1	09/09/2015 01:22	WG814108
Chloroform	U		0.0860	0.500	1	09/09/2015 01:22	WG814108
Chloromethane	U		0.153	0.500	1	09/09/2015 01:22	WG814108
2-Chlorotoluene	U		0.111	0.500	1	09/09/2015 01:22	WG814108
4-Chlorotoluene	U		0.0972	0.500	1	09/09/2015 01:22	WG814108
1,2-Dibromo-3-Chloropropane	U		0.325	1.00	1	09/09/2015 01:22	WG814108
1,2-Dibromoethane	U		0.193	0.500	1	09/09/2015 01:22	WG814108
Dibromomethane	U		0.117	0.500	1	09/09/2015 01:22	WG814108
1,2-Dichlorobenzene	U		0.101	0.500	1	09/09/2015 01:22	WG814108
1,3-Dichlorobenzene	U		0.130	0.500	1	09/09/2015 01:22	WG814108
1,4-Dichlorobenzene	U		0.121	0.500	1	09/09/2015 01:22	WG814108
Dichlorodifluoromethane	U		0.127	0.500	1	09/09/2015 01:22	WG814108
1,1-Dichloroethane	U		0.114	0.500	1	09/09/2015 01:22	WG814108
1,2-Dichloroethane	U		0.108	0.500	1	09/09/2015 01:22	WG814108
1,1-Dichloroethene	U		0.188	0.500	1	09/09/2015 01:22	WG814108
cis-1,2-Dichloroethene	U		0.0933	0.500	1	09/09/2015 01:22	WG814108
trans-1,2-Dichloroethene	U		0.152	0.500	1	09/09/2015 01:22	WG814108
1,2-Dichloropropane	U		0.190	0.500	1	09/09/2015 01:22	WG814108
1,1-Dichloropropene	U		0.128	0.500	1	09/09/2015 01:22	WG814108
1,3-Dichloropropane	U		0.147	0.500	1	09/09/2015 01:22	WG814108
cis-1,3-Dichloropropene	U		0.0976	0.500	1	09/09/2015 01:22	WG814108
trans-1,3-Dichloropropene	U		0.222	0.500	1	09/09/2015 01:22	WG814108
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	09/09/2015 01:22	WG814108
2,2-Dichloropropane	U		0.0929	0.500	1	09/09/2015 01:22	WG814108
Di-isopropyl ether	U		0.0924	0.500	1	09/09/2015 01:22	WG814108
Ethylbenzene	U		0.158	0.500	1	09/09/2015 01:22	WG814108
Hexachloro-1,3-butadiene	U		0.157	1.00	1	09/09/2015 01:22	WG814108
2-Hexanone	U		0.757	2.50	1	09/09/2015 01:22	WG814108
n-Hexane	U		0.305	1.00	1	09/09/2015 01:22	WG814108
Iodomethane	U		0.377	10.0	1	09/09/2015 01:22	WG814108
Isopropylbenzene	U		0.126	0.500	1	09/09/2015 01:22	WG814108
p-Isopropyltoluene	U		0.138	0.500	1	09/09/2015 01:22	WG814108
2-Butanone (MEK)	U		1.28	2.50	1	09/09/2015 01:22	WG814108
Methylene Chloride	U		1.07	2.50	1	09/09/2015 01:22	WG814108
4-Methyl-2-pentanone (MIBK)	U		0.823	2.50	1	09/09/2015 01:22	WG814108
Methyl tert-butyl ether	U		0.102	0.500	1	09/09/2015 01:22	WG814108
Naphthalene	U		0.174	0.500	1	09/09/2015 01:22	WG814108
n-Propylbenzene	U		0.162	0.500	1	09/09/2015 01:22	WG814108
Styrene	U		0.117	0.500	1	09/09/2015 01:22	WG814108
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	09/09/2015 01:22	WG814108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	09/09/2015 01:22	WG814108
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	09/09/2015 01:22	WG814108
Tetrachloroethene	0.372	J	0.199	0.500	1	09/09/2015 01:22	WG814108
Toluene	U		0.102	0.500	1	09/09/2015 01:22	WG814108
1,2,3-Trichlorobenzene	U		0.164	0.500	1	09/09/2015 01:22	WG814108
1,2,4-Trichlorobenzene	U		0.355	0.500	1	09/09/2015 01:22	WG814108
1,1,1-Trichloroethane	U		0.0940	0.500	1	09/09/2015 01:22	WG814108
1,1,2-Trichloroethane	U		0.186	0.500	1	09/09/2015 01:22	WG814108
Trichloroethene	U		0.153	0.500	1	09/09/2015 01:22	WG814108
Trichlorofluoromethane	U		0.130	0.500	1	09/09/2015 01:22	WG814108
1,2,3-Trichloropropane	U		0.247	2.50	1	09/09/2015 01:22	WG814108
1,2,4-Trimethylbenzene	U		0.123	0.500	1	09/09/2015 01:22	WG814108
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	09/09/2015 01:22	WG814108
1,3,5-Trimethylbenzene	U		0.124	0.500	1	09/09/2015 01:22	WG814108
Vinyl acetate	U		0.645	2.50	1	09/09/2015 01:22	WG814108
Vinyl chloride	U		0.118	0.500	1	09/09/2015 01:22	WG814108
Xylenes, Total	U		0.316	1.50	1	09/09/2015 01:22	WG814108
(S) Toluene-d8	*95.1*			*90.0-115*		*09/09/2015 01:22*	WG814108
(S) Dibromofluoromethane	*91.0*			*79.0-121*		*09/09/2015 01:22*	WG814108
(S) 4-Bromofluorobenzene	*110*			*80.1-120*		*09/09/2015 01:22*	WG814108

QUALITY CONTROL SUMMARY

L787282-01,25,27,29,31,33,35,37,44,46

Method Blank (MB)

(MB) 09/11/15 16:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium	U		0.0014	0.0100
Nickel	U		0.0049	0.0100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/11/15 16:14 • (LCSD) 09/11/15 21:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium	1.00	0.958	1.01	96	101	80-120			6	20
Nickel	1.00	0.950	0.992	95	99	80-120			4	20

L787147-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/11/15 16:19 • (MS) 09/11/15 16:25 • (MSD) 09/11/15 16:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium	1.00	0.00754	0.949	0.959	94	95	1	75-125			1	20
Nickel	1.00	0.00313	0.931	0.938	93	93	1	75-125			1	20

Method Blank (MB)

(MB) 09/12/15 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.00105	0.0250
Acrylonitrile	U		0.000873	0.00250
Benzene	U		0.0000896	0.000500
Bromobenzene	U		0.000133	0.000500
Bromodichloromethane	U		0.0000800	0.000500
Bromochloromethane	U		0.000145	0.000500
Bromoform	U		0.000186	0.000500
Bromomethane	U		0.000157	0.000500
n-Butylbenzene	U		0.000143	0.000500
sec-Butylbenzene	U		0.000134	0.000500
tert-Butylbenzene	U		0.000183	0.000500
Carbon disulfide	U		0.000101	0.000500
Carbon tetrachloride	U		0.000159	0.000500
Chlorobenzene	U		0.000140	0.000500
Chlorodibromomethane	U		0.000128	0.000500
Chloroethane	U		0.000141	0.000500
2-Chloroethyl vinyl ether	U		0.000877	0.00250
Chloroform	U		0.0000860	0.000500
Chloromethane	U		0.000153	0.000500
2-Chlorotoluene	U		0.000111	0.000500
4-Chlorotoluene	U		0.0000972	0.000500
1,2-Dibromo-3-Chloropropane	U		0.000325	0.00100
1,2-Dibromoethane	U		0.000193	0.000500
Dibromomethane	U		0.000117	0.000500
1,2-Dichlorobenzene	U		0.000101	0.000500
1,3-Dichlorobenzene	U		0.000130	0.000500
1,4-Dichlorobenzene	U		0.000121	0.000500
Dichlorodifluoromethane	U		0.000127	0.000500
1,1-Dichloroethane	U		0.000114	0.000500
1,2-Dichloroethane	U		0.000108	0.000500
1,1-Dichloroethene	U		0.000188	0.000500
cis-1,2-Dichloroethene	U		0.0000933	0.000500
trans-1,2-Dichloroethene	U		0.000152	0.000500
1,2-Dichloropropane	U		0.000190	0.000500
1,1-Dichloropropene	U		0.000128	0.000500
1,3-Dichloropropane	U		0.000147	0.000500

Method Blank (MB)

(MB) 09/12/15 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
cis-1,3-Dichloropropene	U		0.0000976	0.000500
trans-1,3-Dichloropropene	U		0.000222	0.000500
trans-1,4-Dichloro-2-butene	U		0.000257	0.00500
2,2-Dichloropropane	U		0.0000929	0.000500
Di-isopropyl ether	U		0.0000924	0.000500
Ethylbenzene	U		0.000158	0.000500
Hexachloro-1,3-butadiene	U		0.000157	0.00100
2-Hexanone	U		0.000757	0.00250
n-Hexane	U		0.000305	0.00100
Iodomethane	U		0.000377	0.0100
Isopropylbenzene	U		0.000126	0.000500
p-Isopropyltoluene	U		0.000138	0.000500
2-Butanone (MEK)	U		0.00128	0.00250
Methylene Chloride	U		0.00107	0.00250
4-Methyl-2-pentanone (MIBK)	U		0.000823	0.00250
Methyl tert-butyl ether	U		0.000102	0.000500
Naphthalene	U		0.000174	0.000500
n-Propylbenzene	U		0.000162	0.000500
Styrene	U		0.000117	0.000500
1,1,1,2-Tetrachloroethane	U		0.000120	0.000500
1,1,2,2-Tetrachloroethane	U		0.000130	0.000500
1,1,2-Trichlorotrifluoroethane	U		0.000164	0.000500
Tetrachloroethene	U		0.000199	0.000500
Toluene	U		0.000102	0.000500
1,2,3-Trichlorobenzene	U		0.000164	0.000500
1,2,4-Trichlorobenzene	U		0.000355	0.000500
1,1,1-Trichloroethane	U		0.0000940	0.000500
1,1,2-Trichloroethane	U		0.000186	0.000500
Trichloroethene	U		0.000153	0.000500
Trichlorofluoromethane	U		0.000130	0.000500
1,2,3-Trichloropropane	U		0.000247	0.00250
1,2,4-Trimethylbenzene	U		0.000123	0.000500
1,2,3-Trimethylbenzene	U		0.0000739	0.000500
1,3,5-Trimethylbenzene	U		0.000124	0.000500
Vinyl acetate	U		0.000645	0.00250
Vinyl chloride	U		0.000118	0.000500

Method Blank (MB)

(MB) 09/12/15 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Xylenes, Total	U		0.000316	0.00150
(S) Toluene-d8	*101*			*90.0-115*
(S) Dibromofluoromethane	*94.4*			*79.0-121*
(S) 4-Bromofluorobenzene	*97.6*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/12/15 11:25 • (LCSD) 09/12/15 11:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.104	0.108	83.3	86.7	28.7-175			4.01	20.9
Acrylonitrile	0.125	0.123	0.125	98.6	99.9	58.2-145			1.31	20
Benzene	0.0250	0.0220	0.0221	88.1	88.3	73.0-122			0.210	20
Bromobenzene	0.0250	0.0229	0.0236	91.7	94.3	81.5-115			2.80	20
Bromodichloromethane	0.0250	0.0226	0.0226	90.2	90.3	75.5-121			0.0800	20
Bromochloromethane	0.0250	0.0231	0.0235	92.4	93.9	78.9-123			1.70	20
Bromoform	0.0250	0.0245	0.0254	98.2	101	71.5-131			3.26	20
Bromomethane	0.0250	0.0194	0.0204	77.7	81.8	22.4-187			5.14	20
n-Butylbenzene	0.0250	0.0242	0.0244	96.9	97.6	75.9-134			0.680	20
sec-Butylbenzene	0.0250	0.0239	0.0243	95.7	97.4	80.6-126			1.78	20
tert-Butylbenzene	0.0250	0.0237	0.0243	94.7	97.3	79.3-127			2.75	20
Carbon disulfide	0.0250	0.0200	0.0204	80.2	81.8	53.0-134			1.98	20
Carbon tetrachloride	0.0250	0.0218	0.0220	87.1	87.9	70.9-129			0.860	20
Chlorobenzene	0.0250	0.0238	0.0248	95.1	99.0	79.7-122			4.03	20
Chlorodibromomethane	0.0250	0.0245	0.0252	98.0	101	78.2-124			2.65	20
Chloroethane	0.0250	0.0204	0.0208	81.8	83.1	41.2-153			1.60	20
2-Chloroethyl vinyl ether	0.125	0.118	0.120	94.2	96.3	23.4-162			2.30	23.5
Chloroform	0.0250	0.0210	0.0212	84.0	84.9	73.2-125			1.14	20
Chloromethane	0.0250	0.0203	0.0205	81.3	81.9	55.8-134			0.660	20
2-Chlorotoluene	0.0250	0.0233	0.0236	93.0	94.4	76.4-125			1.41	20
4-Chlorotoluene	0.0250	0.0228	0.0232	91.0	92.9	81.5-121			2.05	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0229	0.0238	91.7	95.2	64.8-131			3.78	20
1,2-Dibromoethane	0.0250	0.0232	0.0245	92.8	98.0	79.8-122			5.47	20
Dibromomethane	0.0250	0.0233	0.0239	93.2	95.6	79.5-118			2.52	20
1,2-Dichlorobenzene	0.0250	0.0231	0.0234	92.3	93.7	84.7-118			1.42	20
1,3-Dichlorobenzene	0.0250	0.0233	0.0240	93.1	96.0	77.6-127			3.10	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/12/15 11:25 • (LCSD) 09/12/15 11:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.0250	0.0235	0.0236	93.9	94.3	82.2-114			0.440	20
Dichlorodifluoromethane	0.0250	0.0191	0.0191	76.4	76.5	56.0-134			0.140	20
1,1-Dichloroethane	0.0250	0.0228	0.0228	91.1	91.3	71.7-127			0.240	20
1,2-Dichloroethane	0.0250	0.0203	0.0208	81.4	83.1	65.3-126			2.16	20
1,1-Dichloroethene	0.0250	0.0227	0.0225	91.0	90.1	59.9-137			0.950	20
cis-1,2-Dichloroethene	0.0250	0.0217	0.0216	86.7	86.4	77.3-122			0.360	20
trans-1,2-Dichloroethene	0.0250	0.0217	0.0219	86.6	87.4	72.6-125			0.920	20
1,2-Dichloropropane	0.0250	0.0253	0.0255	101	102	77.4-125			0.890	20
1,1-Dichloropropene	0.0250	0.0216	0.0218	86.4	87.2	72.5-127			0.910	20
1,3-Dichloropropane	0.0250	0.0232	0.0242	92.9	96.7	80.6-115			3.99	20
cis-1,3-Dichloropropene	0.0250	0.0240	0.0241	95.9	96.5	77.7-124			0.720	20
trans-1,3-Dichloropropene	0.0250	0.0242	0.0244	96.7	97.6	73.5-127			0.900	20
trans-1,4-Dichloro-2-butene	0.0250	0.0227	0.0234	90.6	93.6	58.3-129			3.25	20
2,2-Dichloropropane	0.0250	0.0193	0.0201	77.2	80.6	61.3-134			4.23	20
Di-isopropyl ether	0.0250	0.0235	0.0235	94.0	94.0	65.1-135			0.0400	20
Ethylbenzene	0.0250	0.0231	0.0237	92.4	94.9	80.9-121			2.65	20
Hexachloro-1,3-butadiene	0.0250	0.0238	0.0239	95.2	95.7	73.7-133			0.600	20
2-Hexanone	0.125	0.128	0.137	102	109	59.4-151			6.98	20
n-Hexane	0.0250	0.0223	0.0227	89.3	90.7	59.5-132			1.58	20
Iodomethane	0.125	0.114	0.115	91.3	92.1	64.6-137			0.890	20
Isopropylbenzene	0.0250	0.0236	0.0242	94.2	96.7	81.6-124			2.58	20
p-Isopropyltoluene	0.0250	0.0239	0.0244	95.8	97.8	77.6-129			2.07	20
2-Butanone (MEK)	0.125	0.115	0.123	92.3	98.2	46.4-155			6.25	20
Methylene Chloride	0.0250	0.0218	0.0222	87.0	89.0	69.5-120			2.26	20
4-Methyl-2-pentanone (MIBK)	0.125	0.124	0.130	99.4	104	63.3-138			4.40	20
Methyl tert-butyl ether	0.0250	0.0222	0.0224	88.7	89.6	70.1-125			0.940	20
Naphthalene	0.0250	0.0235	0.0242	93.9	96.9	69.7-134			3.21	20
n-Propylbenzene	0.0250	0.0238	0.0243	95.1	97.2	81.9-122			2.20	20
Styrene	0.0250	0.0232	0.0242	92.6	96.6	79.9-124			4.20	20
1,1,1,2-Tetrachloroethane	0.0250	0.0230	0.0240	92.0	96.2	78.5-125			4.46	20
1,1,2,2-Tetrachloroethane	0.0250	0.0242	0.0260	96.6	104	79.3-123			7.45	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0226	0.0231	90.4	92.3	62.0-141			2.04	20
Tetrachloroethene	0.0250	0.0227	0.0239	90.7	95.5	73.5-130			5.16	20
Toluene	0.0250	0.0232	0.0233	92.9	93.4	77.9-116			0.490	20
1,2,3-Trichlorobenzene	0.0250	0.0249	0.0254	99.5	101	75.7-134			1.95	20
1,2,4-Trichlorobenzene	0.0250	0.0247	0.0249	98.8	99.5	76.1-136			0.700	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/12/15 11:25 • (LCSD) 09/12/15 11:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0250	0.0209	0.0210	83.8	84.1	71.1-129			0.330	20
1,1,2-Trichloroethane	0.0250	0.0229	0.0246	91.8	98.4	81.6-120			6.96	20
Trichloroethene	0.0250	0.0234	0.0233	93.5	93.4	79.5-121			0.110	20
Trichlorofluoromethane	0.0250	0.0227	0.0229	90.8	91.5	49.1-157			0.820	20
1,2,3-Trichloropropane	0.0250	0.0238	0.0251	95.0	101	74.9-124			5.66	20
1,2,4-Trimethylbenzene	0.0250	0.0232	0.0236	92.6	94.3	79.0-122			1.81	20
1,2,3-Trimethylbenzene	0.0250	0.0234	0.0236	93.5	94.4	79.9-118			0.970	20
1,3,5-Trimethylbenzene	0.0250	0.0236	0.0239	94.5	95.5	81.0-123			1.02	20
Vinyl acetate	0.125	0.144	0.146	115	117	41.7-159			1.44	20
Vinyl chloride	0.0250	0.0204	0.0205	81.7	82.1	61.5-134			0.500	20
Xylenes, Total	0.0750	0.0697	0.0719	92.9	95.9	79.2-122			3.14	20
(S) Toluene-d8				*104*	*103*	*90.0-115*				
(S) Dibromofluoromethane				*94.6*	*94.0*	*79.0-121*				
(S) 4-Bromofluorobenzene				*95.0*	*96.4*	*80.1-120*				

L787282-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/12/15 14:05 • (MS) 09/12/15 13:05 • (MSD) 09/12/15 13:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.250	0.00103	0.137	0.0710	54.4	142	1	25.0-156		J3	63.4	21.5
Acrylonitrile	0.250	ND	0.270	0.210	108	420	1	55.9-161		J3	24.9	20
Benzene	0.0500	ND	0.0442	0.0438	88.4	87.5	1	58.6-133			1.00	20
Bromobenzene	0.0500	ND	0.0476	0.0468	95.2	93.5	1	70.6-125			1.82	20
Bromodichloromethane	0.0500	ND	0.0451	0.0438	90.1	87.6	1	69.2-127			2.83	20
Bromochloromethane	0.0500	ND	0.0471	0.0456	94.3	91.2	1	74.4-128			3.33	20
Bromoform	0.0500	ND	0.0534	0.0530	107	106	1	66.3-140			0.635	20
Bromomethane	0.0500	ND	0.0400	0.0405	80.1	81.1	1	16.6-183			1.23	20.5
n-Butylbenzene	0.0500	ND	0.0492	0.0465	98.4	92.9	1	64.8-145			5.74	20
sec-Butylbenzene	0.0500	ND	0.0489	0.0449	97.8	89.8	1	66.8-139			8.50	20
tert-Butylbenzene	0.0500	ND	0.0493	0.0461	98.6	92.1	1	67.1-138			6.72	20
Carbon disulfide	0.0500	ND	0.0404	0.0406	80.8	81.2	1	34.9-138			0.569	20
Carbon tetrachloride	0.0500	ND	0.0443	0.0440	88.6	88.1	1	60.6-139			0.576	20
Chlorobenzene	0.0500	ND	0.0499	0.0503	99.7	101	1	70.1-130			0.953	20
Chlorodibromomethane	0.0500	ND	0.0520	0.0516	104	103	1	71.6-132			0.667	20
Chloroethane	0.0500	ND	0.0414	0.0407	82.8	81.5	1	33.3-155			1.54	20

L787282-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/12/15 14:05 • (MS) 09/12/15 13:05 • (MSD) 09/12/15 13:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2-Chloroethyl vinyl ether	0.250	ND	0.000468	0.000	0.187	0.000	1	5.00-149	J6	J3 J6	200	40
Chloroform	0.0500	0.000499	0.0430	0.0424	85.0	84.7	1	66.1-133			1.46	20
Chloromethane	0.0500	ND	0.0416	0.0405	83.3	81.0	1	40.7-139			2.79	20
2-Chlorotoluene	0.0500	ND	0.0486	0.0471	97.1	94.1	1	66.9-134			3.12	20
4-Chlorotoluene	0.0500	ND	0.0473	0.0475	94.6	95.0	1	66.8-134			0.453	20
1,2-Dibromo-3-Chloropropane	0.0500	ND	0.0495	0.0499	99.1	99.8	1	63.9-142			0.745	20.2
1,2-Dibromoethane	0.0500	ND	0.0500	0.0496	100	99.3	1	73.8-131			0.740	20
Dibromomethane	0.0500	ND	0.0474	0.0456	94.7	91.3	1	72.8-127			3.68	20
1,2-Dichlorobenzene	0.0500	ND	0.0473	0.0484	94.5	96.9	1	77.4-127			2.45	20
1,3-Dichlorobenzene	0.0500	ND	0.0492	0.0489	98.4	97.8	1	67.9-136			0.683	20
1,4-Dichlorobenzene	0.0500	ND	0.0477	0.0484	95.4	96.8	1	74.4-123			1.42	20
Dichlorodifluoromethane	0.0500	ND	0.0397	0.0383	79.5	76.6	1	42.2-146			3.62	20
1,1-Dichloroethane	0.0500	ND	0.0453	0.0445	90.5	89.0	1	64.0-134			1.68	20
1,2-Dichloroethane	0.0500	ND	0.0414	0.0400	82.8	80.0	1	60.7-132			3.42	20
1,1-Dichloroethene	0.0500	ND	0.0452	0.0450	90.4	90.1	1	48.8-144			0.417	20
cis-1,2-Dichloroethene	0.0500	0.0204	0.0615	0.0606	82.3	121	1	60.6-136			1.44	20
trans-1,2-Dichloroethene	0.0500	0.000513	0.0443	0.0444	87.5	88.7	1	61.0-132			0.173	20
1,2-Dichloropropane	0.0500	ND	0.0490	0.0484	98.0	96.8	1	69.7-130			1.21	20
1,1-Dichloropropene	0.0500	ND	0.0440	0.0438	87.9	87.5	1	61.5-136			0.452	20
1,3-Dichloropropane	0.0500	ND	0.0488	0.0489	97.6	97.8	1	74.3-123			0.228	20
cis-1,3-Dichloropropene	0.0500	ND	0.0462	0.0459	92.4	91.9	1	71.1-129			0.526	20
trans-1,3-Dichloropropene	0.0500	ND	0.0487	0.0487	97.5	97.4	1	66.3-136			0.0320	20
trans-1,4-Dichloro-2-butene	0.0500	ND	0.0504	0.0495	101	99.1	1	57.6-136			1.73	20
2,2-Dichloropropane	0.0500	ND	0.0407	0.0395	81.4	78.9	1	54.9-142			3.04	20
Di-isopropyl ether	0.0500	ND	0.0466	0.0456	93.2	91.1	1	59.9-140			2.24	20
Ethylbenzene	0.0500	ND	0.0494	0.0487	98.8	97.5	1	62.7-136			1.37	20
Hexachloro-1,3-butadiene	0.0500	ND	0.0476	0.0435	95.1	87.0	1	61.1-144			8.94	20.1
2-Hexanone	0.250	ND	0.263	0.254	105	509	1	59.4-154			3.39	20.1
n-Hexane	0.0500	ND	0.0440	0.0434	88.0	86.8	1	38.7-146			1.37	20
Iodomethane	0.250	ND	0.232	0.227	92.8	454	1	55.2-140			2.04	20
Isopropylbenzene	0.0500	ND	0.0490	0.0478	98.0	95.5	1	67.4-136			2.63	20
p-Isopropyltoluene	0.0500	ND	0.0493	0.0449	98.5	89.7	1	62.8-143			9.32	20
2-Butanone (MEK)	0.250	ND	0.204	0.141	81.7	283	1	45.0-156		J3	36.4	20.8
Methylene Chloride	0.0500	ND	0.0444	0.0432	88.8	86.4	1	61.5-125			2.68	20
4-Methyl-2-pentanone (MIBK)	0.250	ND	0.257	0.243	103	486	1	60.7-150			5.43	20
Methyl tert-butyl ether	0.0500	ND	0.0444	0.0421	88.8	84.2	1	61.4-136			5.27	20

L787282-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/12/15 14:05 • (MS) 09/12/15 13:05 • (MSD) 09/12/15 13:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.0500	0.000430	0.0489	0.0513	96.9	103	1	61.8-143			4.77	20
n-Propylbenzene	0.0500	ND	0.0494	0.0476	98.7	95.2	1	63.2-139			3.63	20
Styrene	0.0500	ND	0.0498	0.0494	99.5	98.7	1	68.2-133			0.822	20
1,1,1,2-Tetrachloroethane	0.0500	ND	0.0485	0.0488	96.9	97.6	1	70.5-132			0.721	20
1,1,2,2-Tetrachloroethane	0.0500	ND	0.0537	0.0513	107	103	1	64.9-145			4.62	20
1,1,2-Trichlorotrifluoroethane	0.0500	ND	0.0461	0.0472	92.1	94.3	1	53.7-150			2.32	20
Tetrachloroethene	0.0500	0.000886	0.0485	0.0490	95.3	98.0	1	57.4-141			0.974	20
Toluene	0.0500	ND	0.0456	0.0454	91.2	90.7	1	67.8-124			0.536	20
1,2,3-Trichlorobenzene	0.0500	ND	0.0507	0.0508	101	102	1	65.7-143			0.0543	20
1,2,4-Trichlorobenzene	0.0500	ND	0.0510	0.0499	102	99.9	1	67.0-146			2.07	20
1,1,1-Trichloroethane	0.0500	ND	0.0425	0.0415	84.9	82.9	1	58.7-134			2.39	20
1,1,2-Trichloroethane	0.0500	ND	0.0498	0.0486	99.6	97.2	1	74.1-130			2.45	20
Trichloroethene	0.0500	0.363	0.365	0.359	2.24	718	1	48.9-148	V	V	1.49	20
Trichlorofluoromethane	0.0500	ND	0.0467	0.0460	93.4	92.1	1	39.9-165			1.49	20
1,2,3-Trichloropropane	0.0500	ND	0.0514	0.0498	103	99.7	1	71.5-134			3.19	20
1,2,4-Trimethylbenzene	0.0500	ND	0.0480	0.0461	96.1	92.3	1	60.5-137			4.06	20
1,2,3-Trimethylbenzene	0.0500	ND	0.0471	0.0467	94.2	93.4	1	62.7-133			0.879	20
1,3,5-Trimethylbenzene	0.0500	ND	0.0487	0.0465	97.5	93.0	1	67.9-134			4.65	20
Vinyl acetate	0.250	ND	0.306	0.292	123	584	1	42.8-181			4.77	20
Vinyl chloride	0.0500	ND	0.0417	0.0410	83.3	82.1	1	44.3-143			1.47	20
Xylenes, Total	0.150	ND	0.147	0.147	98.3	293	1	65.6-133			0.665	20
(S) Toluene-d8					*99.6*	*99.2*		*90.0-115*				
(S) Dibromofluoromethane					*95.3*	*91.6*		*79.0-121*				
(S) 4-Bromofluorobenzene					*95.9*	*94.9*		*80.1-120*				

Method Blank (MB)

(MB) 09/06/15 15:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,4-Dioxane	U		0.000597	0.00300
(S) Toluene-d8	*95.9*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/06/15 13:54 • (LCSD) 09/06/15 14:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.0438	0.0445	87.5	89.1	70.0-130			1.75	25
(S) Toluene-d8				*96.1*	*95.8*	*70.0-130*				

L787282-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/06/15 16:43 • (MS) 09/06/15 15:31 • (MSD) 09/06/15 15:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.00272	0.145	0.138	285	270	1	0.000-200	J5	J5	5.23	42
(S) Toluene-d8					*211*	*207*		*70.0-130*	J1	J1		

Method Blank (MB)

(MB) 09/08/15 23:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.00105	0.0250
Acrylonitrile	U		0.000873	0.00250
Benzene	U		0.0000896	0.000500
Bromobenzene	U		0.000133	0.000500
Bromodichloromethane	U		0.0000800	0.000500
Bromochloromethane	U		0.000145	0.000500
Bromoform	U		0.000186	0.000500
Bromomethane	U		0.000157	0.000500
n-Butylbenzene	U		0.000143	0.000500
Carbon disulfide	U		0.000101	0.000500
sec-Butylbenzene	U		0.000134	0.000500
tert-Butylbenzene	U		0.000183	0.000500
Carbon tetrachloride	U		0.000159	0.000500
Chlorobenzene	U		0.000140	0.000500
Chlorodibromomethane	U		0.000128	0.000500
Chloroethane	U		0.000141	0.000500
2-Chloroethyl vinyl ether	U		0.000877	0.00250
Chloroform	U		0.0000860	0.000500
Chloromethane	U		0.000153	0.000500
2-Chlorotoluene	U		0.000111	0.000500
4-Chlorotoluene	U		0.0000972	0.000500
1,2-Dibromo-3-Chloropropane	U		0.000325	0.00100
1,2-Dibromoethane	U		0.000193	0.000500
Dibromomethane	U		0.000117	0.000500
1,2-Dichlorobenzene	U		0.000101	0.000500
1,3-Dichlorobenzene	U		0.000130	0.000500
1,4-Dichlorobenzene	U		0.000121	0.000500
Dichlorodifluoromethane	U		0.000127	0.000500
1,1-Dichloroethane	U		0.000114	0.000500
1,2-Dichloroethane	U		0.000108	0.000500
1,1-Dichloroethene	U		0.000188	0.000500
cis-1,2-Dichloroethene	U		0.0000933	0.000500
trans-1,2-Dichloroethene	U		0.000152	0.000500
1,2-Dichloropropane	U		0.000190	0.000500
trans-1,4-Dichloro-2-butene	U		0.000257	0.00500
1,1-Dichloropropene	U		0.000128	0.000500

Method Blank (MB)

(MB) 09/08/15 23:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,3-Dichloropropane	U		0.000147	0.000500
cis-1,3-Dichloropropene	U		0.0000976	0.000500
trans-1,3-Dichloropropene	U		0.000222	0.000500
2,2-Dichloropropane	U		0.0000929	0.000500
2-Hexanone	U		0.000757	0.00250
Di-isopropyl ether	U		0.0000924	0.000500
Ethylbenzene	U		0.000158	0.000500
n-Hexane	U		0.000305	0.00100
Iodomethane	U		0.000377	0.0100
Hexachloro-1,3-butadiene	U		0.000157	0.00100
Isopropylbenzene	U		0.000126	0.000500
p-Isopropyltoluene	U		0.000138	0.000500
2-Butanone (MEK)	U		0.00128	0.00250
Methylene Chloride	U		0.00107	0.00250
4-Methyl-2-pentanone (MIBK)	U		0.000823	0.00250
Methyl tert-butyl ether	U		0.000102	0.000500
1,1,2-Trichlorotrifluoroethane	U		0.000164	0.000500
Naphthalene	U		0.000174	0.000500
n-Propylbenzene	U		0.000162	0.000500
Styrene	U		0.000117	0.000500
1,1,1,2-Tetrachloroethane	U		0.000120	0.000500
1,1,2,2-Tetrachloroethane	U		0.000130	0.000500
Tetrachloroethene	U		0.000199	0.000500
1,2,3-Trimethylbenzene	U		0.0000739	0.000500
Toluene	U		0.000102	0.000500
Vinyl acetate	U		0.000645	0.00250
1,2,3-Trichlorobenzene	U		0.000164	0.000500
1,2,4-Trichlorobenzene	U		0.000355	0.000500
1,1,1-Trichloroethane	U		0.0000940	0.000500
1,1,2-Trichloroethane	U		0.000186	0.000500
Trichloroethene	U		0.000153	0.000500
Trichlorofluoromethane	U		0.000130	0.000500
1,2,3-Trichloropropane	U		0.000247	0.00250
1,2,4-Trimethylbenzene	U		0.000123	0.000500
1,3,5-Trimethylbenzene	U		0.000124	0.000500
Vinyl chloride	U		0.000118	0.000500

Method Blank (MB)

(MB) 09/08/15 23:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Xylenes, Total	U		0.000316	0.00150
(S) Toluene-d8	*95.6*			*90.0-115*
(S) Dibromofluoromethane	*88.7*			*79.0-121*
(S) 4-Bromofluorobenzene	*107*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/08/15 21:54 • (LCSD) 09/08/15 22:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	0.0250	0.0253	0.0254	101	102	78.9-123			0.380	20
Carbon disulfide	0.0250	0.0208	0.0207	83.2	82.7	53.0-134			0.560	20
Acetone	0.125	0.109	0.119	87.2	94.9	28.7-175			8.43	20.9
Acrylonitrile	0.125	0.100	0.106	80.0	85.0	58.2-145			6.01	20
Benzene	0.0250	0.0223	0.0219	89.4	87.8	73.0-122			1.85	20
Bromobenzene	0.0250	0.0242	0.0241	97.0	96.3	81.5-115			0.640	20
Bromodichloromethane	0.0250	0.0236	0.0238	94.3	95.1	75.5-121			0.840	20
Bromoform	0.0250	0.0291	0.0291	116	117	71.5-131			0.130	20
Bromomethane	0.0250	0.0213	0.0211	85.0	84.3	22.4-187			0.870	20
n-Butylbenzene	0.0250	0.0220	0.0211	88.1	84.5	75.9-134			4.12	20
sec-Butylbenzene	0.0250	0.0270	0.0267	108	107	80.6-126			1.14	20
trans-1,4-Dichloro-2-butene	0.0250	0.0207	0.0217	82.9	86.8	58.3-129			4.63	20
tert-Butylbenzene	0.0250	0.0280	0.0275	112	110	79.3-127			1.87	20
Carbon tetrachloride	0.0250	0.0254	0.0254	101	101	70.9-129			0.000	20
Chlorobenzene	0.0250	0.0270	0.0267	108	107	79.7-122			1.26	20
Chlorodibromomethane	0.0250	0.0269	0.0267	108	107	78.2-124			0.550	20
2-Hexanone	0.125	0.108	0.116	86.1	92.9	59.4-151			7.55	20
Chloroethane	0.0250	0.0206	0.0199	82.2	79.7	41.2-153			3.19	20
n-Hexane	0.0250	0.0201	0.0197	80.5	78.8	59.5-132			2.07	20
2-Chloroethyl vinyl ether	0.125	0.106	0.107	84.9	85.8	23.4-162			1.08	23.5
Iodomethane	0.125	0.126	0.124	101	99.0	64.6-137			1.84	20
Chloroform	0.0250	0.0230	0.0229	91.8	91.7	73.2-125			0.190	20
Chloromethane	0.0250	0.0182	0.0179	72.8	71.8	55.8-134			1.43	20
2-Chlorotoluene	0.0250	0.0276	0.0270	110	108	76.4-125			2.18	20
4-Chlorotoluene	0.0250	0.0255	0.0249	102	99.6	81.5-121			2.39	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0229	0.0238	91.5	95.0	64.8-131			3.82	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/08/15 21:54 • (LCSD) 09/08/15 22:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2-Dibromoethane	0.0250	0.0251	0.0256	101	103	79.8-122			1.97	20
Dibromomethane	0.0250	0.0247	0.0246	98.7	98.2	79.5-118			0.540	20
1,2-Dichlorobenzene	0.0250	0.0241	0.0235	96.4	94.1	84.7-118			2.45	20
1,3-Dichlorobenzene	0.0250	0.0284	0.0277	114	111	77.6-127			2.60	20
1,4-Dichlorobenzene	0.0250	0.0226	0.0219	90.4	87.4	82.2-114			3.38	20
Dichlorodifluoromethane	0.0250	0.0212	0.0217	84.9	86.8	56.0-134			2.22	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0240	0.0234	96.1	93.4	62.0-141			2.84	20
1,1-Dichloroethane	0.0250	0.0221	0.0216	88.3	86.5	71.7-127			2.03	20
1,2-Dichloroethane	0.0250	0.0213	0.0212	85.0	84.8	65.3-126			0.190	20
1,1-Dichloroethene	0.0250	0.0217	0.0212	86.8	85.0	59.9-137			2.12	20
cis-1,2-Dichloroethene	0.0250	0.0242	0.0238	96.6	95.1	77.3-122			1.62	20
trans-1,2-Dichloroethene	0.0250	0.0243	0.0237	97.2	94.8	72.6-125			2.57	20
1,2-Dichloropropane	0.0250	0.0223	0.0218	89.3	87.2	77.4-125			2.44	20
1,1-Dichloropropene	0.0250	0.0224	0.0224	89.6	89.6	72.5-127			0.0800	20
1,3-Dichloropropane	0.0250	0.0229	0.0228	91.4	91.1	80.6-115			0.330	20
cis-1,3-Dichloropropene	0.0250	0.0244	0.0235	97.7	94.2	77.7-124			3.63	20
trans-1,3-Dichloropropene	0.0250	0.0240	0.0246	95.9	98.4	73.5-127			2.59	20
2,2-Dichloropropane	0.0250	0.0262	0.0260	105	104	61.3-134			0.880	20
1,2,3-Trimethylbenzene	0.0250	0.0221	0.0211	88.5	84.4	79.9-118			4.70	20
Vinyl acetate	0.125	0.0960	0.100	76.8	80.3	41.7-159			4.40	20
Di-isopropyl ether	0.0250	0.0202	0.0200	80.9	80.1	65.1-135			0.980	20
Ethylbenzene	0.0250	0.0272	0.0265	109	106	80.9-121			2.45	20
Hexachloro-1,3-butadiene	0.0250	0.0253	0.0244	101	97.6	73.7-133			3.55	20
Isopropylbenzene	0.0250	0.0273	0.0268	109	107	81.6-124			2.03	20
p-Isopropyltoluene	0.0250	0.0286	0.0279	115	111	77.6-129			2.82	20
2-Butanone (MEK)	0.125	0.0929	0.100	74.3	80.1	46.4-155			7.43	20
Methylene Chloride	0.0250	0.0219	0.0216	87.4	86.3	69.5-120			1.22	20
4-Methyl-2-pentanone (MIBK)	0.125	0.0941	0.0975	75.2	78.0	63.3-138			3.56	20
Methyl tert-butyl ether	0.0250	0.0224	0.0232	89.6	92.8	70.1-125			3.54	20
Naphthalene	0.0250	0.0222	0.0221	88.8	88.3	69.7-134			0.570	20
n-Propylbenzene	0.0250	0.0258	0.0253	103	101	81.9-122			1.72	20
Styrene	0.0250	0.0281	0.0275	112	110	79.9-124			2.17	20
1,1,1,2-Tetrachloroethane	0.0250	0.0287	0.0284	115	114	78.5-125			1.14	20
1,1,2,2-Tetrachloroethane	0.0250	0.0227	0.0236	91.0	94.5	79.3-123			3.77	20
Tetrachloroethene	0.0250	0.0291	0.0285	116	114	73.5-130			1.85	20
Toluene	0.0250	0.0245	0.0236	97.9	94.4	77.9-116			3.58	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/08/15 21:54 • (LCSD) 09/08/15 22:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2,3-Trichlorobenzene	0.0250	0.0251	0.0241	100	96.5	75.7-134			3.77	20
1,2,4-Trichlorobenzene	0.0250	0.0259	0.0246	104	98.5	76.1-136			5.01	20
1,1,1-Trichloroethane	0.0250	0.0243	0.0238	97.3	95.3	71.1-129			2.10	20
1,1,2-Trichloroethane	0.0250	0.0259	0.0256	104	102	81.6-120			1.29	20
Trichloroethene	0.0250	0.0271	0.0269	109	107	79.5-121			1.10	20
Trichlorofluoromethane	0.0250	0.0225	0.0224	90.1	89.7	49.1-157			0.420	20
1,2,3-Trichloropropane	0.0250	0.0246	0.0249	98.2	99.7	74.9-124			1.54	20
1,2,4-Trimethylbenzene	0.0250	0.0270	0.0265	108	106	79.0-122			2.00	20
1,3,5-Trimethylbenzene	0.0250	0.0268	0.0263	107	105	81.0-123			1.86	20
Vinyl chloride	0.0250	0.0202	0.0203	80.9	81.1	61.5-134			0.250	20
Xylenes, Total	0.0750	0.0809	0.0782	108	104	79.2-122			3.36	20
(S) Toluene-d8				*96.6*	*96.3*	*90.0-115*				
(S) Dibromofluoromethane				*90.4*	*91.9*	*79.0-121*				
(S) 4-Bromofluorobenzene				*106*	*108*	*80.1-120*				

L787103-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/09/15 01:42 • (MS) 09/08/15 23:59 • (MSD) 09/09/15 00:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	0.0250	ND	0.0240	0.0234	96.0	93.5	1	74.4-128			2.64	20
Carbon disulfide	0.0250	ND	0.0157	0.0155	63.0	62.0	1	34.9-138			1.51	20
Acetone	0.125	0.00193	0.0615	0.0617	47.7	47.8	1	25.0-156			0.290	21.5
trans-1,4-Dichloro-2-butene	0.0250	ND	0.0206	0.0206	82.4	82.3	1	57.6-136			0.110	20
Acrylonitrile	0.125	ND	0.102	0.101	81.6	81.1	1	55.9-161			0.690	20
Benzene	0.0250	ND	0.0204	0.0200	81.6	80.1	1	58.6-133			1.88	20
Bromobenzene	0.0250	ND	0.0231	0.0225	92.4	89.9	1	70.6-125			2.72	20
Bromodichloromethane	0.0250	ND	0.0227	0.0217	90.8	86.9	1	69.2-127			4.30	20
2-Hexanone	0.125	ND	0.0995	0.0985	79.6	78.8	1	59.4-154			1.01	20.1
n-Hexane	0.0250	ND	0.0163	0.0159	65.2	63.8	1	38.7-146			2.17	20
Bromoform	0.0250	ND	0.0288	0.0282	115	113	1	66.3-140			2.29	20
Iodomethane	0.125	ND	0.109	0.107	87.1	85.9	1	55.2-140			1.44	20
Bromomethane	0.0250	ND	0.0183	0.0177	73.2	70.8	1	16.6-183			3.30	20.5
n-Butylbenzene	0.0250	ND	0.0211	0.0202	84.4	80.6	1	64.8-145			4.60	20
sec-Butylbenzene	0.0250	ND	0.0264	0.0250	106	100	1	66.8-139			5.24	20
tert-Butylbenzene	0.0250	ND	0.0276	0.0262	110	105	1	67.1-138			5.17	20

L787103-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/09/15 01:42 • (MS) 09/08/15 23:59 • (MSD) 09/09/15 00:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.0250	ND	0.0234	0.0231	93.8	92.5	1	60.6-139			1.39	20
Chlorobenzene	0.0250	ND	0.0253	0.0249	101	99.5	1	70.1-130			1.77	20
Chlorodibromomethane	0.0250	ND	0.0267	0.0257	107	103	1	71.6-132			3.83	20
Chloroethane	0.0250	ND	0.0178	0.0173	71.1	69.3	1	33.3-155			2.64	20
2-Chloroethyl vinyl ether	0.125	ND	0.00690	0.00151	5.52	1.21	1	5.00-149		J3 J6	128	40
Chloroform	0.0250	ND	0.0215	0.0210	86.0	84.0	1	66.1-133			2.35	20
Chloromethane	0.0250	ND	0.0149	0.0146	59.4	58.4	1	40.7-139			1.75	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.169	0.167	0.166	0.000	0.000	1	53.7-150	V	V	0.940	20
2-Chlorotoluene	0.0250	ND	0.0265	0.0255	106	102	1	66.9-134			3.86	20
4-Chlorotoluene	0.0250	ND	0.0243	0.0234	97.2	93.5	1	66.8-134			3.81	20
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0242	0.0243	96.7	97.0	1	63.9-142			0.360	20.2
1,2-Dibromoethane	0.0250	ND	0.0249	0.0245	99.6	98.0	1	73.8-131			1.64	20
Dibromomethane	0.0250	ND	0.0232	0.0225	92.7	89.9	1	72.8-127			3.05	20
1,2-Dichlorobenzene	0.0250	ND	0.0229	0.0225	91.6	90.0	1	77.4-127			1.81	20
1,3-Dichlorobenzene	0.0250	ND	0.0280	0.0267	112	107	1	67.9-136			4.89	20
1,4-Dichlorobenzene	0.0250	ND	0.0216	0.0208	86.3	83.0	1	74.4-123			3.84	20
Dichlorodifluoromethane	0.0250	0.000870	0.0203	0.0204	77.9	78.2	1	42.2-146			0.400	20
1,2,3-Trimethylbenzene	0.0250	ND	0.0206	0.0200	82.5	80.1	1	62.7-133			2.99	20
1,1-Dichloroethane	0.0250	0.000701	0.0209	0.0203	80.7	78.4	1	64.0-134			2.88	20
1,2-Dichloroethane	0.0250	ND	0.0197	0.0193	78.8	77.2	1	60.7-132			2.16	20
Vinyl acetate	0.125	ND	0.109	0.109	87.4	87.3	1	42.8-181			0.110	20
1,1-Dichloroethene	0.0250	0.00714	0.0252	0.0255	72.1	73.6	1	48.8-144			1.46	20
cis-1,2-Dichloroethene	0.0250	0.0953	0.107	0.105	48.2	38.7	1	60.6-136	J6	J6	2.22	20
trans-1,2-Dichloroethene	0.0250	0.000637	0.0219	0.0215	85.0	83.4	1	61.0-132			1.82	20
1,2-Dichloropropane	0.0250	ND	0.0205	0.0197	82.0	78.8	1	69.7-130			3.94	20
1,1-Dichloropropene	0.0250	ND	0.0198	0.0197	79.1	78.8	1	61.5-136			0.340	20
1,3-Dichloropropane	0.0250	ND	0.0219	0.0215	87.6	86.0	1	74.3-123			1.88	20
cis-1,3-Dichloropropene	0.0250	ND	0.0218	0.0211	87.3	84.6	1	71.1-129			3.15	20
trans-1,3-Dichloropropene	0.0250	ND	0.0250	0.0248	100	99.0	1	66.3-136			1.08	20
2,2-Dichloropropane	0.0250	ND	0.0239	0.0225	95.6	90.2	1	54.9-142			5.87	20
Di-isopropyl ether	0.0250	ND	0.0190	0.0189	76.1	75.5	1	59.9-140			0.910	20
Ethylbenzene	0.0250	ND	0.0251	0.0239	100	95.6	1	62.7-136			4.89	20
Hexachloro-1,3-butadiene	0.0250	ND	0.0245	0.0236	97.8	94.4	1	61.1-144			3.57	20.1
Isopropylbenzene	0.0250	ND	0.0262	0.0251	105	100	1	67.4-136			4.43	20
p-Isopropyltoluene	0.0250	ND	0.0276	0.0265	110	106	1	62.8-143			4.00	20
2-Butanone (MEK)	0.125	ND	0.0762	0.0770	61.0	61.6	1	45.0-156			1.02	20.8

L787103-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/09/15 01:42 • (MS) 09/08/15 23:59 • (MSD) 09/09/15 00:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methylene Chloride	0.0250	0.000472	0.0200	0.0196	78.3	76.7	1	61.5-125			2.04	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.0928	0.0914	74.2	73.1	1	60.7-150			1.49	20
Methyl tert-butyl ether	0.0250	ND	0.0220	0.0218	87.9	87.4	1	61.4-136			0.640	20
Naphthalene	0.0250	ND	0.0225	0.0223	89.9	89.0	1	61.8-143			0.990	20
n-Propylbenzene	0.0250	ND	0.0244	0.0234	97.6	93.7	1	63.2-139			4.10	20
Styrene	0.0250	ND	0.0266	0.0256	106	102	1	68.2-133			3.83	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0278	0.0268	111	107	1	70.5-132			3.66	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0247	0.0236	98.8	94.5	1	64.9-145			4.39	20
Tetrachloroethene	0.0250	3.37	2.97	2.86	0.000	0.000	1	57.4-141	V	V	3.70	20
Toluene	0.0250	ND	0.0218	0.0208	87.2	83.1	1	67.8-124			4.85	20
1,2,3-Trichlorobenzene	0.0250	ND	0.0245	0.0241	97.8	96.3	1	65.7-143			1.58	20
1,2,4-Trichlorobenzene	0.0250	ND	0.0254	0.0247	102	98.7	1	67.0-146			2.75	20
1,1,1-Trichloroethane	0.0250	0.00269	0.0243	0.0239	86.4	84.7	1	58.7-134			1.74	20
1,1,2-Trichloroethane	0.0250	ND	0.0251	0.0244	101	97.8	1	74.1-130			2.85	20
Trichloroethene	0.0250	0.219	0.214	0.208	0.000	0.000	1	48.9-148	V	V	2.62	20
Trichlorofluoromethane	0.0250	ND	0.0195	0.0194	78.2	77.6	1	39.9-165			0.720	20
1,2,3-Trichloropropane	0.0250	ND	0.0263	0.0255	105	102	1	71.5-134			2.88	20
1,2,4-Trimethylbenzene	0.0250	ND	0.0263	0.0251	105	100	1	60.5-137			4.78	20
1,3,5-Trimethylbenzene	0.0250	ND	0.0258	0.0249	103	99.7	1	67.9-134			3.49	20
Vinyl chloride	0.0250	ND	0.0173	0.0171	69.1	68.6	1	44.3-143			0.680	20
Xylenes, Total	0.0750	ND	0.0757	0.0723	101	96.3	1	65.6-133			4.67	20
(S) Toluene-d8					*93.5*	*93.3*		*90.0-115*				
(S) Dibromofluoromethane					*89.0*	*91.6*		*79.0-121*				
(S) 4-Bromofluorobenzene					*107*	*108*		*80.1-120*				

Method Blank (MB)

(MB) 09/10/15 15:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
cis-1,2-Dichloroethene	U		0.0000933	0.000500
Trichloroethene	U		0.000153	0.000500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/10/15 14:31 • (LCSD) 09/10/15 14:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	0.0250	0.0237	0.0227	94.8	90.9	77.3-122			4.18	20
Trichloroethene	0.0250	0.0254	0.0248	102	99.1	79.5-121			2.70	20

L786852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/10/15 17:05 • (MS) 09/10/15 17:25 • (MSD) 09/10/15 17:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	0.0250	ND	0.0215	0.0217	86.2	86.9	1	60.6-136			0.900	20
Trichloroethene	0.0250	ND	0.0228	0.0226	91.1	90.4	1	48.9-148			0.780	20

Method Blank (MB)

(MB) 09/11/15 14:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,4-Dioxane	U		0.000597	0.00300
(S) Toluene-d8	*96.4*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/11/15 13:21 • (LCSD) 09/11/15 13:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.0499	0.0487	99.9	97.5	70.0-130			2.45	25
(S) Toluene-d8				*96.4*	*96.1*	*70.0-130*				

L786989-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/11/15 16:17 • (MS) 09/11/15 15:05 • (MSD) 09/11/15 15:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.0931	0.113	0.129	39.2	72.8	1	0.000-200			13.9	42
(S) Toluene-d8					*96.7*	*96.5*		*70.0-130*				

Method Blank (MB)

(MB) 09/14/15 11:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,4-Dioxane	U		0.000597	0.00300
(S) Toluene-d8	*95.9*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/14/15 10:16 • (LCSD) 09/14/15 12:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.0420	0.0368	84.0	73.6	70.0-130			13.3	25
(S) Toluene-d8				*96.5*	*95.9*	*70.0-130*				

L787593-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/14/15 14:40 • (MS) 09/14/15 13:04 • (MSD) 09/14/15 13:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.00119	0.0504	0.0662	98.5	130	1	0.000-200			27.0	42
(S) Toluene-d8					*99.6*	*99.0*		*70.0-130*				

Method Blank (MB)

(MB) 09/15/15 12:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.00105	0.0250
Acrylonitrile	U		0.000873	0.00250
Benzene	U		0.0000896	0.000500
Bromobenzene	U		0.000133	0.000500
Bromochloromethane	U		0.000145	0.000500
Bromodichloromethane	U		0.0000800	0.000500
Bromoform	U		0.000186	0.000500
Bromomethane	U		0.000157	0.000500
n-Butylbenzene	U		0.000143	0.000500
Carbon disulfide	U		0.000101	0.000500
sec-Butylbenzene	U		0.000134	0.000500
tert-Butylbenzene	U		0.000183	0.000500
Carbon tetrachloride	U		0.000159	0.000500
Chlorobenzene	U		0.000140	0.000500
Chlorodibromomethane	U		0.000128	0.000500
Chloroethane	U		0.000141	0.000500
2-Chloroethyl vinyl ether	U		0.000877	0.00250
Chloroform	U		0.0000860	0.000500
Chloromethane	U		0.000153	0.000500
2-Chlorotoluene	U		0.000111	0.000500
4-Chlorotoluene	U		0.0000972	0.000500
1,2-Dibromo-3-Chloropropane	U		0.000325	0.00100
1,2-Dibromoethane	U		0.000193	0.000500
Dibromomethane	U		0.000117	0.000500
1,2-Dichlorobenzene	U		0.000101	0.000500
1,3-Dichlorobenzene	U		0.000130	0.000500
1,4-Dichlorobenzene	U		0.000121	0.000500
Dichlorodifluoromethane	U		0.000127	0.000500
1,1-Dichloroethane	U		0.000114	0.000500
1,2-Dichloroethane	U		0.000108	0.000500
1,1-Dichloroethene	U		0.000188	0.000500
cis-1,2-Dichloroethene	U		0.0000933	0.000500
trans-1,2-Dichloroethene	U		0.000152	0.000500
1,2-Dichloropropane	U		0.000190	0.000500
1,1-Dichloropropene	U		0.000128	0.000500
trans-1,4-Dichloro-2-butene	U		0.000257	0.00500

Method Blank (MB)

(MB) 09/15/15 12:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,3-Dichloropropane	U		0.000147	0.000500
cis-1,3-Dichloropropene	U		0.0000976	0.000500
trans-1,3-Dichloropropene	U		0.000222	0.000500
2,2-Dichloropropane	U		0.0000929	0.000500
Di-isopropyl ether	U		0.0000924	0.000500
2-Hexanone	U		0.000757	0.00250
Ethylbenzene	U		0.000158	0.000500
Iodomethane	U		0.000377	0.0100
Hexachloro-1,3-butadiene	U		0.000157	0.00100
n-Hexane	U		0.000305	0.00100
Isopropylbenzene	U		0.000126	0.000500
p-Isopropyltoluene	U		0.000138	0.000500
2-Butanone (MEK)	U		0.00128	0.00250
Methylene Chloride	U		0.00107	0.00250
4-Methyl-2-pentanone (MIBK)	U		0.000823	0.00250
Methyl tert-butyl ether	U		0.000102	0.000500
1,1,2-Trichlorotrifluoroethane	U		0.000164	0.000500
Naphthalene	U		0.000174	0.000500
n-Propylbenzene	U		0.000162	0.000500
Styrene	U		0.000117	0.000500
1,1,1,2-Tetrachloroethane	U		0.000120	0.000500
1,1,2,2-Tetrachloroethane	U		0.000130	0.000500
Tetrachloroethene	U		0.000199	0.000500
1,2,3-Trimethylbenzene	U		0.0000739	0.000500
Toluene	U		0.000102	0.000500
Vinyl acetate	U		0.000645	0.00250
1,2,3-Trichlorobenzene	U		0.000164	0.000500
1,2,4-Trichlorobenzene	U		0.000355	0.000500
1,1,1-Trichloroethane	U		0.0000940	0.000500
1,1,2-Trichloroethane	U		0.000186	0.000500
Trichloroethene	U		0.000153	0.000500
Trichlorofluoromethane	U		0.000130	0.000500
1,2,3-Trichloropropane	U		0.000247	0.00250
1,2,4-Trimethylbenzene	U		0.000123	0.000500
1,3,5-Trimethylbenzene	U		0.000124	0.000500
Vinyl chloride	U		0.000118	0.000500

Method Blank (MB)

(MB) 09/15/15 12:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Xylenes, Total	U		0.000316	0.00150
(S) Toluene-d8	*102*			*90.0-115*
(S) Dibromofluoromethane	*95.4*			*79.0-121*
(S) 4-Bromofluorobenzene	*96.6*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/15/15 11:02 • (LCSD) 09/15/15 11:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	0.0250	0.0244	0.0255	97.6	102	78.9-123			4.43	20
Carbon disulfide	0.0250	0.0237	0.0241	94.9	96.4	53.0-134			1.60	20
Acetone	0.125	0.111	0.102	88.9	81.9	28.7-175			8.20	20.9
Acrylonitrile	0.125	0.136	0.144	109	115	58.2-145			5.58	20
Benzene	0.0250	0.0239	0.0246	95.6	98.4	73.0-122			2.84	20
Bromobenzene	0.0250	0.0250	0.0250	99.9	99.9	81.5-115			0.0200	20
Bromodichloromethane	0.0250	0.0236	0.0240	94.2	95.9	75.5-121			1.82	20
Bromoform	0.0250	0.0268	0.0270	107	108	71.5-131			0.800	20
Bromomethane	0.0250	0.0228	0.0242	91.1	96.7	22.4-187			5.99	20
n-Butylbenzene	0.0250	0.0252	0.0259	101	104	75.9-134			2.83	20
sec-Butylbenzene	0.0250	0.0257	0.0258	103	103	80.6-126			0.670	20
trans-1,4-Dichloro-2-butene	0.0250	0.0243	0.0241	97.1	96.3	58.3-129			0.820	20
tert-Butylbenzene	0.0250	0.0251	0.0255	101	102	79.3-127			1.56	20
Carbon tetrachloride	0.0250	0.0228	0.0236	91.1	94.5	70.9-129			3.63	20
Chlorobenzene	0.0250	0.0258	0.0264	103	105	79.7-122			2.12	20
Chlorodibromomethane	0.0250	0.0256	0.0267	103	107	78.2-124			4.00	20
2-Hexanone	0.125	0.143	0.142	115	114	59.4-151			0.790	20
Chloroethane	0.0250	0.0225	0.0229	89.9	91.8	41.2-153			2.11	20
2-Chloroethyl vinyl ether	0.125	0.124	0.127	99.3	102	23.4-162			2.58	23.5
Iodomethane	0.125	0.123	0.128	98.8	103	64.6-137			3.76	20
Chloroform	0.0250	0.0222	0.0230	88.8	92.0	73.2-125			3.61	20
Chloromethane	0.0250	0.0236	0.0245	94.3	97.9	55.8-134			3.73	20
2-Chlorotoluene	0.0250	0.0243	0.0247	97.4	98.8	76.4-125			1.44	20
4-Chlorotoluene	0.0250	0.0244	0.0244	97.7	97.7	81.5-121			0.0200	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0239	0.0245	95.5	97.9	64.8-131			2.43	20
1,2-Dibromoethane	0.0250	0.0255	0.0254	102	101	79.8-122			0.340	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/15/15 11:02 • (LCSD) 09/15/15 11:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dibromomethane	0.0250	0.0250	0.0256	99.8	103	79.5-118			2.71	20
1,2-Dichlorobenzene	0.0250	0.0242	0.0246	96.9	98.6	84.7-118			1.68	20
1,3-Dichlorobenzene	0.0250	0.0249	0.0250	99.7	99.8	77.6-127			0.190	20
1,4-Dichlorobenzene	0.0250	0.0240	0.0245	96.2	98.0	82.2-114			1.87	20
Dichlorodifluoromethane	0.0250	0.0213	0.0217	85.0	86.8	56.0-134			2.10	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0240	0.0249	95.9	99.6	62.0-141			3.73	20
1,1-Dichloroethane	0.0250	0.0237	0.0247	94.8	98.6	71.7-127			3.98	20
1,2-Dichloroethane	0.0250	0.0215	0.0221	85.8	88.2	65.3-126			2.74	20
1,1-Dichloroethene	0.0250	0.0242	0.0245	96.7	98.0	59.9-137			1.30	20
cis-1,2-Dichloroethene	0.0250	0.0232	0.0239	92.7	95.5	77.3-122			2.91	20
trans-1,2-Dichloroethene	0.0250	0.0235	0.0244	94.1	97.6	72.6-125			3.66	20
1,2-Dichloropropane	0.0250	0.0263	0.0279	105	112	77.4-125			5.66	20
1,1-Dichloropropene	0.0250	0.0232	0.0246	92.9	98.3	72.5-127			5.65	20
1,3-Dichloropropane	0.0250	0.0252	0.0252	101	101	80.6-115			0.180	20
cis-1,3-Dichloropropene	0.0250	0.0254	0.0260	102	104	77.7-124			2.33	20
trans-1,3-Dichloropropene	0.0250	0.0259	0.0262	104	105	73.5-127			1.10	20
2,2-Dichloropropane	0.0250	0.0198	0.0215	79.1	85.8	61.3-134			8.17	20
1,2,3-Trimethylbenzene	0.0250	0.0243	0.0247	97.1	98.8	79.9-118			1.76	20
Vinyl acetate	0.125	0.152	0.153	122	122	41.7-159			0.500	20
Di-isopropyl ether	0.0250	0.0248	0.0257	99.1	103	65.1-135			3.67	20
Ethylbenzene	0.0250	0.0250	0.0255	100	102	80.9-121			2.09	20
Hexachloro-1,3-butadiene	0.0250	0.0248	0.0249	99.3	99.7	73.7-133			0.380	20
n-Hexane	0.0250	0.0252	0.0260	101	104	59.5-132			3.29	20
Isopropylbenzene	0.0250	0.0255	0.0255	102	102	81.6-124			0.0500	20
p-Isopropyltoluene	0.0250	0.0256	0.0256	102	102	77.6-129			0.170	20
2-Butanone (MEK)	0.125	0.126	0.125	101	100	46.4-155			0.710	20
Methylene Chloride	0.0250	0.0236	0.0248	94.4	99.1	69.5-120			4.86	20
4-Methyl-2-pentanone (MIBK)	0.125	0.135	0.139	108	111	63.3-138			2.51	20
Methyl tert-butyl ether	0.0250	0.0231	0.0238	92.3	95.0	70.1-125			2.96	20
Naphthalene	0.0250	0.0252	0.0255	101	102	69.7-134			1.17	20
n-Propylbenzene	0.0250	0.0255	0.0257	102	103	81.9-122			1.05	20
Styrene	0.0250	0.0250	0.0259	99.9	103	79.9-124			3.49	20
1,1,1,2-Tetrachloroethane	0.0250	0.0242	0.0246	96.8	98.5	78.5-125			1.74	20
1,1,2,2-Tetrachloroethane	0.0250	0.0268	0.0269	107	108	79.3-123			0.340	20
Tetrachloroethene	0.0250	0.0250	0.0253	100	101	73.5-130			0.970	20
Toluene	0.0250	0.0248	0.0256	99.2	102	77.9-116			3.07	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/15/15 11:02 • (LCSD) 09/15/15 11:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2,3-Trichlorobenzene	0.0250	0.0258	0.0262	103	105	75.7-134			1.55	20
1,2,4-Trichlorobenzene	0.0250	0.0257	0.0259	103	104	76.1-136			0.640	20
1,1,1-Trichloroethane	0.0250	0.0213	0.0220	85.1	87.8	71.1-129			3.14	20
1,1,2-Trichloroethane	0.0250	0.0253	0.0254	101	102	81.6-120			0.400	20
Trichloroethene	0.0250	0.0245	0.0252	97.9	101	79.5-121			2.94	20
Trichlorofluoromethane	0.0250	0.0243	0.0254	97.2	102	49.1-157			4.40	20
1,2,3-Trichloropropane	0.0250	0.0259	0.0261	104	104	74.9-124			0.590	20
1,2,4-Trimethylbenzene	0.0250	0.0248	0.0248	99.1	99.2	79.0-122			0.110	20
1,3,5-Trimethylbenzene	0.0250	0.0250	0.0251	99.9	100	81.0-123			0.460	20
Vinyl chloride	0.0250	0.0235	0.0239	93.8	95.7	61.5-134			1.99	20
Xylenes, Total	0.0750	0.0758	0.0769	101	103	79.2-122			1.46	20
(S) Toluene-d8				*104*	*105*	*90.0-115*				
(S) Dibromofluoromethane				*92.8*	*95.1*	*79.0-121*				
(S) 4-Bromofluorobenzene				*96.1*	*96.2*	*80.1-120*				

L787282-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/15/15 14:49 • (MS) 09/15/15 15:09 • (MSD) 09/15/15 15:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	0.0250	ND	0.0239	0.0221	95.4	88.5	1	74.4-128			7.55	20
Carbon disulfide	0.0250	ND	0.0200	0.0209	80.1	83.4	1	34.9-138			4.08	20
Acetone	0.125	ND	0.0408	0.0221	32.7	17.7	1	25.0-156		J3 J6	59.4	21.5
trans-1,4-Dichloro-2-butene	0.0250	ND	0.0213	0.0205	85.1	82.0	1	57.6-136			3.70	20
Acrylonitrile	0.125	ND	0.109	0.0791	87.4	63.3	1	55.9-161		J3	32.0	20
Benzene	0.0250	ND	0.0227	0.0225	90.7	90.1	1	58.6-133			0.640	20
Bromobenzene	0.0250	ND	0.0233	0.0247	93.3	98.7	1	70.6-125			5.57	20
Bromodichloromethane	0.0250	ND	0.0226	0.0220	90.6	88.1	1	69.2-127			2.80	20
2-Hexanone	0.125	ND	0.112	0.0939	89.3	75.1	1	59.4-154			17.2	20.1
Bromoform	0.0250	ND	0.0256	0.0243	102	97.3	1	66.3-140			5.00	20
Iodomethane	0.125	ND	0.118	0.116	94.1	92.4	1	55.2-140			1.83	20
Bromomethane	0.0250	ND	0.0222	0.0231	88.9	92.5	1	16.6-183			3.93	20.5
n-Butylbenzene	0.0250	ND	0.0235	0.0236	93.9	94.4	1	64.8-145			0.500	20
sec-Butylbenzene	0.0250	ND	0.0233	0.0250	93.2	100	1	66.8-139			7.08	20
tert-Butylbenzene	0.0250	ND	0.0231	0.0250	92.6	100	1	67.1-138			7.71	20
Carbon tetrachloride	0.0250	ND	0.0220	0.0220	87.8	87.8	1	60.6-139			0.0100	20

L787282-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/15/15 14:49 • (MS) 09/15/15 15:09 • (MSD) 09/15/15 15:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	0.0250	ND	0.0246	0.0260	98.4	104	1	70.1-130			5.42	20
Chlorodibromomethane	0.0250	ND	0.0253	0.0250	101	100	1	71.6-132			1.05	20
Chloroethane	0.0250	ND	0.0221	0.0222	88.3	88.9	1	33.3-155			0.780	20
2-Chloroethyl vinyl ether	0.125	ND	0.000321	0.000	0.257	0.000	1	5.00-149	J6	J3 J6	200	40
Chloroform	0.0250	0.000648	0.0222	0.0213	86.1	82.8	1	66.1-133			3.74	20
Chloromethane	0.0250	ND	0.0227	0.0227	90.6	90.8	1	40.7-139			0.210	20
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.0241	0.0236	96.3	94.5	1	53.7-150			1.91	20
2-Chlorotoluene	0.0250	ND	0.0230	0.0249	92.0	99.5	1	66.9-134			7.82	20
4-Chlorotoluene	0.0250	ND	0.0229	0.0244	91.6	97.5	1	66.8-134			6.28	20
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0214	0.0201	85.8	80.5	1	63.9-142			6.33	20.2
1,2-Dibromoethane	0.0250	ND	0.0240	0.0240	96.1	95.9	1	73.8-131			0.260	20
Dibromomethane	0.0250	ND	0.0232	0.0220	92.7	88.0	1	72.8-127			5.23	20
1,2-Dichlorobenzene	0.0250	ND	0.0229	0.0235	91.6	94.1	1	77.4-127			2.69	20
1,3-Dichlorobenzene	0.0250	ND	0.0235	0.0253	94.2	101	1	67.9-136			7.00	20
1,4-Dichlorobenzene	0.0250	ND	0.0236	0.0235	94.6	94.0	1	74.4-123			0.650	20
Dichlorodifluoromethane	0.0250	ND	0.0221	0.0217	88.5	86.8	1	42.2-146			2.00	20
1,2,3-Trimethylbenzene	0.0250	ND	0.0227	0.0230	90.8	91.9	1	62.7-133			1.25	20
1,1-Dichloroethane	0.0250	ND	0.0230	0.0229	91.8	91.8	1	64.0-134			0.0600	20
1,2-Dichloroethane	0.0250	ND	0.0208	0.0199	83.0	79.6	1	60.7-132			4.23	20
Vinyl acetate	0.125	ND	0.148	0.135	119	108	1	42.8-181			9.52	20
1,1-Dichloroethene	0.0250	ND	0.0211	0.0214	84.3	85.5	1	48.8-144			1.38	20
cis-1,2-Dichloroethene	0.0250	0.00114	0.0232	0.0234	88.0	88.9	1	60.6-136			0.960	20
trans-1,2-Dichloroethene	0.0250	ND	0.0226	0.0225	90.2	90.1	1	61.0-132			0.110	20
1,2-Dichloropropane	0.0250	ND	0.0249	0.0242	99.8	96.9	1	69.7-130			2.98	20
1,1-Dichloropropene	0.0250	ND	0.0223	0.0225	89.2	90.2	1	61.5-136			1.08	20
1,3-Dichloropropane	0.0250	ND	0.0238	0.0246	95.2	98.2	1	74.3-123			3.11	20
cis-1,3-Dichloropropene	0.0250	ND	0.0234	0.0227	93.7	90.8	1	71.1-129			3.10	20
trans-1,3-Dichloropropene	0.0250	ND	0.0241	0.0244	96.4	97.7	1	66.3-136			1.24	20
2,2-Dichloropropane	0.0250	ND	0.0206	0.0211	82.5	84.6	1	54.9-142			2.47	20
Di-isopropyl ether	0.0250	ND	0.0233	0.0222	93.1	88.9	1	59.9-140			4.62	20
Ethylbenzene	0.0250	ND	0.0242	0.0258	97.0	103	1	62.7-136			6.36	20
Hexachloro-1,3-butadiene	0.0250	ND	0.0213	0.0215	85.1	86.2	1	61.1-144			1.24	20.1
n-Hexane	0.0250	ND	0.0200	0.0208	80.0	83.0	1	38.7-146			3.77	20
Isopropylbenzene	0.0250	ND	0.0234	0.0254	93.6	101	1	67.4-136			8.10	20
p-Isopropyltoluene	0.0250	ND	0.0232	0.0246	92.8	98.4	1	62.8-143			5.86	20
2-Butanone (MEK)	0.125	ND	0.0617	0.0379	49.3	30.3	1	45.0-156		J3 J6	47.8	20.8

L787282-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/15/15 14:49 • (MS) 09/15/15 15:09 • (MSD) 09/15/15 15:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methylene Chloride	0.0250	0.000658	0.0231	0.0213	89.6	82.4	1	61.5-125			8.13	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.120	0.0984	95.8	78.7	1	60.7-150			19.6	20
Methyl tert-butyl ether	0.0250	ND	0.0211	0.0188	84.2	75.3	1	61.4-136			11.2	20
Naphthalene	0.0250	ND	0.0232	0.0231	92.8	92.2	1	61.8-143			0.660	20
n-Propylbenzene	0.0250	ND	0.0236	0.0256	94.6	102	1	63.2-139			7.74	20
Styrene	0.0250	ND	0.0237	0.0246	94.7	98.4	1	68.2-133			3.89	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0233	0.0244	93.0	97.5	1	70.5-132			4.75	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0254	0.0245	102	98.1	1	64.9-145			3.73	20
Tetrachloroethene	0.0250	ND	0.0238	0.0253	95.4	101	1	57.4-141			6.05	20
Toluene	0.0250	0.00118	0.0245	0.0250	93.3	95.3	1	67.8-124			1.94	20
1,2,3-Trichlorobenzene	0.0250	ND	0.0242	0.0242	96.9	96.7	1	65.7-143			0.280	20
1,2,4-Trichlorobenzene	0.0250	ND	0.0240	0.0238	96.2	95.4	1	67.0-146			0.860	20
1,1,1-Trichloroethane	0.0250	ND	0.0210	0.0212	84.2	84.7	1	58.7-134			0.630	20
1,1,2-Trichloroethane	0.0250	ND	0.0241	0.0249	96.4	99.4	1	74.1-130			3.04	20
Trichloroethene	0.0250	0.124	0.129	0.133	20.5	35.5	1	48.9-148	V	V	2.86	20
Trichlorofluoromethane	0.0250	ND	0.0241	0.0231	96.4	92.4	1	39.9-165			4.26	20
1,2,3-Trichloropropane	0.0250	ND	0.0243	0.0232	97.1	92.6	1	71.5-134			4.74	20
1,2,4-Trimethylbenzene	0.0250	ND	0.0228	0.0246	91.3	98.5	1	60.5-137			7.62	20
1,3,5-Trimethylbenzene	0.0250	ND	0.0231	0.0248	92.3	99.4	1	67.9-134			7.35	20
Vinyl chloride	0.0250	ND	0.0225	0.0227	90.0	90.6	1	44.3-143			0.700	20
Xylenes, Total	0.0750	0.00147	0.0723	0.0774	94.5	101	1	65.6-133			6.81	20
(S) Toluene-d8					*101*	*102*		*90.0-115*				
(S) Dibromofluoromethane					*92.3*	*90.2*		*79.0-121*				
(S) 4-Bromofluorobenzene					*93.0*	*98.7*		*80.1-120*				

Method Blank (MB)

(MB) 09/15/15 13:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,4-Dioxane	U		0.000597	0.00300
(S) Toluene-d8	*95.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/15/15 12:08 • (LCSD) 09/15/15 12:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.0415	0.0514	82.9	103	70.0-130			21.3	25
(S) Toluene-d8				*95.8*	*95.5*	*70.0-130*				

L788267-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/15/15 14:40 • (MS) 09/15/15 17:44 • (MSD) 09/15/15 18:08

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	0.0500	0.0756	0.150	0.147	148	142	1	0.000-200			2.04	42
(S) Toluene-d8					*96.0*	*95.8*		*70.0-130*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

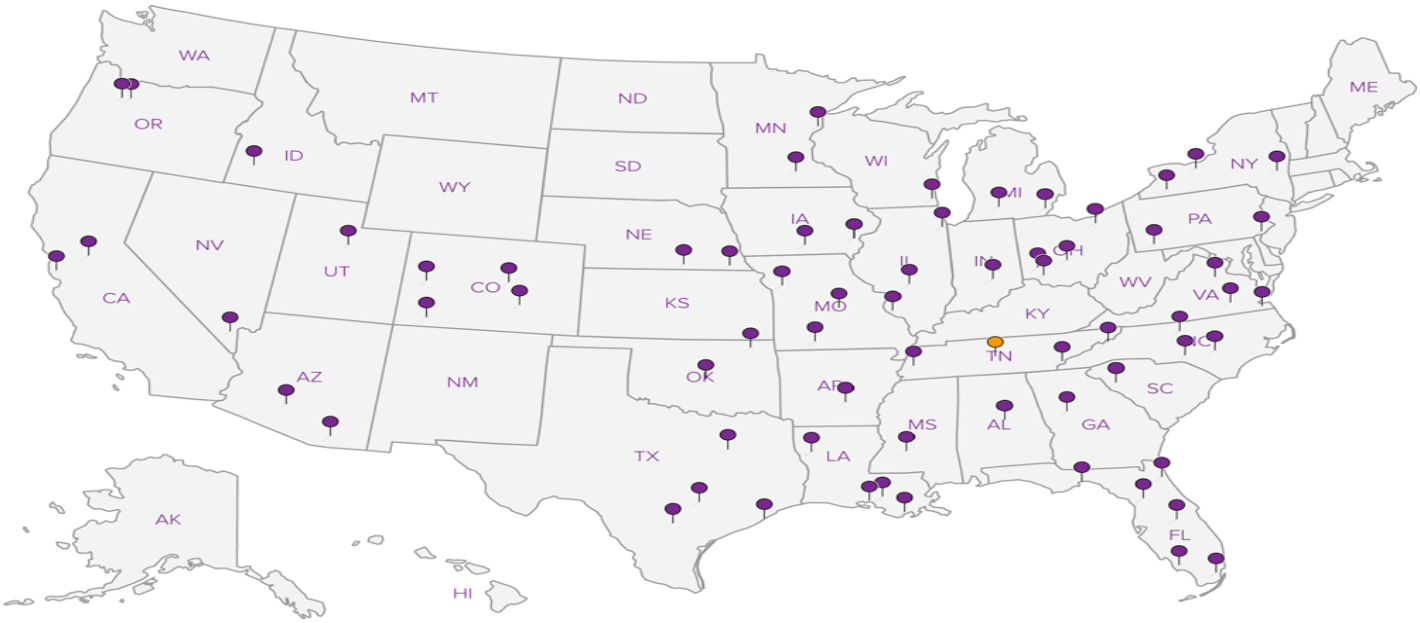
[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh , NC 27607

Billing Information:
Quote #:
ENSRNC021815S

Report to: Bob Wyrick

Email To: bob.wyrick@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60341618.2

Lab Project #

Site/Facility ID #

P.O. #

Collected by (print): A.C. Whichard
Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L787282
C241

Acctnum: ENSRNC
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260LL: 4 x 40ml amber VOAs w/ HCl	14 D x 8260SIM: 2 z 40ml amber VOAs w/ HCl	Cr & Ni x 6010: 250 HDPE-Nitric	Rem./Contaminant	Sample # (lab only)
mw-3	Grab	GW		9-2-15	0930	5	X		X		-01
mw-6	Grab	GW		9-2-15	1400	6	X	X			-02/-03
mw-6DR3	Grab	GW		9-2-15	1315	6	X	X			-03 -04/-05
mw-8	Grab	GW		9-1-15	1335	4	X				-04 -06
mw-8D	Grab	GW		9-1-15	1440	4	X				-05 -07
mw-8DR	Grab	GW		9-1-15	1410	4	X				-06 -08
mw-13	Grab	GW		9-3-15	1315	6	X	X			-07 -09/-10
mw-21	Grab	GW		9-1-15	1235	4	X				-08 -11
mw-21D	Grab	GW		9-1-15	1200	4	X				-09 -12
mw-29	Grab	GW		9-3-15	1230	6	X	X			-10 -13/-14

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Hold #

Condition: OK (lab use only)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9-4-15	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date: 9/4/15	Time: 16:45	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.8 °C Bottles Received: 164
Date: 9/5/15 Time: 700

COC Seal Intact: ___Y ___N ___NA
pH Checked: OK
NCF:

Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh, NC 27607

Billing Information:
Quote #: ENSRNC021815S

Report to: Bob Wyrick

Email To: bob.wyrick@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60341618.2

Lab Project #

Collected by (print): A. C. Whichard

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 6787282

Table #

Acctnum: ENSRNC

Template:

Prelogin:

TSR:

Cooler:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260LL: 4 x 40ml amber VOAs w/ HCl	14 D x 8260SIM: 2 z 40ml amber VOAs w/ HCl	Cr & Ni x 6010: 250 HDPE-Nitric								Rem./Contaminant	Sample # (lab only)
mw-32	Grab	GW		9-1-15	1055	6	X	X										~~11~~ -15/-16
mw-33	Grab	GW		9-1-15	1200	6	X	X										~~12~~ -17/18
mw-34	Grab	GW		9-1-15	1345	6	X	X										~~13~~ -19/-20
mw-36	Grab	GW		9-2-15	0800	4	X											~~14~~ -21
mw-38	Grab	GW		9-1-15	1050	4	X											~~15~~ -22
mw-39D	Grab	GW		9-1-15	0955	4	X											~~16~~ -23
mw-40D	Grab	GW		9-1-15	1020	4	X											~~17~~ -24
RW-4	Grab	GW		9-3-15	1515	7	X	X	X									~~18~~ -25/-26
RW-6	Grab	GW		9-3-15	1430	7	X	X	X									~~19~~ -27/-28
RW-19	Grab	GW		9-3-15	1350	7	X	X	X									~~20~~ -29/30

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9-4-15	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date: 9/4/15	Time: 16:45	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 164

Date: 9/5/15 Time: 700

Hold #

Condition: OK (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: L2

NCF:

Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh , NC 27607

Billing Information:
Quote #:
ENSRNC021815S

Report to:
Bob Wyrick

Email To:
bob.wyrick@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60341618.2

Lab Project #

Collected by (print): A.C. Whichard

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Immediately Packed on Ice N ___ Y X

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L787282
Table # L70
Acctnum: ENSRNC
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260LL: 4 x 40ml amber VOAs w/ HCl	14 D x 8260SIM: 2 z 40ml amber VOAs w/ HCl	Cr & Ni x 6010: 250 HDPE-Nitric	Rem./Contaminant	Sample # (lab only)
POC-1A	Grab	GW		9-2-15	1100	7	X	X	X		~~21~~ -31/-32
POC-1B	Grab	GW		9-2-15	1010	7	X	X	X		~~22~~ -33/-34
POC-2A	Grab	GW		9-2-15	1145	7	X	X	X		~~23~~ -35/-36
POC-2B	Grab	GW		9-2-15	1230	7	X	X	X		~~24~~ -37/-38
Andrews-WSW	Grab	GW		9-3-15	1115	6	X	X			~~25~~ -39/-40
Perry-WSW	Grab	GW		9-3-15	1130	6	X	X			~~26~~ -41/-42
DUP-01-09022015	Grab	GW		9-2-15	—	4	X				~~27~~ -43
DUP-02-09032015	Grab	GW		9-3-15	—	7	X	X	X		~~28~~ -44/-45
EB-01-09022015	Grab	GW		9-2-15	0730	7	X	X	X		~~29~~ -46/-47
Trip Blank	Grab	GW		—	—	2	X				~~30~~ -48

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 164

Date: 9/5/15 Time: 700

Hold #

Condition: ok (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: ok

NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9-4-15	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
	9/4/15	16:45	

Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh , NC 27607

Billing Information:
Quote #:
ENSRNC021815S

Report to: Bob Wyrick

Email To: bob.wyrick@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60341618.2

Lab Project #

Site/Facility ID #

P.O. #

Collected by (print): A.C. Whichard
Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L787282
C241

Acctnum: ENSRNC
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260LL: 4 x 40ml amber VOAs w/ HCl	14 D x 8260SIM: 2 z 40ml amber VOAs w/ HCl	Cr & Ni x 6010: 250 HDPE-Nitric	Rem./Contaminant	Sample # (lab only)
mw-3	Grab	GW		9-2-15	0930	5	X		X		-01
mw-6	Grab	GW		9-2-15	1400	6	X	X			-02/-03
mw-6DR3	Grab	GW		9-2-15	1315	6	X	X			-03 -04/-05
mw-8	Grab	GW		9-1-15	1335	4	X				-04 -06
mw-8D	Grab	GW		9-1-15	1440	4	X				-05 -07
mw-8DR	Grab	GW		9-1-15	1410	4	X				-06 -08
mw-13	Grab	GW		9-3-15	1315	6	X	X			-07 -09/-10
mw-21	Grab	GW		9-1-15	1235	4	X				-08 -11
mw-21D	Grab	GW		9-1-15	1200	4	X				-09 -12
mw-29	Grab	GW		9-3-15	1230	6	X	X			-10 -13/-14

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Hold #

Condition: OK (lab use only)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9-4-15	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date: 9/4/15	Time: 16:45	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.8 °C Bottles Received: 164
Date: 9/5/15 Time: 700

COC Seal Intact: ___Y ___N ___NA
pH Checked: OK
NCF:

Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh, NC 27607

Billing Information:
Quote #: ENSRNC021815S

Report to: Bob Wyrick

Email To: bob.wyrick@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60341618.2

Lab Project #

Collected by (print): A. C. Whichard

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 6787282

Table #

Acctnum: ENSRNC

Template:

Prelogin:

TSR:

Cooler:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260LL: 4 x 40ml amber VOAs w/ HCl	14 D x 8260SIM: 2 z 40ml amber VOAs w/ HCl	Cr & Ni x 6010: 250 HDPE-Nitric								Rem./Contaminant	Sample # (lab only)
mw-32	Grab	GW		9-1-15	1055	6	X	X										~~11~~ -15/-16
mw-33	Grab	GW		9-1-15	1200	6	X	X										~~12~~ -17/18
mw-34	Grab	GW		9-1-15	1345	6	X	X										~~13~~ -19/-20
mw-36	Grab	GW		9-2-15	0800	4	X											~~14~~ -21
mw-38	Grab	GW		9-1-15	1050	4	X											~~15~~ -22
mw-39D	Grab	GW		9-1-15	0955	4	X											~~16~~ -23
mw-40D	Grab	GW		9-1-15	1020	4	X											~~17~~ -24
RW-4	Grab	GW		9-3-15	1515	7	X	X	X									~~18~~ -25/-26
RW-6	Grab	GW		9-3-15	1430	7	X	X	X									~~19~~ -27/-28
RW-19	Grab	GW		9-3-15	1350	7	X	X	X									~~20~~ -29/30

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9-4-15	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date: 9/4/15	Time: 16:45	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 164

Date: 9/5/15 Time: 700

Hold #

Condition: OK (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: L2

NCF:

Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh , NC 27607

Billing Information:
Quote #:
ENSRNC021815S

Report to:
Bob Wyrick

Email To:
bob.wyrick@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60341618.2

Lab Project #

Collected by (print): A.C. Whichard

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Immediately Packed on Ice N ___ Y X

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L787282
Table # L70
Acctnum: ENSRNC
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260LL: 4 x 40ml amber VOAs w/ HCl	14 D x 8260SIM: 2 z 40ml amber VOAs w/ HCl	Cr & Ni x 6010: 250 HDPE-Nitric	Rem./Contaminant	Sample # (lab only)
POC-1A	Grab	GW		9-2-15	1100	7	X	X	X		~~21~~ -31/-32
POC-1B	Grab	GW		9-2-15	1010	7	X	X	X		~~22~~ -33/-34
POC-2A	Grab	GW		9-2-15	1145	7	X	X	X		~~23~~ -35/-36
POC-2B	Grab	GW		9-2-15	1230	7	X	X	X		~~24~~ -37/-38
Andrews-WSW	Grab	GW		9-3-15	1115	6	X	X			~~25~~ -39/-40
Perry-WSW	Grab	GW		9-3-15	1130	6	X	X			~~26~~ -41/-42
DUP-01-09022015	Grab	GW		9-2-15	—	4	X				~~27~~ -43
DUP-02-09032015	Grab	GW		9-3-15	—	7	X	X	X		~~28~~ -44/-45
EB-01-09022015	Grab	GW		9-2-15	0730	7	X	X	X		~~29~~ -46/-47
Trip Blank	Grab	GW		—	—	2	X				~~30~~ -48

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 164

Date: 9/5/15 Time: 700

Hold #

Condition: ok (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: ok

NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	9-4-15	1000	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
	9/4/15	16:45	

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Mr. Matthew Allen
AECOM, Inc - Raleigh, NC
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607

Report Summary

Friday July 10, 2015

Report Number: L774897
Samples Received: 07/03/15
Client Project: 60320722.4

Description: Parker Wake Forrest

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

Entire Report Reviewed By: Terrie Fudge

Terrie Fudge, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences.
Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Matthew Allen
AECOM, Inc - Raleigh, NC
701 Corporate Center Drive, Suite 4
Raleigh, NC 27607

July 10,2015

ESC Sample # : L774897-01

Date Received : July 03, 2015
Description : Parker Wake Forrest

Site ID :

Sample ID : INFLUENT

Project # : 60320722.4

Collected By : A.C. Whichard
Collection Date : 07/02/15 11:00

Parameter	Result	Det. Limit	Units	Qualifier	Method	Date	Dil.
Nitrate	1200	100	ug/l		9056	07/03/15	1
Nitrite	BDL	100	ug/l		9056	07/03/15	1
Mercury	0.65	0.20	ug/l		7470A	07/06/15	1
Arsenic	BDL	10.	ug/l		6010C	07/09/15	1
Barium	440	5.0	ug/l		6010C	07/09/15	1
Cadmium	BDL	2.0	ug/l		6010C	07/09/15	1
Chromium	550	10.	ug/l		6010C	07/09/15	1
Copper	1200	10.	ug/l		6010C	07/09/15	1
Nickel	190	10.	ug/l		6010C	07/09/15	1
Selenium	BDL	10.	ug/l		6010C	07/09/15	1
Silver	5.2	5.0	ug/l		6010C	07/09/15	1
Zinc	1900	50.	ug/l		6010C	07/09/15	1
Volatile Organics							
Acetone	BDL	50.	ug/l		8260B	07/05/15	1
Benzene	BDL	1.0	ug/l		8260B	07/05/15	1
Bromodichloromethane	BDL	1.0	ug/l		8260B	07/05/15	1
Carbon Disulfide	BDL	1.0	ug/l		8260B	07/05/15	1
Chlorodibromomethane	BDL	1.0	ug/l		8260B	07/05/15	1
Chloroform	BDL	5.0	ug/l		8260B	07/05/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l		8260B	07/05/15	1
1,1-Dichloroethane	BDL	1.0	ug/l		8260B	07/05/15	1
1,2-Dichloroethane	BDL	1.0	ug/l		8260B	07/05/15	1
1,1-Dichloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
cis-1,2-Dichloroethene	96.	1.0	ug/l		8260B	07/05/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
1,2-Dichloropropane	BDL	1.0	ug/l		8260B	07/05/15	1
2-Butanone (MEK)	BDL	10.	ug/l		8260B	07/05/15	1
Tetrachloroethene	7.7	1.0	ug/l		8260B	07/05/15	1
Toluene	BDL	5.0	ug/l		8260B	07/05/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l		8260B	07/05/15	1
Trichloroethene	200	1.0	ug/l		8260B	07/05/15	1
Trichlorofluoromethane	BDL	5.0	ug/l		8260B	07/05/15	1
Vinyl chloride	BDL	1.0	ug/l		8260B	07/05/15	1
Surrogate Recovery							
Toluene-d8	101.		% Rec.		8260B	07/05/15	1
Dibromofluoromethane	98.6		% Rec.		8260B	07/05/15	1
4-Bromofluorobenzene	106.		% Rec.		8260B	07/05/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 07/10/15 08:42 Printed: 07/10/15 08:43

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Matthew Allen
AECOM, Inc - Raleigh, NC
701 Corporate Center Drive, Suite 4
Raleigh, NC 27607

July 10, 2015

ESC Sample # : L774897-02

Date Received : July 03, 2015
Description : Parker Wake Forest

Site ID :

Sample ID : EFFLUENT

Project # : 60320722.4

Collected By : A.C. Whichard
Collection Date : 07/02/15 11:10

Parameter	Result	Det. Limit	Units	Qualifier	Method	Date	Dil.
Nitrate	1600	100	ug/l		9056	07/03/15	1
Nitrite	BDL	100	ug/l		9056	07/03/15	1
Mercury	BDL	0.20	ug/l		7470A	07/06/15	1
Arsenic	BDL	10.	ug/l		6010C	07/09/15	1
Barium	55.	5.0	ug/l		6010C	07/09/15	1
Cadmium	BDL	2.0	ug/l		6010C	07/09/15	1
Chromium	BDL	10.	ug/l		6010C	07/09/15	1
Copper	BDL	10.	ug/l		6010C	07/09/15	1
Nickel	BDL	10.	ug/l		6010C	07/09/15	1
Selenium	BDL	10.	ug/l		6010C	07/09/15	1
Silver	BDL	5.0	ug/l		6010C	07/09/15	1
Zinc	50.	50.	ug/l		6010C	07/09/15	1
Volatile Organics							
Acetone	BDL	50.	ug/l		8260B	07/05/15	1
Benzene	BDL	1.0	ug/l		8260B	07/05/15	1
Bromodichloromethane	BDL	1.0	ug/l		8260B	07/05/15	1
Carbon Disulfide	BDL	1.0	ug/l		8260B	07/05/15	1
Chlorodibromomethane	BDL	1.0	ug/l		8260B	07/05/15	1
Chloroform	BDL	5.0	ug/l		8260B	07/05/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l		8260B	07/05/15	1
1,1-Dichloroethane	BDL	1.0	ug/l		8260B	07/05/15	1
1,2-Dichloroethane	BDL	1.0	ug/l		8260B	07/05/15	1
1,1-Dichloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
1,2-Dichloropropane	BDL	1.0	ug/l		8260B	07/05/15	1
2-Butanone (MEK)	BDL	10.	ug/l		8260B	07/05/15	1
Tetrachloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
Toluene	BDL	5.0	ug/l		8260B	07/05/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l		8260B	07/05/15	1
Trichloroethene	BDL	1.0	ug/l		8260B	07/05/15	1
Trichlorofluoromethane	BDL	5.0	ug/l		8260B	07/05/15	1
Vinyl chloride	BDL	1.0	ug/l		8260B	07/05/15	1
Surrogate Recovery							
Toluene-d8	104.		% Rec.		8260B	07/05/15	1
Dibromofluoromethane	101.		% Rec.		8260B	07/05/15	1
4-Bromofluorobenzene	106.		% Rec.		8260B	07/05/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 07/10/15 08:42 Printed: 07/10/15 08:43

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Matthew Allen
AECOM, Inc - Raleigh, NC
701 Corporate Center Drive, Suite 4
Raleigh, NC 27607

July 10, 2015

ESC Sample # : L774897-03

Date Received : July 03, 2015
Description : Parker Wake Forest

Site ID :

Sample ID : TRIP BLANK

Project # : 60320722.4

Collected By : A.C. Whichard
Collection Date : 07/02/15 00:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	07/05/15	1
Benzene	U	0.33	1.0	ug/l		8260B	07/05/15	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	07/05/15	1
Carbon Disulfide	U	0.28	1.0	ug/l		8260B	07/05/15	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	07/05/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	07/05/15	1
Dichlorodifluoromethane	U	0.55	5.0	ug/l		8260B	07/05/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	07/05/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	07/05/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	07/05/15	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	07/05/15	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	07/05/15	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	07/05/15	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	07/05/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	07/05/15	1
Toluene	U	0.78	5.0	ug/l		8260B	07/05/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	07/05/15	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	07/05/15	1
Trichlorofluoromethane	U	1.2	5.0	ug/l		8260B	07/05/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	07/05/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	07/05/15	1
Dibromofluoromethane	102.			% Rec.		8260B	07/05/15	1
4-Bromofluorobenzene	105.			% Rec.		8260B	07/05/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 07/10/15 08:42 Printed: 07/10/15 08:43

Company Name/Address:
AECOM
701 Corporate Center Drive
Suite 475
Raleigh , NC 27607

Billing Information:

Report to: Matt Allen

Email To: matthew.allen@aecom.com

Project Description: Parker Wake Forest

City/State Collected: Wake Forest, NC

Phone: 919-872-6600
Fax:

Client Project # 60320722.4

Lab Project #

Collected by (print): A.C. Wickard

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L774897

Ta B230

Acctnum: ENSRNC
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs x 8260: 2 x 40ml amber VOAs w/ HCl	Metals: 250 HDPE-Nitric	SV8270: 2 x 100ml amber bottles-NoPres	Nitrate & Nitrite: 125 HDPE-NoPres	Rem./Contaminant	Sample # (lab only)
Influent	Grab	water		7-2-15	1100	4	X	X		X		-01
Effluent	Grab	water		7-2-15	1110	4	X	X		X		02
trip Blank	Grab	water		—	—	1	X					03

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: 6781 2040 4517

pH _____ Temp _____
Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	7-2-15	1230	Fedex
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.9 °C Bottles Received: 9

Date: 7/3/15 Time: 0900

Hold #

Condition: F (lab use only) DTW

COC Seal Intact: ____Y ____N ____NA

pH Checked: <2

NCF: ✓

ESC Lab Sciences
Non-Conformance Form

Login #: L774897	Client: ENSRNC	Date: 7/3/15	Evaluated by: Scott

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type	x	Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: What Metals?

Client informed by:		Call		Email		Voice Mail		Date: 7/3/15	Time: 1207
TSR Initials:tf	Client Contact:								

Login Instructions:

[Terrie Fudge] run the same metals listed on L761715

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

VAPORTECH Services, Inc.

9/17/2015

Mr. Matt Allen
AECOM
701 Corporate Center Drive
Suite 475
Raleigh, NC 27607

Dear Matt:

Enclosed are the sample data report, chain of custody record and quality control data for the sample(s) received on September 10, 2015 for your project; 60341618.2 - Wake Forest, NC .

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road, Suite 201, Valencia, PA 16059
Ph: 724-898-2622 Fx: 724-898-2633 www.vaportechservices.com

Vaportech Services, Inc

AEM303-5253

AECOM
Project: 60341618.2 - Wake Forest, NC

CONCENTRATIONS IN ug/m3

COMPOUND	SVE-4	SVE-5	SVE-6	EFFLUENT	INFLUENT	PQL
1,1 DICHLOROETHYLENE	ND	ND	ND	ND	ND	40
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	348
TRANS-1,2 DICHLOROETHYLENE	ND	ND	ND	ND	ND	40
1,1 DICHLOROETHANE	ND	ND	ND	ND	ND	81
CIS-1,2 DICHLOROETHYLENE	167	ND	48	ND	95	40
CHLOROFORM	ND	ND	ND	ND	ND	24
1,1,1 TRICHLOROETHANE	ND	ND	ND	ND	ND	27
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	32
TRICHLOROETHYLENE	813	248	6080	921	1756	27
TETRACHLOROETHYLENE	1651	360	306	245	428	34

FILE NAME	V81B.570.BND	V81B.571.BND	V81B.572.BND	V81B.573.BND	V81B.574.BND
DATE SAMPLED	09/03/15	09/03/15	09/03/15	09/03/15	09/03/15
DATE RECEIVED	09/10/15	09/10/15	09/10/15	09/10/15	09/10/15
DATE ANALYZED	09/12/15	09/12/15	09/12/15	09/12/15	09/12/15

PQL - 'Practical Quantitation Limit'
ND - 'Not Detected' at or above the lower practical quantitation limit

17-Sep-15

Reviewed by:_____

Vaportech Services, Inc

AECOM
Quality Control
Laboratory Project(s): 5253

CONTINUING CALIBRATION CHECK

STANDARDS: 21V-R4
FILE NAME: V81B.558.BND
DATE ANALYZED: 09/12/15

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
1,1 DICHLOROETHYLENE	1.01	0.90	11.09
METHYLENE CHLORIDE	1.15	1.09	5.65
TRANS-1,2 DICHLOROETHYLENE	1.01	0.86	15.05
1,1 DICHLOROETHANE	0.99	0.96	2.63
CIS-1,2 DICHLOROETHYLENE	1.01	1.01	0.20
CHLOROFORM	0.820	0.811	1.10
1,1,1 TRICHLOROETHANE	0.730	0.710	2.74
CARBON TETRACHLORIDE	0.640	0.617	3.59
TRICHLOROETHYLENE	0.740	0.732	1.08
TETRACHLOROETHYLENE	0.590	0.571	3.22

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V81B.556.BND
DATE ANALYZED: 09/12/15

COMPOUND	BLANK (PPMV)	PRACTICAL QUANTITATION LIMIT (PPMV)
1,1 DICHLOROETHYLENE	ND	0.01
METHYLENE CHLORIDE	ND	0.05
TRANS-1,2 DICHLOROETHYLENE	ND	0.01
1,1 DICHLOROETHANE	ND	0.02
CIS-1,2 DICHLOROETHYLENE	ND	0.01
CHLOROFORM	ND	0.005
1,1,1 TRICHLOROETHANE	ND	0.005
CARBON TETRACHLORIDE	ND	0.005
TRICHLOROETHYLENE	ND	0.005
TETRACHLOROETHYLENE	ND	0.005

ND - 'Not Detected' at or above the lower practical quantitation limit

17-Sep-15

Reviewed by:

AEM303 - 5253

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: AECOM
Address: 701 Corporate Center Dr Suite 475
City: Raleigh **State:** NC **Zip:** 27607
Proj. Manager: Matt Allen
Proj. Location: Wake Forest, NC
Proj. Number: 60341618.2
Phone #: 919-239-7160 **Fax #:**

Sampler's signature:

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
9-3-15	1545	2	Air	Influent	I					12
9-3-15	1550	2	Air	Effluent	I					12
9-3-15	1555	2	Air	SVE-4	I					>10
9-3-15	1600	2	Air	SVE-5	I					12
9-3-15	1605	2	Air	SVE-6	I					9

Results to : mathew.allen@aecom.com

Invoice to : Same

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
	AECOM	9-9-15	0800	[illegible]	Vaportech	9/10/15	1200
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A *Fortune 500* firm, AECOM companies have annual revenue of approximately US$18 billion. See how we deliver what others can only imagine at aecom.com and @AECOM.

AECOM
1600 Perimeter Park Drive, Suite 400
Morrisville, North Carolina 27560
T: +1.919.461.1100
F: +1.919.461.1415