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February 19, 2020

Mr. John Sager
Wisconsin Department of Natural Resources
1701 N. 4th Street
Superior, WI 54880
(715) 392-7822

**RE: 2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility
Superior, Wisconsin
WID 006 179 493**

Dear Mr. Sager:

On behalf of Beazer East, Inc. (Beazer), Field & Technical Services, LLC (FTS) is submitting to the Wisconsin Department of Natural Resources (WDNR) the 2019 RCRA Annual Groundwater Monitoring Report for the above-referenced facility.

If you have any questions, please contact me at (412) 429-2694.

Sincerely,

Field & Technical Services LLC

Angie Gatchie
Project Scientist

Attachments: Original Report (hardcopy) and CD (electronic copy)

cc: D. Panofsky, WDNR
L. Paul, Koppers Inc. (electronic copy only)
J. Patarcity, Beazer East (electronic copy only)
D. Bessingpass (.pdf transmittal)
H. Pappert, FTS – site copy

**2019 RCRA ANNUAL
GROUNDWATER MONITORING REPORT**

**Former Koppers Inc. Facility
Superior, Wisconsin
EPA ID No.: WID 006 176 493**

Prepared for:

Beazer East, Inc.

Prepared by:

Field & Technical Services, LLC
200 Third Avenue
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February 19, 2020

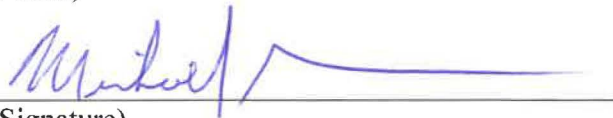
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Document: **2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility
Superior, Wisconsin
EPA ID No. WID 006 176 493**

Michael Slenska

(Name)



(Signature)

President

(Title)

Beazer East, Inc.

(Company Name)

2-18-2020

(Date)

PROFESSIONAL GEOLOGIST CERTIFICATION

“I, Thomas E. Jordan, hereby certify that to the best of my knowledge, all information contained in this document is correct and I have personally examined this report, and I am familiar with the information and all attachments herein. Furthermore, based on my inquiry of those persons immediately responsible for obtaining the information contained in this report, I believe that the information is true, accurate, and complete.”

Document: **2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility
Superior, Wisconsin
EPA ID No. WID 006 176 493**



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Key Environmental, Inc.
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01/24/2020

Date



TABLE OF CONTENTS

LIST OF TABLES ii
LIST OF FIGURES ii
LIST OF APPENDICES ii
ABBREVIATIONS/ACRONYMS iii

1.0 INTRODUCTION..... 1

1.1 SITE DESCRIPTION 1
1.2 PROJECT BACKGROUND 2
1.3 CURRENT GROUNDWATER SAMPLING ACTIVITIES 3
1.4 MONITORING WELL STATUS..... 4
1.5 DOCUMENT ORGANIZATION 4

2.0 SITE GEOLOGIC AND HYDROLOGIC CONDITIONS 5

2.1 SITE GEOLOGY 5
2.2 GROUNDWATER 5

3.0 GROUNDWATER MONITORING RESULTS..... 10

3.1 SEMI-VOLATILE ORGANIC COMPOUNDS..... 10
3.2 DIOXINS AND FURANS..... 10
3.3 VOLATILE ORGANIC COMPOUNDS 11
3.4 DATA TRENDS..... 11
3.4.1 A-ZONE WELLS 11
3.4.2 C-ZONE WELLS 12
3.4.3 D-ZONE WELLS 12

4.0 CURRENT SITE STATUS 13

5.0 REFERENCES..... 14

LIST OF TABLES

Table 1	Current Monitoring Well Network
Table 2A	First Semi-Annual 2019 Groundwater Elevations
Table 2B	Second Semi-Annual 2019 Groundwater Elevations
Table 3	Summary of 2019 Vertical Gradients
Table 4	2019 Horizontal Groundwater Flow Velocities for the A-Zone
Table 5	2019 Horizontal Groundwater Flow Velocities for the C-Zone
Table 6	Summary of 2019 Vertical Groundwater Flow Velocities for the A to C Zones
Table 7	Constituent Groups and EPA Analytical Methods
Table 8	Summary of Regulatory Exceedances, First and Second Semi-Annual 2019 Sampling Events
Table 9	Toxicity Equivalent Quotients of Detected Dioxins and Furans

LIST OF FIGURES

Figure 1	Site Map
Figure 2	Groundwater Elevation Contours A-Zone Wells (April 29, 2019)
Figure 3	Groundwater Elevation Contours C-Zone Wells (April 29, 2019)
Figure 4	Groundwater Elevation Contours A-Zone Wells (October 15, 2019)
Figure 5	Groundwater Elevation Contours C-Zone Wells (October 15, 2019)
Figure 6	April and October 2019 Constituents of Interest
Figure 7	A-Zone Parameter Concentration Trends of Benzene, Chrysene, Naphthalene, Pentachlorophenol

LIST OF APPENDICES

Appendix A	Project Activity Milestone Summary
Appendix B	Field Data and Notes <ul style="list-style-type: none">▪ First Semi-Annual Event▪ Second Semi-Annual Event
Appendix C	Analytical Data <ul style="list-style-type: none">▪ First Semi-Annual Event▪ Second Semi-Annual Event
Appendix D	Data Summary Tables <ul style="list-style-type: none">▪ First Semi-Annual Event▪ Second Semi-Annual Event
Appendix E	Linear Regression Analysis

ABBREVIATIONS/ACRONYMS

2002 SAP	Groundwater Monitoring Sampling Analysis Plan dated April 2002 approved by WDNR on October 29, 2002
AMEC	AMEC Earth and Environmental, Inc.
Beazer	Beazer East, Inc.
CAMU	Corrective Action Management Unit
CMI	Corrective Measures Implementation
CMS	Corrective Measures Study
DMZ	Design Management Zone
DNAPL	Dense Non-Aqueous Phase Liquid
ES	Wisconsin Enforcement Standards
ft/day	feet per day
ft-bgs	feet below ground surface
ft-btoc	feet below top of casing
FCMS	Focused Corrective Measures Study
FTS	Field & Technical Services, LLC
HHRA	Human Health Risk Assessment
HHERA	Human Health and Ecological Risk Assessment
HSWA	Hazardous and Solid Waste Amendments
ILR	Interim Letter Report
Koppers	Koppers Inc.
MCL	USEPA Maximum Contaminant Levels
ug/l	micrograms per liter
PAH	Polycyclic Aromatic Hydrocarbon
PAL	Wisconsin Preventative Action Limits
Plan Approval	Conditional Closure and Long-Term Care Plan Approval dated October 1, 1987
Plan Approval Modification	Conditional Closure and Long Term Care Plan Approval Modification dated October 29, 2002
PWP	Project Work Plan
RCRA	Resource Conservation and Recovery Act
RETEC	The RETEC Group, Inc.
SAP	Sampling and Analysis Plan
Site	Former Koppers Inc. Facility, Superior, Wisconsin
SVOC	Semi-Volatile Organic Constituent
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TEF	Toxicity Equivalency Factor
TEQ	Toxicity Equivalent Quotient
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Constituent
WDNR	Wisconsin Department of Natural Resources
WHO	World Health Organization

1.0 INTRODUCTION

Field and Technical Services, LLC (FTS), on behalf of Beazer East, Inc. (Beazer), prepared this 2019 Resource Conservation and Recovery Act (RCRA) Annual Groundwater Monitoring Report to summarize the compliance groundwater monitoring data collected in 2019 at the former Koppers Inc. (Koppers) facility (Site) located in Superior, Wisconsin.

The purpose of the compliance groundwater monitoring program is to evaluate groundwater quality in the vicinity of two closed surface impoundments, which comprise a single RCRA-regulated unit at the Site. Beazer implements this program in accordance with the following documents and regulations:

- The Conditional Closure and Long-Term Care Plan Approval (Plan Approval) (Wisconsin Department of Natural Resources [WDNR], October 1, 1987);
- The Conditional Closure and Long Term Care Plan Approval Modification (Plan Approval Modification) (WDNR, October 29, 2002);
- Wisconsin Administrative Code NR 664, subchapter F (formerly NR 635); and
- The Site Sampling Analysis Plan (2002 SAP) (The RETEC Group, Inc. [RETEC], April 2002).

Consistent with the requirements established by these documents, this report summarizes the data for two semi-annual sampling events performed in 2019, includes discussions of data trends as well as analytical data trend maps, and presents the annual determination of groundwater flow rate and direction.

1.1 SITE DESCRIPTION

The 112-acre Site is located in northwestern Wisconsin (at the junction of County Roads A and Z), approximately five miles southeast of the town of Superior, in Douglas County. Figure 1 shows the general configuration of the Site. The area immediately surrounding the Site is sparsely populated and consists primarily of brush, woodland, and marshy areas.

1.2 PROJECT BACKGROUND

The facility historically produced pressure-treated railroad cross ties, bridge timbers, switch ties, and crossing panels using creosote (in a No. 6 fuel oil carrier) as the primary preservative. From 1955 through 1979, the facility treated telephone poles using a petroleum oil preservative containing pentachlorophenol. Koppers Inc. (the prior facility owner) discontinued all wood treating operations at the Site in 2006. The former process facilities have been dismantled and removed from the Site. The Site is currently used by TRP Properties, LLC (the current property owner) as a railroad tie grinding facility. In addition, Koppers Inc. leases portions of the property for storage and transfer of untreated railroad ties.

Prior to 1988, the facility was owned and operated by Koppers Company, Inc. In June 1988, BNS Acquisitions, Inc. (a wholly-owned subsidiary of Beazer PLC) acquired 90 percent of the stock of Koppers Company Inc. On December 28, 1988, the Superior facility was sold to Koppers Industries, Inc., and on January 26, 1989 the name Koppers Company Inc. was changed to Beazer Materials and Services, Inc. On April 16, 1990, the name Beazer Materials and Services, Inc. was changed to Beazer East, Inc. The name Koppers Industries, Inc. was changed to Koppers Inc. in February 2003. Koppers Inc. sold the property to TRP Properties, LLC in September 2012. Beazer East, Inc. retains certain environmental responsibilities at the Site, including monitoring and maintenance associated with the closed RCRA surface impoundments.

In 1977, four non-RCRA wastewater impoundments were constructed as part of the facility's wastewater treatment system. The impoundments were closed in 1982 by removing the water and excavating sludges and soils for off-Site disposal.

In 1982, following closure of the non-RCRA wastewater impoundments, two clay-lined impoundments (the RCRA regulated unit) were constructed to store process wastewater following oil-water separation. These units were considered RCRA units because they contained K001 waste (bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol). However, it should be noted that the use of pentachlorophenol as a wood preservative at the Superior facility was discontinued in 1979, three years prior to the construction of the RCRA impoundments. Thus, the RCRA impoundments are not expected to have received wastewater containing pentachlorophenol.

The areal dimensions of the RCRA impoundment system (including berms) are approximately 350 feet by 220 feet. As shown on Figure 1, a portion of the RCRA impoundment system overlies two of the southern non-RCRA impoundments. The non-RCRA impoundments extended north of the RCRA impoundment system by approximately 400 feet.

Closure activities for the RCRA impoundment system were initiated in the early part of 1988. Wastewater and sludges were removed and taken off-site for disposal prior to closure. The RCRA impoundments were closed in 1989. The closure activities were conducted in accordance with a Closure and Post-Closure Care Plan (Keystone, 1987) and associated Conditional Closure and Long-Term Care Plan Approval (WDNR, 1987). The completed closure activities were documented in a Construction Documentation Surface Impoundment Closure Report (Keystone, 1989).

Appendix A contains a project activity milestone summary that describes significant project activities and regulatory deliverables.

1.3 CURRENT GROUNDWATER SAMPLING ACTIVITIES

As stated previously, Beazer is currently implementing this post-closure compliance groundwater monitoring program in accordance with the 2002 SAP (formally approved by the WDNR on October 29, 2002). The 2019 groundwater sampling activities were completed on the following dates:

- First semi-annual event - April 29, 2019 through May 1, 2019; and
- Second semi-annual event - October 15, 2019 through October 17, 2019.

A total of 37 wells comprised the monitoring well network during 2019 (Figure 1; Table 1). Three of these 37 wells (W-18D, W-33D, and W-34D) are D-zone (bedrock) wells that are not officially part of the NR 664 RCRA monitoring network, although one or more of these three wells have generally been gauged and/or sampled in conjunction with the semi-annual monitoring events over the last several years.

During the first and second semi-annual 2019 groundwater monitoring events, all existing monitoring wells were gauged to evaluate groundwater flow patterns, and groundwater samples were collected from 10 wells for laboratory analysis (Appendix B contains the field forms from both events). The 10 wells sampled included:

- Upgradient (background) monitoring wells W-04AR2 and W-28C;
- Side-gradient or downgradient monitoring wells W-06A, W-06C, W-10AR2, W-12A, W-12CR, W-30A, and W-30C; and
- Bedrock monitoring well W-18D.

Well W-18D is not a required component of the approved monitoring program, but is sampled periodically at Beazer's discretion. The other nine wells that were sampled represent the required sampling component of the approved RCRA groundwater monitoring program.

1.4 MONITORING WELL STATUS

Monitoring well inspections were performed during both the first and second 2019 semi-annual sampling events. All of the monitoring wells were reported to be in good condition with no major repairs required during the April 2019 and October 2019 well inspections.

1.5 DOCUMENT ORGANIZATION

The remainder of the 2019 RCRA Annual Groundwater Monitoring Report is organized in the following manner:

- Section 2 – Site Geologic and Hydrologic Conditions
- Section 3 – Groundwater Monitoring Results
- Section 4 – Current Site Status
- Section 5 – References

2.0 SITE GEOLOGIC AND HYDROLOGIC CONDITIONS

The information summarized in Sections 2.1 and 2.2 is based on details presented in previous reports for the Site.

2.1 SITE GEOLOGY

In some areas of the Site, primarily in the vicinity of the former treatment area, a thin layer of fill material is present at the ground surface. However, most of the Site is underlain by a sequence of Quaternary sediments deposited by continental glaciers. Three of the four stratigraphic zones of interest at the Site are within in these deposits.

The uppermost stratigraphic unit is a red-brown clay deposit, which likely represents a till composed of reworked lake bottom sediments. The upper approximately 15 feet of the red-brown clay contains hairline fractures filled with greenish gray silt and clay. The shallow (A-zone) and intermediate (B-zone) zones consist primarily of this clay with little to no sand or gravel.

The lower regions of the red-brown clay unit, which represent the deep zone (C-zone) at the Site, contain discontinuous deposits of fine- to coarse-grained sand and silt. These discontinuous fine to coarse grained deposits occur at depths that vary from approximately 35 to 50 feet below ground surface (ft-bgs) in certain areas of the Site.

The clay unit continues beneath the discontinuous sand and silt deposits to the top of the Precambrian Lake Superior Sandstone, the uppermost bedrock (D-zone) at the Site. The Precambrian Lake Superior Sandstone occurs regionally at a depth of approximately 170 ft-bgs.

2.2 GROUNDWATER

Perched groundwater may be temporarily retained in the thin fill layer (where present). However, across most of the Site, the uppermost groundwater occurs in an unconfined state within the thick red-brown clay (an aquitard). The A-zone monitoring wells monitor the water table in this shallow clay with the bottom of the screened interval typically located approximately 13.0 to 15.5 ft-bgs. Depth to groundwater in the A-zone wells ranged from 1.96 to 8.48 ft-btoc during the April 2019 event (Table 2A), and from 1.28 to 7.26 ft-btoc during the October 2019 event (Table 2B). Previous geologic studies in the Superior area and aquifer testing at the Site show these clay deposits to have very low intergranular hydraulic conductivities. There are also three B-zone monitoring wells at the Site, which monitor slightly deeper zones within the shallow clay (bottom of the screened interval located approximately 32 to 35 ft-bgs). Depth to groundwater in the B-zone wells ranged from 5.87 to 7.60 ft-btoc during the April 2019 event (Table 2A), and from 6.11 to 7.70 ft-btoc during the October 2019 event (Table 2B).

The C-zone wells monitor groundwater in the discontinuous silt and sand within the clay unit and are generally screened at depths from approximately 39 to 49 ft-bgs. Groundwater occurs in a confined state within the C-zone. Depth to groundwater in the C-zone wells ranged from 10.44 to 15.22 ft-btoc in April 2019 (Table 2A), and from 10.69 to 15.36 ft-btoc in October 2019 (Table 2B).

Three D-zone wells (W-18D, W-33D, and W-34D) were installed in February 2000 to evaluate groundwater flow and quality in the bedrock zone. These wells are screened at depths of approximately 176 to 196 ft-bgs, and they monitor the Precambrian Lake Superior Sandstone, which is the uppermost bedrock at the Site. Depth to groundwater for the D-zone wells ranged from 37.00 to 45.05 ft-btoc during the April 2019 event (Table 2A) and from 37.64 to 46.02 ft-btoc during the October 2019 event (Table 2B).

Dense Non-Aqueous Phase Liquid (DNAPL)

All wells were gauged for the presence of dense non-aqueous phase liquid (DNAPL) on April 29, 2019 and October 15, 2019. DNAPL was not observed in any monitoring wells at the Site during either the April or the October 2019 monitoring events.

Groundwater Flow Directions

On April 29, 2019 and October 15, 2019, the FTS field crew measured and recorded water levels in the Site monitoring well network. Groundwater elevations calculated from these measurements for the first and second semi-annual events are presented in Tables 2A and 2B, respectively. Groundwater elevation contour maps for the A-zone and the C-zone are presented as Figures 2 through 5. Because there are only three D-zone wells at the Site, groundwater elevation contour maps are not prepared for the D-zone. However, based on the potentiometric surface elevations measured for the three wells, it appears that groundwater flow in the D-zone is to the north/northwest.

Historically, groundwater flow patterns in the shallow and intermediate clay indicate localized distortions to the overall northerly flow due to combined effects of variability in recharge; low hydraulic conductivity of the clay; and interactions with surface water (drainage ditches). However, groundwater elevation data consistently support a generally northerly flow direction for groundwater at the Site, which is to be expected based upon the location of regional receiving surface water bodies.

A-zone groundwater elevation contours are presented on Figure 2 (April 29, 2019) and Figure 4 (October 15, 2019). It should be noted that the development of meaningful A-zone groundwater elevation contours is complicated by the low hydraulic conductivity of the soil and the presence of drainage ditches. Due to these factors, variable groundwater flow patterns have been observed historically for the A-zone clay unit. Despite the varying patterns associated with contouring shallow groundwater in this setting, the

predominant groundwater flow direction in the A-zone is generally toward the north/northwest.

C-zone groundwater elevation contours are presented on Figure 3 (April 29, 2019) and Figure 5 (October 15, 2019). The groundwater flow direction in the C-zone is generally toward the north, although it should be noted that the sand lenses in the C-zone are discontinuous and are separated by the red-brown clay aquitard.

The groundwater flow directions in the A- and C-zones determined from the April and October 2019 groundwater elevation data are generally consistent with flow directions determined in previous years.

Vertical Hydraulic Gradients

Vertical gradients were calculated at each of the four A/C zone well nests (Table 3). Vertical gradients were calculated using the difference between the 2019 groundwater elevations at the monitored well nest, divided by the difference in elevation between the center points of the well screens. In special circumstances where the water level in the well is lower than the top of the well screen, then the denominator for this equation is modified to use the average between the elevation of the water level and the bottom of the well screen (see Table 3). By convention, the groundwater elevation of the shallower well is subtracted from the deeper well. If the result is positive, the potentiometric head in the deeper well is higher than the potentiometric head in the shallow well and, therefore, groundwater flows in an upward or positive direction. Conversely, if the result is negative, groundwater has a downward or negative vertical component.

Vertical hydraulic gradient calculations for the April and October 2019 monitoring events are presented in Table 3. Based on the 2019 water level data, the average vertical gradient between the A- and C-zones was -0.308 ft/ft for the April 2019 monitoring event and -0.302 ft/ft for the October 2019 monitoring event.

The calculated vertical gradients were negative for each well pair evaluated and for each monitoring event, indicating a downward vertical gradient, which is consistent with gradients calculated during previous years. Based on the magnitude of the gradients and low permeability of the A-zone soils, there is minimal hydraulic connection between the A- and C-zones.

Horizontal Hydraulic Gradients

FTS also calculated horizontal hydraulic gradients as presented in Tables 4 (A-Zone) and 5 (C-Zone). These tables list the wells, groundwater elevations, and horizontal distances used to calculate the gradients. Average horizontal hydraulic gradients for the A-zone were 0.0082 ft/ft for the April 2019 monitoring event, and 0.0088 ft/ft for the

October 2019 monitoring event. The average horizontal hydraulic gradient for the C-zone was calculated to be 0.0031 ft/ft and 0.0041 ft/ft for the April 2019 and October 2019 monitoring events, respectively. These gradients are generally consistent with gradients calculated during previous years.

Groundwater Flow Velocity

Both horizontal and vertical linear groundwater flow velocities were calculated using groundwater elevation data obtained for each semi-annual event. Groundwater velocity can be estimated using a variation of Darcy's Law:

$$V = \frac{ki}{n_e}$$

where:

- V = velocity
- k = hydraulic conductivity
- n_e = effective porosity
- i = hydraulic gradient

Based on correspondence with the WDNR, Beazer agreed to use two effective porosity values (0.01 and 0.3) when calculating groundwater flow velocities within the uppermost clay (i.e., A-zone). The average hydraulic conductivity for the A-zone is 3.28×10^{-3} feet per day (ft/day) which was determined from the slug test evaluation (Chester Environmental, 1995). The 0.3 value is used to evaluate flow through the pore space in the clay (primary porosity). The 0.01 value is used to evaluate the flow through the microfractures in the clay (secondary porosity). The average hydraulic conductivity in the C-zone is 22.6 ft/day which was determined from the slug test evaluation (Chester Environmental, 1995). An effective porosity of 0.2 is used for the discontinuous silt and sand unit (i.e., C-zone) (deMarsily, 1986; Freeze and Cherry, 1979).

Horizontal Groundwater Flow Velocity

Tables 4 and 5 present the procedures and results of the groundwater flow velocity calculations for the A- and C-zones, respectively. The estimated horizontal groundwater velocities for each of the zones, associated with the respective semi-annual sampling events, are summarized below.

A-zone:

- 2.7×10^{-3} ft/day (April) and 2.9×10^{-3} ft/day (October) ($n_e = 0.01$)
- 8.9×10^{-5} ft/day (April) and 9.7×10^{-5} ft/day (October) ($n_e = 0.3$)

C-zone:

3.5×10^{-1} ft/day (April) and 4.6×10^{-1} ft/day (October) ($n_e = 0.2$)

These average horizontal groundwater flow velocities represent an overestimate of the potential rate of dissolved constituent migration in groundwater. Actual constituent flow velocity is lower than calculated groundwater flow velocities because of attenuating effects including adsorption, within the water-bearing zone.

The horizontal groundwater flow velocities calculated using 2019 data are consistent with flow velocities calculated during previous years.

Vertical Groundwater Flow Velocity

Table 6 presents the procedures and results of the vertical groundwater flow velocity calculations. The estimated vertical groundwater velocities for the Site are:

A- to C-zone:

-2.2×10^{-3} ft/day (April) and -2.1×10^{-3} ft/day (October) ($n_e = 0.01$)

-7.3×10^{-5} ft/day (April) and -7.1×10^{-5} ft/day (October) ($n_e = 0.3$)

A hydraulic conductivity value of 7.1×10^{-5} ft/day, based on laboratory vertical permeability tests results, was used to calculate the vertical groundwater velocities. The groundwater flow direction is downward (i.e., negative velocity value). These average linear groundwater flow velocities represent an overestimate of the potential rate of dissolved constituent migration in groundwater. Actual constituent flow velocity is lower than calculated groundwater flow velocities because of attenuating effects including adsorption, within the water-bearing zone. As indicated above, based on the magnitude of the gradients and low permeability of the A-zone soils, there is minimal hydraulic connection between the A and C zones.

The vertical groundwater flow velocities calculated using 2019 data are consistent with flow velocities calculated during previous years.

3.0 GROUNDWATER MONITORING RESULTS

This section summarizes the groundwater sample analytical results for the 2019 semi-annual sampling events. Table 7 lists the general constituent groups and corresponding United States Environmental Protection Agency (USEPA) analytical methods utilized for the groundwater monitoring program as well as the individual compounds per constituent group. Table 8 summarizes data that exceeded the WDNR Preventative Action Limits (PALs), WDNR Enforcement Standards (ESs), or USEPA Maximum Contaminant Levels (MCLs) for the April/May 2019 and October 2019 groundwater sampling events. A map depicting the data for key historical constituents of interest from the first and second semi-annual 2019 sampling events is provided as Figure 6.

Upon receipt, FTS evaluated each laboratory data report. FTS's data evaluation team determined that the 2019 data were valid and useable for their intended purpose. Data evaluation summaries and copies of laboratory reports are provided in Appendix C.

Tables summarizing the parameters detected during each sampling event are included in Appendix D.

3.1 SEMI-VOLATILE ORGANIC COMPOUNDS

As shown on Table 7, samples collected during each 2019 semi-annual sampling event were analyzed for an extended list of semi-volatile organic compounds (SVOCs) by TestAmerica Laboratories, Inc., using USEPA Method 8270D LL.

As shown in Table 8, during the first semi-annual 2019 sampling event, the sample from monitoring well W-04AR2 contained benzo(a)pyrene (0.21 J micrograms per liter [ug/l]), benzo(b)fluoranthene (0.54 J ug/l), and chrysene (0.51 J) above their WDNR PALs of 0.02 ug/l and WDNR ESs of 0.2 ug/l. Monitoring well W-04AR2 also contained benzo(a)pyrene above its MCL of 0.2 ug/l (Table 8).

During the second semi-annual 2019 event, the sample from monitoring well W-04AR2 contained benzo(a)pyrene (0.25 J ug/l), benzo(b)fluoranthene (0.5 J ug/l), and chrysene (0.77 J) above their WDNR PALs of 0.02 ug/l and WDNR ESs of 0.2 ug/l. Monitoring well W-04AR2 also contained benzo(a)pyrene above its MCL of 0.2 ug/l. The sample from monitoring well W-30A contained benzo(b)fluoranthene (0.069 J ug/l above its WDNR PAL of 0.02 ug/l) (Table 8).

3.2 DIOXINS AND FURANS

Groundwater samples were analyzed for dioxins and furans by USEPA Method 8290A during the first semi-annual sampling event (April/May 2019). Dioxins and/or furans were detected in samples collected from eight of the nine monitoring wells sampled (W-04AR2, W-06A, W-10AR2, W-12A, W-12CR, W-28C, W-30A, W-30C). The only

applicable regulatory standard related to dioxins and furans is for the congener 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). The 2,3,7,8-TCDD congener was not detected in any of the nine wells sampled during the first semi-annual 2019 sampling event.

As shown in Table 9, the estimated toxicity (relative to 2,3,7,8-TCDD) of the dioxins and furans that were detected was determined by calculating the Toxicity Equivalent Quotient (TEQ) of the detected dioxins and/or furans in each of the subject samples. To calculate the TEQ of a mixture of dioxins and furans in a given sample, an associated Toxicity Equivalency Factor (TEF) is used to adjust the detected concentration of specific dioxin and furan congeners. The TEF values used for this calculation are 2005 World Health Organization (WHO) derived values. Once calculated for each detected constituent, the individual TEQs are summed, resulting in a total TEQ for a given sample. Under Wisconsin Administrative Code NR 140, 2,3,7,8-TCDD has an ES of 0.00003 ug/l and a PAL of 0.000003 ug/l. As shown in Tables 8 and 9, the samples collected from wells W-04AR2 and W-30A were the only samples with 2,3,7,8-TCDD TEQ values greater than the WDNR PAL for 2,3,7,8-TCDD. None of the samples had 2,3,7,8-TCDD TEQ values greater than the WDNR ES for 2,3,7,8-TCDD.

3.3 VOLATILE ORGANIC COMPOUNDS

Volatile organic compounds (VOCs) were analyzed by TestAmerica Laboratories, Inc., using USEPA Method 8260C during each 2019 semi-annual sampling event. As shown on Table 8, benzene was detected in monitoring well W-10AR2 (17 ug/l and 22 ug/l) above the MCL of 5 ug/l, WDNR ES of 5 ug/l, and WDNR PAL of 0.5 ug/l during the first and second semi-annual 2019 events, respectively. Benzene was also detected in monitoring well W-30A (0.76 J ug/l and 2.4 ug/l) above the WDNR PAL during the first and second semi-annual 2019 events.

As shown on Table 8, naphthalene was detected in monitoring well W-30A (22 ug/l and 91 ug/l) above the WDNR PAL of 10 ug/l during the first and second semi-annual 2019 events.

3.4 DATA TRENDS

This section of the report presents a discussion of data trends for representative constituents exceeding applicable regulatory standards during the last four sampling events: May and October 2018, and April/May and October 2019.

3.4.1 A-Zone Wells

Figure 7 presents graphs of recent and historical groundwater monitoring results at two A-zone monitoring wells: W-10AR2 and W-30A. These wells were selected for discussion because samples collected at these wells typically exhibit the highest concentrations and frequency of detection of Site-related constituents among the

monitored wells. The constituents selected for trend analysis are benzene, chrysene, naphthalene, and pentachlorophenol. These constituents are considered representative of Site-related constituents that have been detected above WDNR PALs or ESs during the last four monitoring events, and are consistent with the constituents selected for trend evaluation in previous annual groundwater monitoring reports.

As shown on Figure 7, samples collected at monitoring well W-10AR2 exhibited concentrations of benzene exceeding its WDNR PAL and WDNR ES in all of the past four sampling rounds, naphthalene was either not-detected or detected below its WDNR PAL and WDNR ES in all of the past four sampling rounds, and pentachlorophenol and chrysene were not detected in any of the last four sampling rounds. At monitoring well W-30A, naphthalene exceeded its WDNR PAL in all of the past four sampling rounds, benzene exceeded its WDNR PAL in all of the past four sampling rounds (one of those four samples also exceeded the WDNR ES for benzene), and pentachlorophenol and chrysene were not detected in any of the last four sampling rounds.

Using these recent data, along with historical data (dating back to 1999) collected from wells W-10AR2 and W-30A for benzene, chrysene, pentachlorophenol, and naphthalene, a linear regression analysis was completed using a 95% confidence level to evaluate whether a data trend exists at wells W-10AR2 and W-30A. The statistical analyses indicate that the long-term trends in the benzene, chrysene, pentachlorophenol, and naphthalene concentrations in wells W-10AR2 and W-30A are stable or decreasing. Details related to the linear regression analysis are provided in Appendix E.

These findings are consistent with the natural attenuation evaluations reported to the WDNR on January 24, 2006, September 18, 2007, and June 12, 2014. Those evaluations documented several lines of evidence indicating the occurrence of natural attenuation of Site-related constituents in groundwater at the Site.

3.4.2 C-Zone Wells

No detections of Site-related constituents above regulatory standards were observed during the last four sampling events in the C-Zone monitoring wells.

3.4.3 D-Zone Wells

Monitoring well W-18D was sampled during the last four semi-annual sampling events. No detections of SVOCs above regulatory standards were observed during the last four sampling events in monitoring well W-18D.

4.0 CURRENT SITE STATUS

As indicated by the data presented in Section 3, the extent of impacted groundwater at this Site is not expanding and appears stable. Additional information regarding project milestones and the current Site status is provided in Appendix A. Semi-annual groundwater monitoring will continue in 2020.

5.0 REFERENCES

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Wisconsin Department of Natural Resources (WDNR), 1987, *Conditional Closure and Long-Term Care Plan Approval*, dated October 1, 1987.

WDNR, 2002, *Conditional Closure and Long Term Care Plan Approval Modification*, dated October 29, 2002.

TABLES

Table 1
Current Monitoring Well Network
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

W-02C	W-10AR2	W-18D	W-26A	W-32C	W-39A
W-04AR2*	W-11A	W-19A	W-26B	W-33D	W-40A
W-05CR	W-12A	W-19C	W-28C	W-34D	
W-06A	W-12CR	W-20AR	W-29A	W-35A	
W-06C	W-14A	W-21A	W-30A	W-36A	
W-08A	W-14B	W-21B	W-30C	W-37A	
W-09C	W-16AR	W-25A	W-31C	W-38A	

Notes:

All Wells are gauged for groundwater elevations and NAPL presence/absence.

Wells in **bold** type are sampled for laboratory analysis as part of the NR664 groundwater monitoring program.

* Monitoring well W-04AR was abandoned and replaced with well W-04AR2 on July 24, 2017.

In addition to the wells listed in this table as part of the NR664 groundwater monitoring program, bedrock well W-18D was sampled during 2019 at Beazer's discretion.

Table 2A
First Semi-Annual 2019 Groundwater Elevations
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well	Top of Casing Elevation (feet msl)	Top of Screen Elevation (feet msl)	Bottom of Screen Elevation (feet msl)	April 29, 2019		
				Depth to Water (feet)	Groundwater Elevation (feet msl)	Apparent DNAPL Thickness (feet msl)
W-02C	672.37	632.65	627.65	10.73	661.64	NP
W-04AR2	676.15	672.53	662.53	2.48	673.67	NP
W-05CR	674.69	643.53	633.53	12.35	662.34	NP
W-06A	673.65	670.04	660.04	3.02	670.63	NP
W-06C	674.33	633.93	628.93	12.21	662.12	NP
W-08A	676.35	670.62	660.62	3.42	672.93	NP
W-09C	673.16	630.41	625.41	11.08	662.08	NP
W-10AR2	677.09	672.77	659.77	3.48	673.61	NP
W-11A	676.40	669.81	659.81	5.06	671.34	NP
W-12A	677.11	673.33	663.33	2.70	674.41	NP
W-12CR	677.39	635.34	630.34	15.22	662.17	NP
W-14A	678.61	673.05	663.05	4.04	674.57	NP
W-14B	677.60	644.97	639.97	5.87	671.73	NP
W-16AR	675.37	668.20	658.20	3.34	672.03	NP
W-18D	674.79	491.23	471.23	45.05	629.74	NP
W-19A	675.39	669.63	659.63	3.64	671.75	NP
W-19C	674.96	635.79	630.79	12.80	662.16	NP
W-20AR	674.72	669.33	659.33	5.30	669.42	NP
W-21A	674.20	667.88	657.88	3.62	670.58	NP
W-21B	674.61	641.71	636.71	7.60	667.01	NP
W-25A	678.77	672.68	662.68	5.21	673.56	NP
W-26A	673.67	668.05	658.05	2.72	670.95	NP
W-26B	674.02	644.42	639.42	7.14	666.88	NP
W-28C	676.33	635.74	630.74	13.89	662.44	NP
W-29A	673.21	668.38	658.38	1.96	671.25	NP
W-30A ⁽¹⁾	676.81	672.86	662.86	2.58	674.23	NP
W-30C	676.91	633.50	628.50	14.90	662.01	NP
W-31C	671.76	626.64	621.64	10.44	661.32	NP
W-32C	672.88	618.93	613.93	13.70	659.18	NP
W-33D	673.43	495.58	475.58	43.62	629.81	NP
W-34D	674.28	496.07	476.07	37.00	637.28	NP
W-35A	675.05	669.28	659.28	3.09	671.96	NP
W-36A	678.44	673.00	663.00	4.39	674.05	NP
W-37A	676.47	671.05	661.05	8.48	667.99	NP
W-38A	676.78	671.35	661.35	2.58	674.20	NP
W-39A	678.40	672.64	662.64	4.93	673.47	NP
W-40A	676.79	671.18	661.18	3.43	673.36	NP

Notes:

feet-msl - Feet above mean sea level
 DNAPL - Dense Non-Aqueous Phase Liquid
 NP - DNAPL Not Present
 NM - not measured
⁽¹⁾ - W-30A was resurveyed on April 30, 2019

Table 2B
Second Semi-Annual 2019 Groundwater Elevations
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well	Top of Casing Elevation (feet msl)	Top of Screen Elevation (feet msl)	Bottom of Screen Elevation (feet msl)	October 15, 2019		
				Depth to Water (feet)	Groundwater Elevation (feet msl)	Apparent DNAPL Thickness (feet msl)
W-02C	672.37	632.65	627.65	10.98	661.39	NP
W-04AR2	676.15	672.53	662.53	3.98	672.17	NP
W-05CR	674.69	643.53	633.53	12.64	662.05	NP
W-06A	673.65	670.04	660.04	3.34	670.31	NP
W-06C	674.33	633.93	628.93	12.34	661.99	NP
W-08A	676.35	670.62	660.62	3.50	672.85	NP
W-09C	673.16	630.41	625.41	11.24	661.92	NP
W-10AR2	677.09	672.77	659.77	4.34	672.75	NP
W-11A	676.40	669.81	659.81	4.84	671.56	NP
W-12A	677.11	673.33	663.33	3.22	673.89	NP
W-12CR	677.39	635.34	630.34	15.36	662.03	NP
W-14A	678.61	673.05	663.05	4.53	674.08	NP
W-14B	677.60	644.97	639.97	6.11	671.49	NP
W-16AR	675.37	668.20	658.20	4.24	671.13	NP
W-18D	674.79	491.23	471.23	46.02	628.77	NP
W-19A	675.39	669.63	659.63	4.05	671.34	NP
W-19C	674.96	635.79	630.79	13.03	661.93	NP
W-20AR	674.72	669.33	659.33	5.80	668.92	NP
W-21A	674.20	667.88	657.88	4.34	669.86	NP
W-21B	674.61	641.71	636.71	7.70	666.91	NP
W-25A	678.77	672.68	662.68	5.33	673.44	NP
W-26A	673.67	668.05	658.05	7.26	666.41	NP
W-26B	674.02	644.42	639.42	7.26	666.76	NP
W-28C	676.33	635.74	630.74	14.05	662.28	NP
W-29A	673.21	668.38	658.38	1.28	671.93	NP
W-30A ⁽¹⁾	676.81	672.86	662.86	2.90	673.91	NP
W-30C	676.91	633.50	628.50	15.03	661.88	NP
W-31C	671.76	626.64	621.64	10.69	661.07	NP
W-32C	672.88	618.93	613.93	13.85	659.03	NP
W-33D	673.43	495.58	475.58	44.54	628.89	NP
W-34D	674.28	496.07	476.07	37.64	636.64	NP
W-35A	675.05	669.28	659.28	3.69	671.36	NP
W-36A	678.44	673.00	663.00	4.85	673.59	NP
W-37A	676.47	671.05	661.05	2.75	673.72	NP
W-38A	676.78	671.35	661.35	2.84	673.94	NP
W-39A	678.40	672.64	662.64	5.18	673.22	NP
W-40A	676.79	671.18	661.18	3.68	673.11	NP

Notes:

feet-msl - Feet above mean sea level
 DNAPL - Dense Non-Aqueous Phase Liquid
 NP - DNAPL Not Present
 NM - not measured
⁽¹⁾ - W-30A was resurveyed on April 30, 2019

Table 3
Summary of 2019 Vertical Gradients
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

April 2019

Well Nest		Screen Elevations				Screen Midpoint		Difference Between Screen Midpoints (feet)	Groundwater Elevation		Difference in Groundwater Elevations (feet)	Is h1<t1	Vertical Gradient		
Well 1	Well 2	Well 1		Well 2		Well 1	Well 2		Well 1	Well 2			Is h1<t1	(If yes)	(If no)
		Top (feet msl)	Bottom (feet msl)	Top (feet msl)	Bottom (feet msl)	---- (feet msl)	---- (feet msl)							---- (feet msl)	---- (feet msl)
		t1	b1	t2	b2	$\frac{(t1+b1)}{2}$	$\frac{(t1+b1)}{2}$	$(t1+b1)/2-(t2+b2)/2$	h1	h2	h2-h1				
W-06A	W-06C	670.04	660.04	633.98	628.98	665.04	631.48	33.56	670.63	662.12	-8.51	no	-0.254		
W-12A	W-12CR	673.33	663.33	635.34	630.34	668.33	632.84	35.49	674.41	662.17	-12.24	no	-0.345		
W-19A	W-19C	669.74	659.74	635.79	630.79	664.74	633.29	31.45	671.75	662.16	-9.59	no	-0.305		
W-30A	W-30C	672.90	662.90	633.50	628.50	667.90	631.00	36.90	674.16	662.01	-12.15	no	-0.329		
AVERAGE VERTICAL GRADIENT⁽¹⁾ - Between Zones A and C												-0.308			

October 2019

Well Nest		Screen Elevations				Screen Midpoint		Difference Between Screen Midpoints (feet)	Groundwater Elevation		Difference in Groundwater Elevations (feet)	Is h1<t1	Vertical Gradient		
Well 1	Well 2	Well 1		Well 2		Well 1	Well 2		Well 1	Well 2			Is h1<t1	(If yes)	(If no)
		Top (feet msl)	Bottom (feet msl)	Top (feet msl)	Bottom (feet msl)	---- (feet msl)	---- (feet msl)							---- (feet msl)	---- (feet msl)
		t1	b1	t2	b2	$\frac{(t1+b1)}{2}$	$\frac{(t1+b1)}{2}$	$(t1+b1)/2-(t2+b2)/2$	h1	h2	h2-h1				
W-06A	W-06C	670.04	660.04	633.98	628.98	665.04	631.48	33.56	670.31	661.99	-8.32	no	-0.248		
W-12A	W-12CR	673.33	663.33	635.34	630.34	668.33	632.84	35.49	673.89	662.03	-11.86	no	-0.334		
W-19A	W-19C	669.74	659.74	635.79	630.79	664.74	633.29	31.45	671.34	661.93	-9.41	no	-0.299		
W-30A	W-30C	672.90	662.90	633.50	628.50	667.90	631.00	36.90	673.91	661.88	-12.03	no	-0.326		
AVERAGE VERTICAL GRADIENT⁽¹⁾ - Between Zones A and C												-0.302			

Notes:

⁽¹⁾ The Average Vertical Gradient was calculated using nested well sets. The Vertical Gradient was calculated by dividing the Difference in Groundwater Elevations by Difference Between Screen Midpoint Elevations. All of the Vertical Gradients were then averaged to yield the Average Vertical Gradient between the two monitored zones. Negative values indicate a downward vertical gradient.

Table 4
2019 Horizontal Groundwater Flow Velocities for the A-Zone
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameters	First Semi-Annual 4/29/2019	Second Semi-Annual 10/15/2019
Hydraulic Gradient (i1) Vicinity of W-38A to W-29A		
Upgradient Elevation (ft, msl), (h1)	674.20	673.94
Downgradient Elevation (ft, msl), (h2)	671.25	671.93
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	1225.18	1225.18
Horizontal Hydraulic Gradient (i1=(h1-h2)/l)	0.0024	0.0016
Hydraulic Gradient (i2) Vicinity of W-19A to W-20AR		
Upgradient Elevation (ft, msl), (h1)	671.75	671.34
Downgradient Elevation (ft, msl), (h2)	669.42	668.92
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	166.81	166.81
Horizontal Hydraulic Gradient (i2 = (h1-h2)/l)	0.0140	0.0145
Hydraulic Gradient (i3) Vicinity of W-08A to W-21A		
Upgradient Well - Elevation (ft, msl), (h1)	672.93	672.85
Downgradient Well - Elevation (ft, msl), (h2)	670.58	669.86
Horizontal Distance Between Up and Downgradient Well (ft), (l)	288.00	288.00
Horizontal Hydraulic Gradient (i3 = (h1-h2)/l)	0.0082	0.0104
Average Hydraulic Gradient $i = (i1 + i2 + i3)/3$	0.0082	0.0088
Average Hydraulic Conductivity (K) (foot per day)	0.00328	0.00328
Effective Porosity (n)	0.01	0.01
Effective Porosity (n)	0.30	0.30
Average Groundwater Velocity		
(V = Ki/n) (feet per day), Where n = 0.01	2.7E-03	2.9E-03
(V = Ki/n) (feet per day), Where n = 0.30	8.9E-05	9.7E-05

Notes:

Average hydraulic conductivity determined from slug tests (Chester Environmental, 1995).
Effective porosity was derived from literature values (de Marsily, 1986; Freeze and Cherry, 1979).
ft = feet
msl = mean sea level

Table 5
2019 Horizontal Groundwater Flow Velocities for the C-Zone
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameters	First Semi-Annual 4/29/2019	Second Semi-Annual 10/15/2019
Hydraulic Gradient (i1) Vicinity of W-28C to W-32C		
Upgradient Elevation (ft, msl), (h1)	662.44	662.28
Downgradient Elevation (ft, msl), (h2)	659.18	659.03
Horizontal Distance Between Up and Downgradient Elevations (ft), (l)	1377.00	1377.00
Horizontal Hydraulic Gradient ($i1=(h1-h2)/l$)	0.0024	0.0024
Hydraulic Gradient (i2) Vicinity of W-30C to W-32C		
Upgradient Elevation (ft, msl), (h1)	662.01	661.88
Downgradient Elevation (ft, msl), (h2)	659.18	659.03
Horizontal Distance Between Up and Downgradient Elevations (ft), (l)	723.89	487.95
Horizontal Hydraulic Gradient ($i2 = (h1-h2)/l$)	0.0039	0.0058
Average Hydraulic Gradient $i = (i1 + i2)/2$	0.0031	0.0041
Average Hydraulic Conductivity (K) (foot per day)	22.6	22.6
Effective Porosity (n)	0.20	0.20
Average Groundwater Velocity		
($V = Ki/n$) (feet per day), Where $n = 0.20$	3.5E-01	4.6E-01

Notes:

Average hydraulic conductivity determined from slug tests (Chester Environmental, 1995).

Effective porosity was derived from literature values (de Marsily, 1986; Freeze and Cherry, 1979).

ft = feet

msl = mean sea level

Table 6
Summary of 2019 Vertical Groundwater Flow Velocities
for the A to C Zones
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameters	First Semi-Annual 4/29/2019	Second Semi-Annual 10/15/2019
Average Vertical Hydraulic Gradient (i from Table 3)	-0.308	-0.302
Vertical Hydraulic Conductivity (K) (feet/day)⁽¹⁾	7.1E-05	7.1E-05
Effective Porosity (n)	0.01	0.01
Effective Porosity (n)	0.30	0.30
Average Groundwater Flow Velocity⁽²⁾		
V=Ki/n (ft/day) Where n=0.01	-2.2E-03	-2.1E-03
V=K/in (ft/day) Where n=0.3	-7.3E-05	-7.1E-05

Notes:

(1) The Average Vertical Hydraulic Conductivity value of 7.1 E-05 feet/day was derived from laboratory permeability tests.

(2) The Average Groundwater Velocity was calculated using Darcy's Law given above. The Average Vertical Gradient hydraulic conductivity and effective porosity were used in this calculation. By convention, a positive Vertical Gradient represents an upward flow while a negative Vertical Gradient represents a downward flow.

Table 7
Constituent Groups and EPA Analytical Methods
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Field Indicators	
pH - EPA Method 9040	Apparent Color (Visual)
Temperature - EPA Method 170.1	
Specific Conductance - EPA Method 9050	
Semi-Annual Analyses	
VOCs - EPA Method 8260C	
Benzene ⁽¹⁾	1,3,5 Trimethylbenzene
Ethylbenzene	1,1,1- Trichloroethane
Methyl-tert-butylether	n-Butylbenzene
Toluene	Chloromethane
o-Xylene	n-Propylbenzene
p-Xylene	Naphthalene
m-Xylene	Styrene
1,2,4- Trimethylbenzene	
Semi-Volatile Organic Constituents - EPA Method 8270C Ion Trap/8270D LL	
1,2,4-Trichlorobenzene	4-Nitroaniline
1,2-Dichlorobenzene	4-Nitrophenol
1,3-Dichlorobenzene	Acenaphthene
1,4-Dichlorobenzene	Acenaphthylene
2,4,5-Trichlorophenol	Anthracene
2,4,6-Trichlorophenol	Benzo(a)anthracene
2,4-Dichlorophenol	Benzo(a)pyrene
2,4-Dimethylphenol	Benzo(b)fluoranthene
2,4-Dinitrotoluene ⁽¹⁾	Benzoic Acid
2,4-Dinitrophenol	Benzyl Alcohol
2,6-Dinitrotoluene ⁽¹⁾	Benzo(g,h,i)perylene
2-Chloronaphthalene	Bis(2-chloroethyl)ether
2-Chlorophenol	Bis(2-chloroethoxy)methane
2-Methylnaphthalene	Bis(2-chloroisopropyl)ether
2-Methylphenol	Bis(2-ethylhexyl)phthalate ⁽¹⁾
2-Nitroaniline	Benzo(k)fluoranthene
2-Nitrophenol	Butyl benzyl phthalate
3,3-Dichlorobenzidine	Chrysene
3-Nitroaniline	Dibenzo(a,h)anthracene
4,6-Dinitro-2-methylphenol	Dibenzofuran
4-Bromophenyl phenyl ether	Diethyl phthalate
4-Chloro-3-methylphenol	Dimethyl phthalate
4-Chloroaniline	Di-n-octyl phthalate
4-Chlorophenyl phenyl ether	Di-n-butyl phthalate
4-Methylphenol	Fluorene
Fluoranthene	Nitrobenzene
Hexachlorobutadiene	N-Nitrosodiphenylamine
Hexachlorocyclopentadiene	N-Nitrosodi-n-propylamine
Hexachlorobenzene	Pentachlorophenol
Hexachloroethane	Phenanthrene
Indeno(1,2,3-cd)pyrene	Phenol
Isophorone	1-Methylnaphthalene
Pyrene	2,3,5,6 - Tetrachlorophenol
2,3,4,6 - Tetrachlorophenol	
Annual Analyses (First Semi-Annual Event Only)	
Dioxins and Dibenzofurans - EPA Method 8290	
Furans	Dioxins
TCDFs (total)	TCDDs (total)
2,3,7,8-TCDF	2,3,7,8-TCDD
PeCDFs (total)	PeCDDs (total)
1,2,3,7,8-PeCDF	1,2,3,7,8-PECDD
2,3,4,7,8-PeCDF	HxCDDs (total)
HxCDFs (total)	1,2,3,4,7,8-HxCDD
1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDD
1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDD
2,3,4,6,7,8,HxCDF	HpCDDs (total)
1,2,3,7,8,9-HxCDF	1,2,3,4,6,7,8-HpCDD
HpCDFs (total)	OCDDs (total)
1,2,3,4,6,7,8-HpCDF	
1,2,3,4,7,8,9-HpCDF	
OCDFs (total)	

Notes: (1) Report to lowest level of quantitation possible.

Table 8
Summary of Regulatory Exceedances
First and Second Semi-Annual 2019 Sampling Events
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well	Parameter	Sample Result (ug/L)	Regulatory Standard (ug/L)
First Semi-Annual Sampling Event			
MCL Exceedance			
W-04AR2	Benzo(a)pyrene	0.21 J	0.2
W-10AR2	Benzene	17	5
ES Exceedance			
W-04AR2	Benzo(a)pyrene	0.21 J	0.2
	Benzo(b)fluoranthene	0.54 J	0.2
	Chrysene	0.51 J	0.2
W-10AR2	Benzene	17	5
PAL Exceedance			
W-04AR2	Benzo(a)pyrene	0.21 J	0.02
	Benzo(b)fluoranthene	0.54 J	0.02
	Chrysene	0.51 J	0.02
	2,3,7,8-TCDD TEQ	2.34E-05	3.00E-06
W-10AR2	Benzene	17	0.5
W-30A	Benzene	0.76 J	0.5
	Naphthalene	22	10
	2,3,7,8-TCDD TEQ	1.60E-05	3.00E-06
Second Semi-Annual Sampling Event			
MCL Exceedance			
W-04AR2	Benzo(a)pyrene	0.25 J	0.2
W-10AR2	Benzene	22	5
ES Exceedance			
W-04AR2	Benzo(a)pyrene	0.25 J	0.2
	Benzo(b)fluoranthene	0.5 J	0.2
	Chrysene	0.77 J	0.2
W-10AR2	Benzene	22	5
PAL Exceedance			
W-04AR2	Benzo(a)pyrene	0.25 J	0.02
	Benzo(b)fluoranthene	0.5 J	0.02
	Chrysene	0.77 J	0.02
W-10AR2	Benzene	22	0.5
W-30A	Benzene	2.4	0.5
	Benzo(b)fluoranthene	0.069 J	0.02
	Naphthalene	91	10

Notes:

µg/L - micrograms per liter

J - estimated result

ES - WDNR Enforcement Standards

PAL - WDNR Preventative Action Limits

MCL - Federal Maximum Contaminant Levels

TEQ - Toxicity Equivalent Quotient

- At the request of WDNR, 2,3,7,8-TCDD TEQ values are compared to the congener-specific PAL and ES for 2,3,7,8-TCDD.

**Table 9
Toxicity Equivalent Quotient of Detected Dioxin and Furans
2019 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin**

ANALYTE NAME	UNITS	TEFs	W-04AR2 5/1/2019	W-06A 4/30/2019	W-06C 4/30/2019	W-10AR2 4/30/2019	W-12A 4/30/2019	W-12CR 4/30/2019	W-12CR-DUP 4/30/2019	W-28C 4/30/2019	W-30A 4/30/2019	W-30C 4/30/2019	Equipment Blank 4/30/2019
8290A													
1,2,3,4,6,7,8-HPCDD	UG/L	0.01	0.00079	0.0000026 U	0.0000032 U	0.000019 J	0.00005	0.0000026 U	0.0000045 U	0.0000088 U	0.00047	0.0000039 U	0.0000026 U
1,2,3,4,6,7,8-HPCDF	UG/L	0.01	0.0002	0.0000015 U	0.00000095 U	0.0000061 U	0.000021 J	0.0000086 U	0.0000018 U	0.0000056 U	0.00017	0.0000013 U	0.0000019 U
1,2,3,4,7,8,9-HPCDF	UG/L	0.01	0.000017 JI	0.0000002 U	0.00000024 U	0.0000007 U	0.0000031 U	0.0000055 U	0.0000048 U	0.0000056 U	0.000015 J	0.0000027 U	0.0000025 U
1,2,3,4,7,8-HXCDD	UG/L	0.1	0.000094 J	0.00000017 U	0.0000002 U	0.00000045 U	0.000014 JI	0.0000032 U	0.0000061 U	0.0000028 U	0.000017 JI	0.0000024 U	0.0000036 U
1,2,3,4,7,8-HXCDF	UG/L	0.1	0.000022 JI	0.00000023 U	0.00000019 U	0.00000056 U	0.000034 J	0.0000023 U	0.0000038 U	0.0000016 U	0.000023 J	0.0000025 U	0.0000056 JI
1,2,3,6,7,8-HXCDD	UG/L	0.1	0.000036 J	0.00000051 U	0.00000021 U	0.00000047 U	0.0000031 U	0.0000034 U	0.0000063 U	0.0000029 U	0.000018 JI	0.0000025 U	0.0000037 U
1,2,3,6,7,8-HXCDF	UG/L	0.1	0.000029 JI	0.00000023 U	0.00000019 U	0.000002 JI	0.000059 JI	0.0000023 U	0.0000039 U	0.000011 JI	0.000031 JI	0.0000025 U	0.0000014 U
1,2,3,7,8,9-HXCDD	UG/L	0.1	0.000016 J	0.00000058 U	0.00000019 U	0.00000043 U	0.0000055 U	0.0000031 U	0.0000058 U	0.0000026 U	0.0000043 U	0.0000023 U	0.0000034 U
1,2,3,7,8,9-HXCDF	UG/L	0.1	0.0000051 U	0.00000029 U	0.00000024 U	0.00000075 U	0.0000095 U	0.0000075 U	0.0000005 U	0.0000039 U	0.0000034 U	0.0000032 U	0.0000018 U
1,2,3,7,8-PECDD	UG/L	1	0.0000013 U	0.00000018 U	0.0000002 U	0.00000017 U	0.0000054 U	0.0000024 U	0.0000032 U	0.0000022 U	0.0000055 U	0.0000029 U	0.0000019 U
1,2,3,7,8-PECDF	UG/L	0.03	0.0000028 U	0.00000026 U	0.00000029 U	0.0000013 U	0.0000084 U	0.0000041 U	0.0000056 U	0.0000038 U	0.0000012 U	0.0000039 U	0.0000005 U
2,3,4,6,7,8-HXCDF	UG/L	0.1	0.0000041 U	0.00000024 U	0.0000002 U	0.0000061 U	0.0000098 JI	0.0000025 U	0.0000042 U	0.0000033 U	0.0000027 U	0.0000027 U	0.0000015 U
2,3,4,7,8-PECDF	UG/L	0.3	0.0000028 U	0.00000026 U	0.00000029 U	0.0000012 U	0.0000085 U	0.0000038 U	0.0000052 U	0.0000037 U	0.0000013 U	0.0000039 U	0.0000047 U
2,3,7,8-TCDD	UG/L	1	0.0000015 U	0.00000015 U	0.0000001 U	0.00000024 U	0.0000058 U	0.0000019 U	0.0000033 U	0.0000022 U	0.0000005 U	0.0000016 U	0.0000003 U
2,3,7,8-TCDF	UG/L	0.1	0.0000019 U	0.00000019 U	0.00000018 U	0.00000047 U	0.000014 JI	0.0000035 U	0.0000027 U	0.000007 JI	0.000001 U	0.0000041 JI	0.0000021 U
OCDD	UG/L	0.0003	0.0063	0.0000025 U	0.0000034 U	0.00026	0.00056	0.000018 U	0.00006 J	0.00011	0.0063	0.000026 U	0.000025 JI
OCDF	UG/L	0.0003	0.00052	0.0000043 U	0.000003 U	0.000021 U	0.000052 J	0.000002 U	0.0000051 U	0.000014 U	0.0005	0.0000041 U	0.0000081 JI
TOTAL HPCDD	UG/L	NA	0.002	0.0000077 U	0.0000089 U	0.000041 J	0.000097	0.0000063 U	0.000011 U	0.000055	0.001	0.0000077 U	0.0000082 JI
TOTAL HPCDF	UG/L	NA	0.00073 I	0.0000032 U	0.0000027 U	0.000021 JI	0.000087 I	0.0000024 U	0.0000046 U	0.0000086 U	0.00067	0.0000032 U	0.0000025 U
TOTAL HXCDD	UG/L	NA	0.00022	0.0000011 U	0.00000021 U	0.0000019 U	0.000011 U	0.0000044 U	0.0000063 U	0.0000038 U	0.000074 I	0.0000012 U	0.0000037 U
TOTAL HXCDF	UG/L	NA	0.00065 I	0.00000029 U	0.00000024 U	0.000019 JI	0.000094 I	0.0000017 U	0.0000097 U	0.000005 U	0.00055 I	0.0000032 U	0.0000056 JI
TOTAL PECDD	UG/L	NA	0.000037 JI	0.00000018 U	0.0000002 U	0.00000017 U	0.0000054 U	0.0000024 U	0.0000032 U	0.0000022 U	0.0000055 U	0.0000029 U	0.0000032 J
TOTAL PECDF	UG/L	NA	0.00024 I	0.00000045 JI	0.00000029 U	0.000011 JI	0.000049 I	0.0000041 U	0.0000056 U	0.000016 JI	0.00024 I	0.000021 JI	0.0000005 U
TOTAL TCDD	UG/L	NA	0.0000031 U	0.00000046 JI	0.00000039 U	0.00000068 JI	0.00000084 JI	0.00000048 JI	0.0000033 U	0.0000022 U	0.0000066 U	0.0000016 U	0.0000042 U
TOTAL TCDF	UG/L	NA	0.000053 I	0.00000034 U	0.0000003 U	0.0000063 JI	0.000018 I	0.0000035 U	0.0000051 U	0.000014 JI	0.000046 I	0.000023 JI	0.0000044 U
2,3,7,8-TCDD TEQ - ND = 0	UG/L	NA	2.34E-05	0.00E+00	0.00E+00	4.68E-07	2.20E-06	0.00E+00	1.80E-08	2.13E-07	1.60E-05	4.10E-08	5.70E-08

Notes:

U Indicates compound was not detected

J Indicates an estimated value

I Indicates value is estimated maximum possible concentration

TEQ = Toxicity Equivalent Quotient

TEQs were calculated using zero for nondetected values

TEF = Toxicity Equivalent Factor

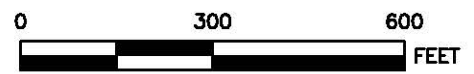
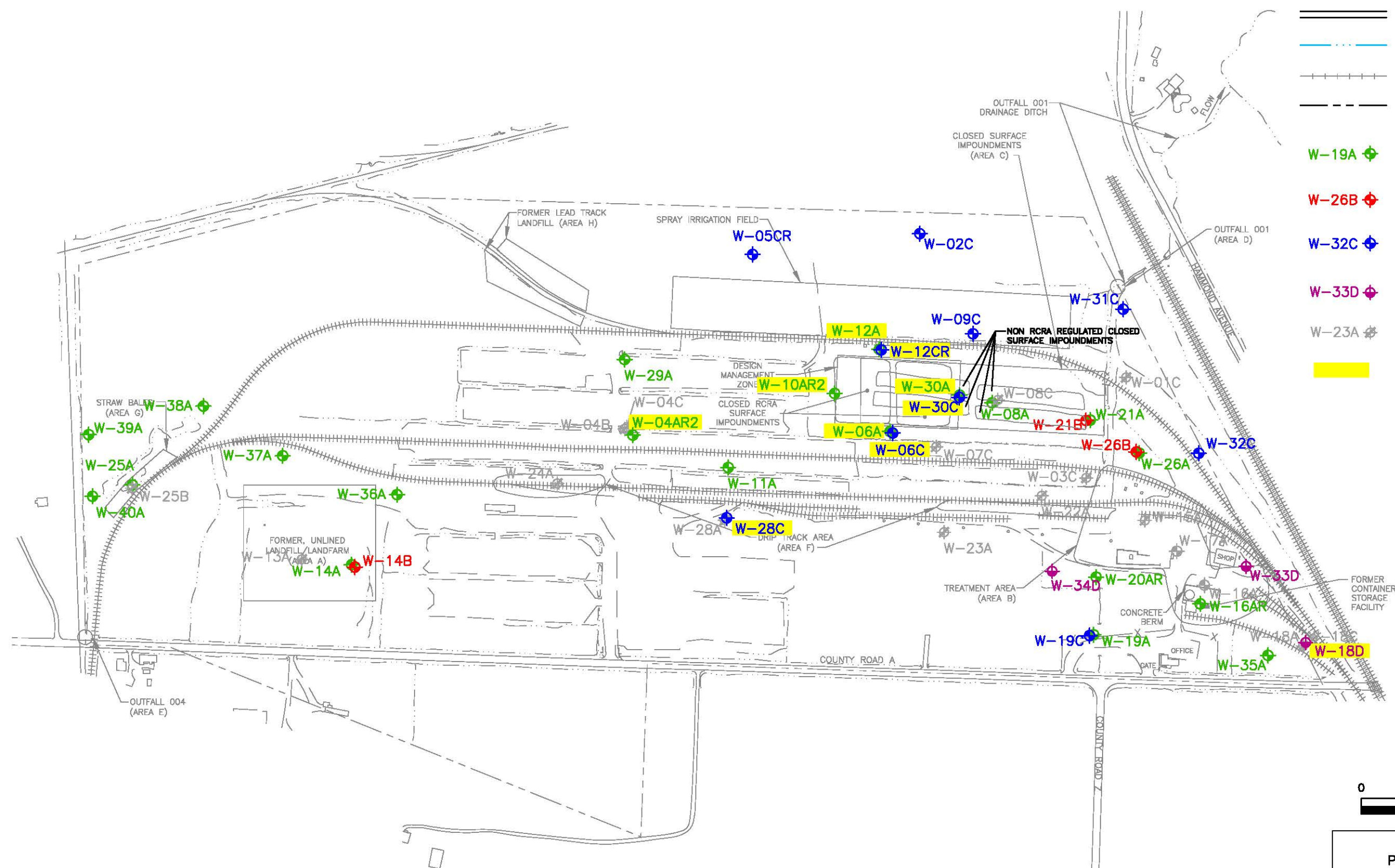
TEFs values taken from the 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

FIGURES



LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- A ZONE GROUNDWATER MONITORING WELL
- B ZONE GROUNDWATER MONITORING WELL
- C ZONE GROUNDWATER MONITORING WELL
- BEDROCK ZONE GROUNDWATER MONITORING WELL
- ABANDONED WELL
- SAMPLED WELL LOCATION



BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA		 FTS	FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106	
DRWN: KLC	DATE: 04/30/19			
CHKD: AMO	DATE: 04/30/19			
APPD: JJK	DATE: 08/25/19			
SCALE: AS SHOWN				
ISSUE DATE:				
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN				
SITE MAP		PROJECT NO: 0M055619 DRAWING NUMBER FIGURE 1		

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.

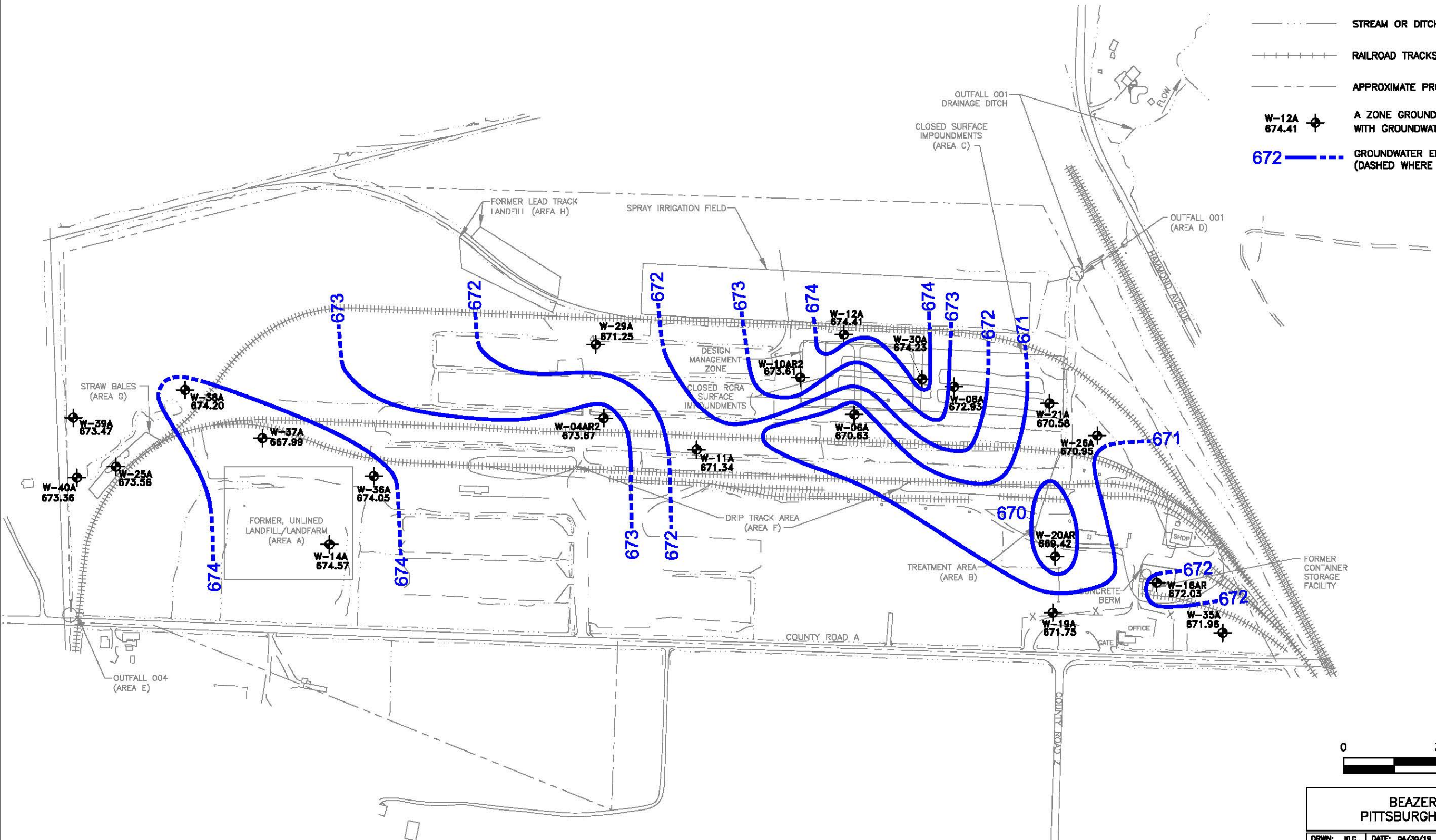
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REV #	DATE	DESCRIPTION	APPD



LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-12A 674.41 A ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 672 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)



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REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
 BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
 ALL LOCATIONS ARE APPROXIMATE.

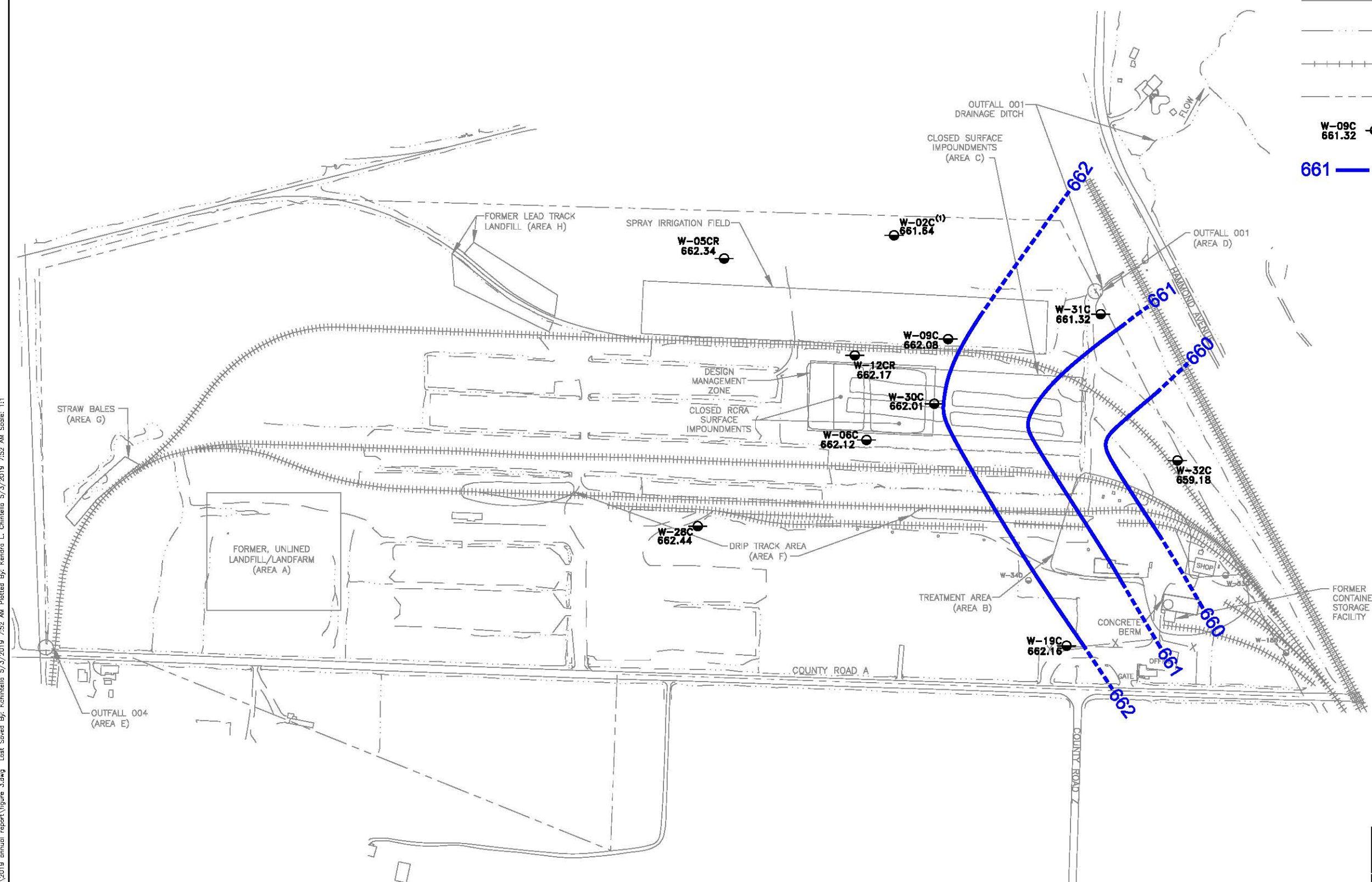
REV #	DATE	DESCRIPTION	APPD

BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KLC	DATE: 04/30/19	 FTS	FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 04/30/19		200 THIRD AVENUE
APPD: JJK	DATE: 05/21/19		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS A-ZONE WELLS (APRIL 29, 2019)			PROJECT NO: 0M055619 DRAWING NUMBER FIGURE 2

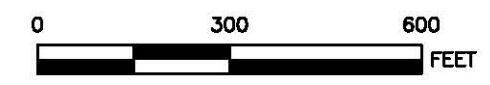


LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-09C 661.32 C ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 661 --- GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)



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BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KLC	DATE: 04/30/19		FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 04/30/19		200 THIRD AVENUE
APPD: JJK	DATE: 05/21/19		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS C-ZONE WELLS (APRIL 29, 2019)			PROJECT NO: 0M055619 DRAWING NUMBER FIGURE 3

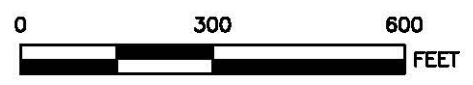
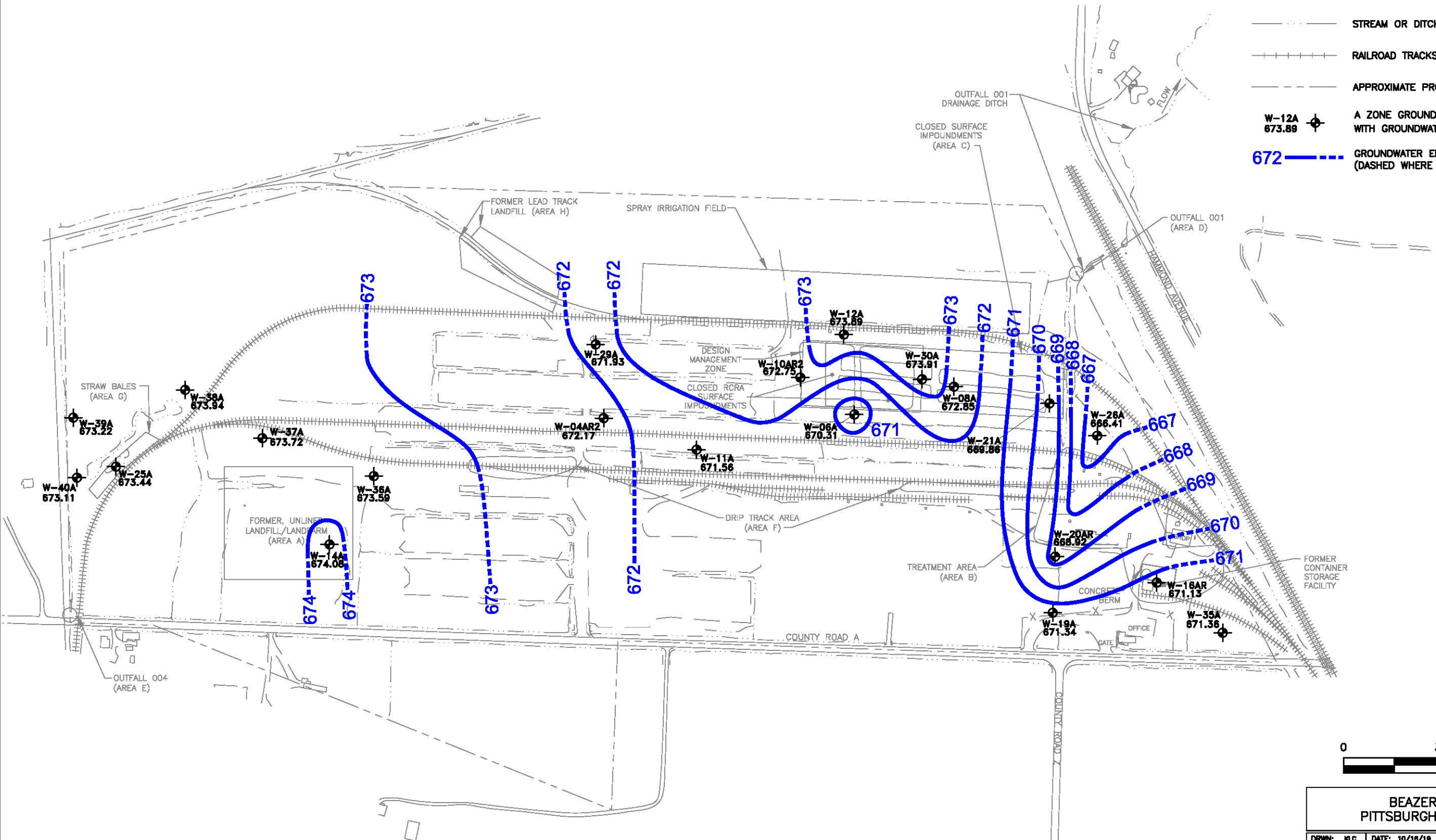
REV #	DATE	DESCRIPTION	APPD

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
 BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
 ALL LOCATIONS ARE APPROXIMATE.
 (1) W-02C ELEVATION NOT USED TO GENERATE CONTOURS.



LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-12A 673.89 A ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 672 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)



BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KLC	DATE: 10/16/19	 FTS	FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 10/16/19		200 THIRD AVENUE
APPD: JJK	DATE: 11/08/19		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS A-ZONE WELLS (OCTOBER 15, 2019)			PROJECT NO: 0M055619 DRAWING NUMBER FIGURE 4







REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
ALL LOCATIONS ARE APPROXIMATE.

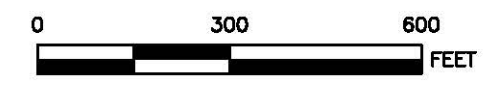
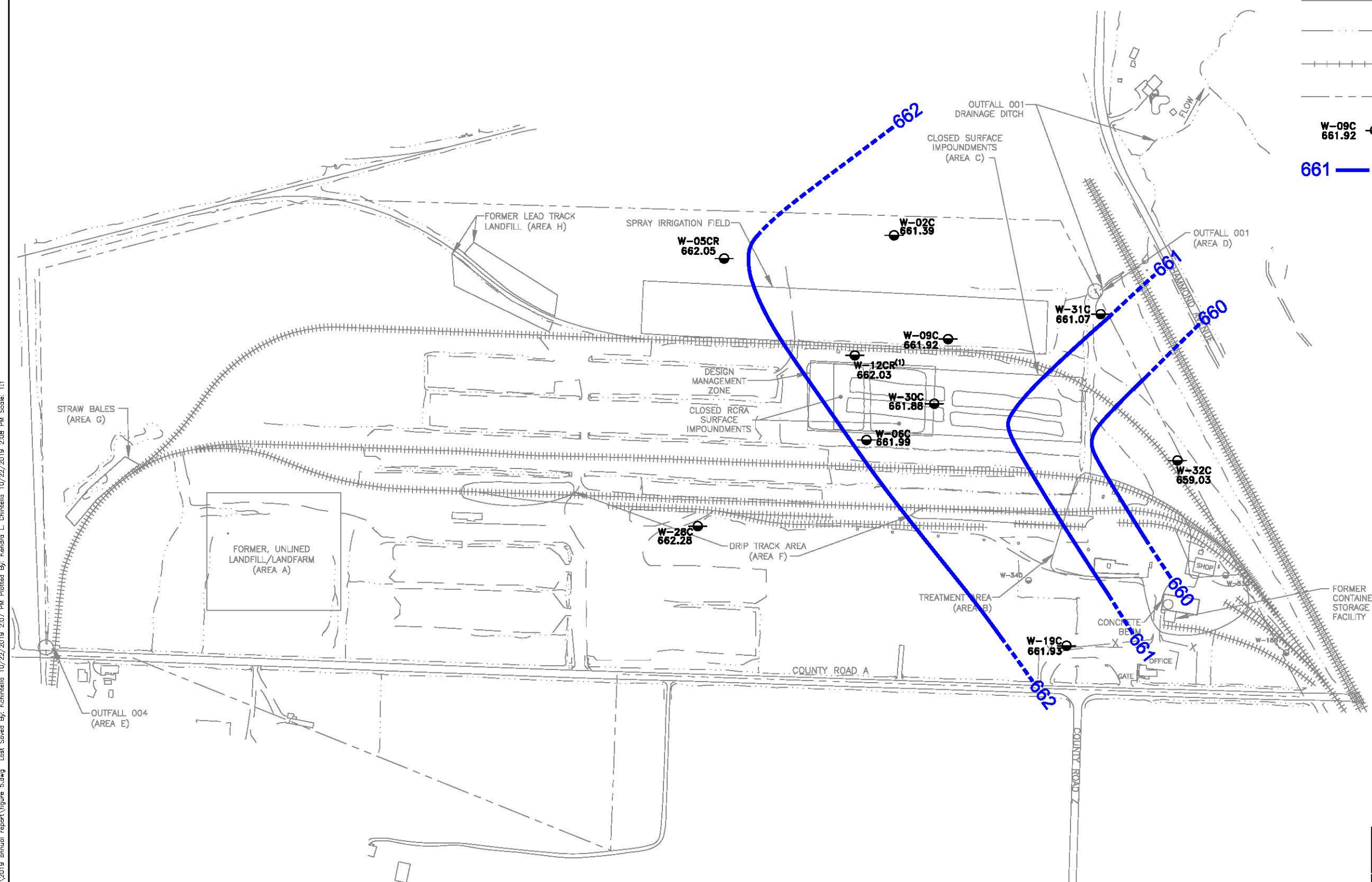
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LEGEND

-  ROAD
-  STREAM OR DITCH
-  RAILROAD TRACKS
-  APPROXIMATE PROPERTY BOUNDARY
-  W-09C
661.92 C ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
-  661 ——— GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)



BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KLC	DATE: 10/16/19		FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 10/16/19		200 THIRD AVENUE
APPD: JJK	DATE: 11/06/19		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS C-ZONE WELLS (OCTOBER 15, 2019)			PROJECT NO: 0M055619 DRAWING NUMBER FIGURE 5

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REV #	DATE	DESCRIPTION	APPD

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
 BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
 ALL LOCATIONS ARE APPROXIMATE.
 (1) W-12CR ELEVATION NOT USED TO GENERATE CONTOURS.



W-12A		
Constituent	Apr-19	Oct-19
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.056 U	0.054 U
BENZO(B)FLUORANTHENE	0.058 U	0.056 U
CHRYSENE	0.14 U	0.13 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	2.20E-06	NA

W-12CR			
Constituent	Apr-19	Apr-19 Dup	Oct-19
BENZENE	0.41 U	0.41 U	0.41 U
BENZO(A)PYRENE	0.056 U	0.055 U	0.056 U
BENZO(B)FLUORANTHENE	0.058 U	0.057 U	0.058 U
CHRYSENE	0.14 U	0.14 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	0.00E+00	1.80E-08	NA

W-30A		
Constituent	Apr-19	Oct-19
BENZENE	0.76 J	2.4
BENZO(A)PYRENE	0.054 U	0.057 UJ
BENZO(B)FLUORANTHENE	0.056 U	0.069 J
CHRYSENE	0.13 U	0.14 UJ
NAPHTHALENE	22	91
2,3,7,8-TCDD TEQ (ND=0)	1.60E-05	NA

W-10AR2		
Constituent	Apr-19	Oct-19
BENZENE	17	22
BENZO(A)PYRENE	0.055 U	0.057 UJ
BENZO(B)FLUORANTHENE	0.057 U	0.059 UJ
CHRYSENE	0.14 U	0.14 UJ
NAPHTHALENE	2.2	2.3 U
2,3,7,8-TCDD TEQ (ND=0)	4.68E-07	NA

W-30C			
Constituent	Apr-19	Oct-19	Dup
BENZENE	0.41 U	0.41 U	0.41 U
BENZO(A)PYRENE	0.054 U	0.055 U	0.055 U
BENZO(B)FLUORANTHENE	0.055 U	0.057 U	0.057 U
CHRYSENE	0.13 U	0.14 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	4.10E-08	NA	NA

W-04AR2		
Constituent	May-19	Oct-19
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.21 J	0.25 J
BENZO(B)FLUORANTHENE	0.54 J	0.5 J
CHRYSENE	0.51 J	0.77 J
NAPHTHALENE	0.43 U	0.76 U
2,3,7,8-TCDD TEQ (ND=0)	2.34E-05	NA

W-28C		
Constituent	Apr-19	Oct-19
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.053 U	0.053 UJ
BENZO(B)FLUORANTHENE	0.055 U	0.055 UJ
CHRYSENE	0.13 U	0.13 UJ
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	2.13E-07	NA

W-06A		
Constituent	Apr-19	Oct-19
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.055 U	0.056 U
BENZO(B)FLUORANTHENE	0.056 U	0.058 U
CHRYSENE	0.14 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	0.00E+00	NA

W-06C		
Constituent	Apr-19	Oct-19
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.054 U	0.054 U
BENZO(B)FLUORANTHENE	0.056 U	0.056 U
CHRYSENE	0.13 U	0.13 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	0.00E+00	NA

W-18D		
Constituent	May-19	Oct-19
BENZENE	NA	NA
BENZO(A)PYRENE	0.054 UJ	0.056 U
BENZO(B)FLUORANTHENE	0.056 UJ	0.058 U
CHRYSENE	0.14 UJ	0.14 U
NAPHTHALENE	0.29 UJ	0.3 U
2,3,7,8-TCDD TEQ (ND=0)	NA	NA

LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-19A A ZONE GROUNDWATER MONITORING WELL
- W-26B B ZONE GROUNDWATER MONITORING WELL
- W-32C C ZONE GROUNDWATER MONITORING WELL
- W-33D BEDROCK ZONE GROUNDWATER MONITORING WELL
- W-23A ABANDONED WELL

STANDARDS

Constituent	WDNR PAL	WDNR ES	MCL
BENZENE	0.5	5	5
BENZO(A)PYRENE	0.02	0.2	0.2
BENZO(B)FLUORANTHENE	0.02	0.2	-
CHRYSENE	0.02	0.2	-
NAPHTHALENE	10	100	-
2,3,7,8-TCDD TEQ (ND=0)	0.000003	0.00003	0.00003

- EXCEEDS WDNR PAL
- EXCEEDS WDNR ES
- EXCEEDS FEDERAL MCL
- ALL VALUES ARE IN ug/L
- U- NOT DETECTED
- J- ESTIMATED RESULT
- NA- NOT ANALYZED

TEQ- 2,3,7,8-TCDD TOXICITY EQUIVALENT QUOTIENT AT THE REQUEST OF WDNR, 2,3,7,8-TCDD TEQ VALUES ARE COMPARED TO THE CONGENER-SPECIFIC PAL AND ES FOR 2,3,7,8-TCDD

- PAL- WDNR PREVENTIVE ACTION LIMIT
- ES- WDNR ENFORCEMENT STANDARD
- MCL- FEDERAL MAXIMUM CONTAMINANT LEVEL



BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: KLC	DATE: 11/20/19
CHND: TSA	DATE: 11/20/19
APPD: AMG	DATE: 12/11/19
SCALE: AS SHOWN	
ISSUE DATE:	

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

APRIL AND OCTOBER 2019
CONSTITUENTS OF INTEREST

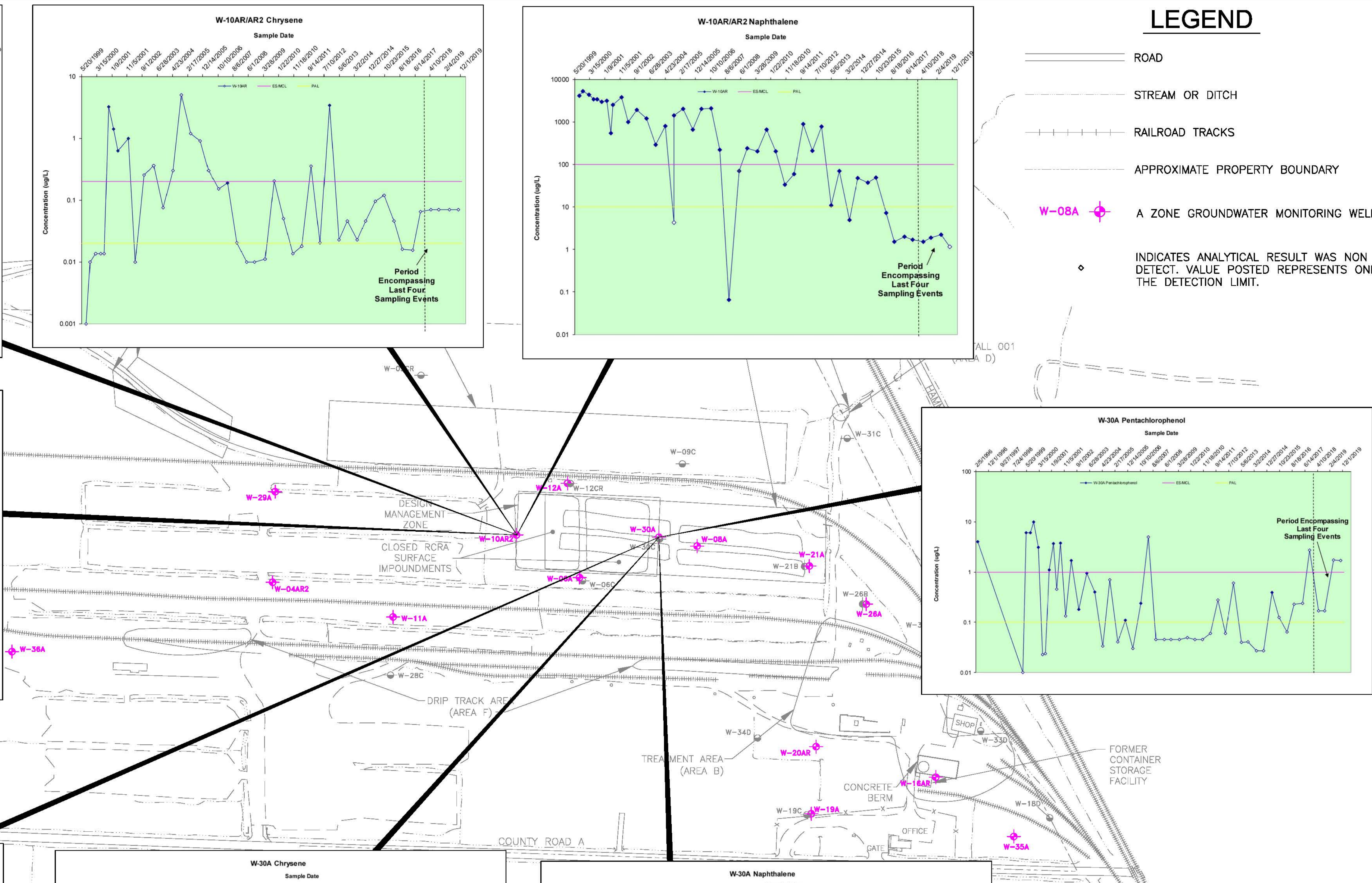
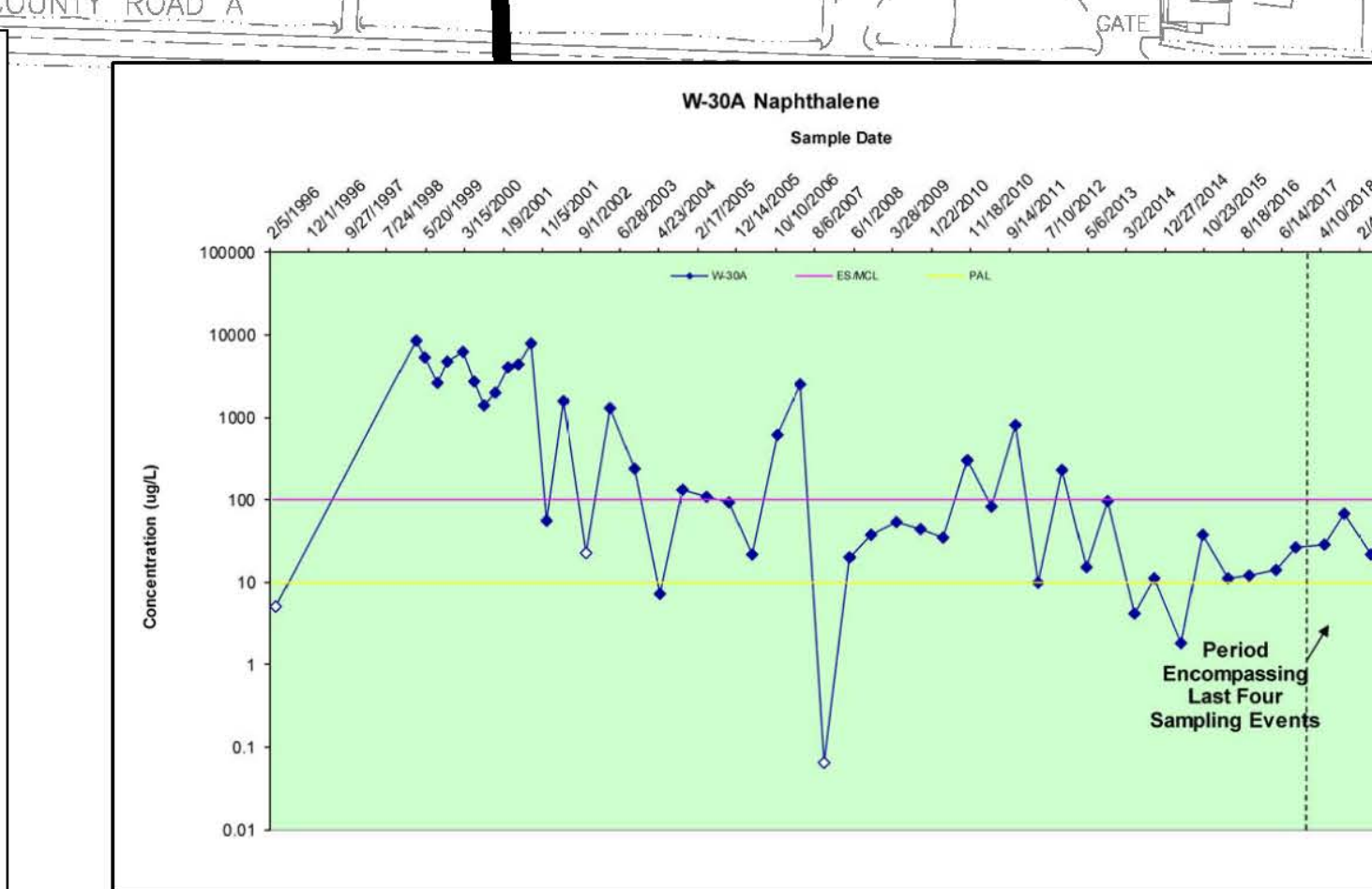
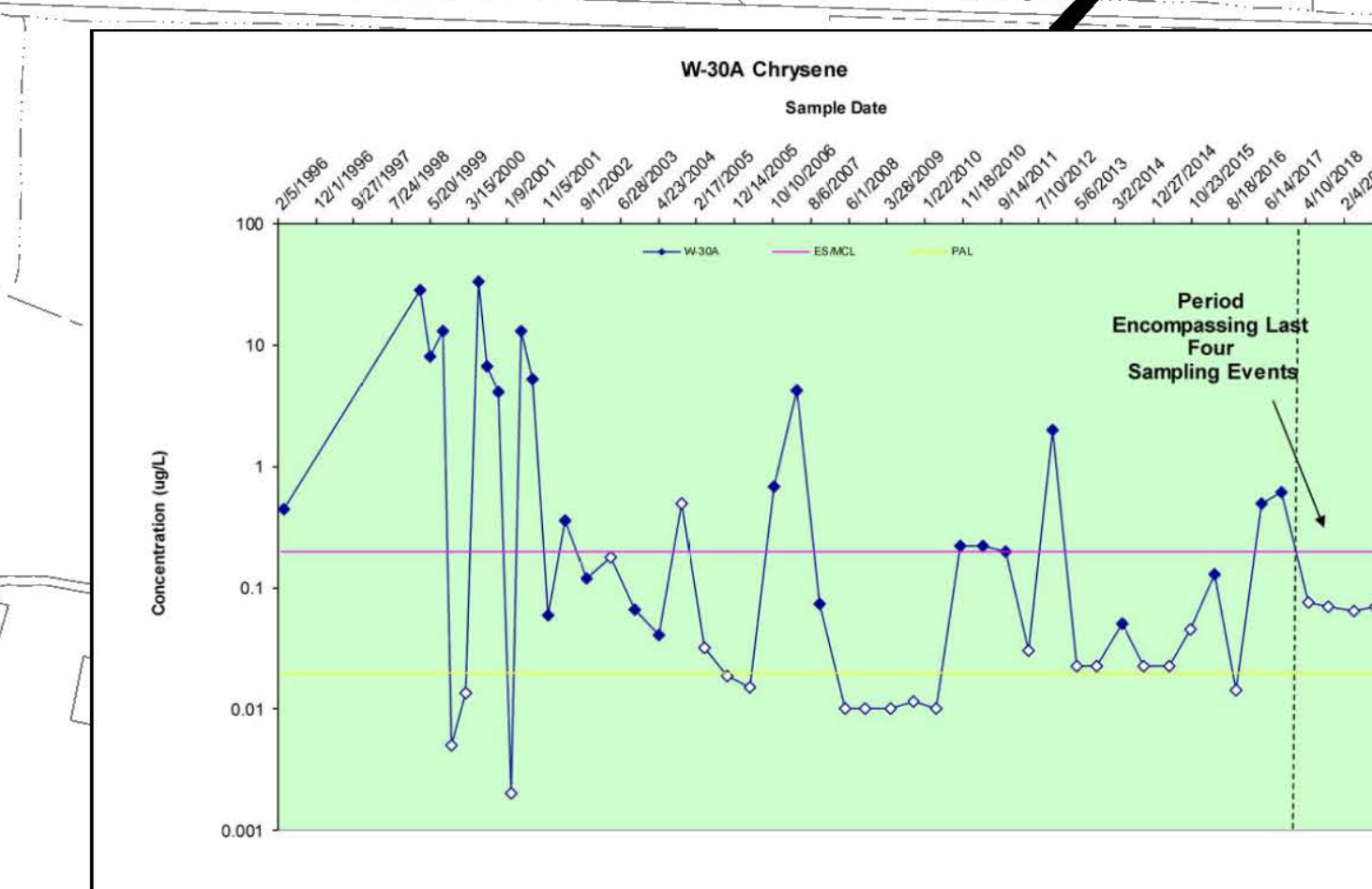
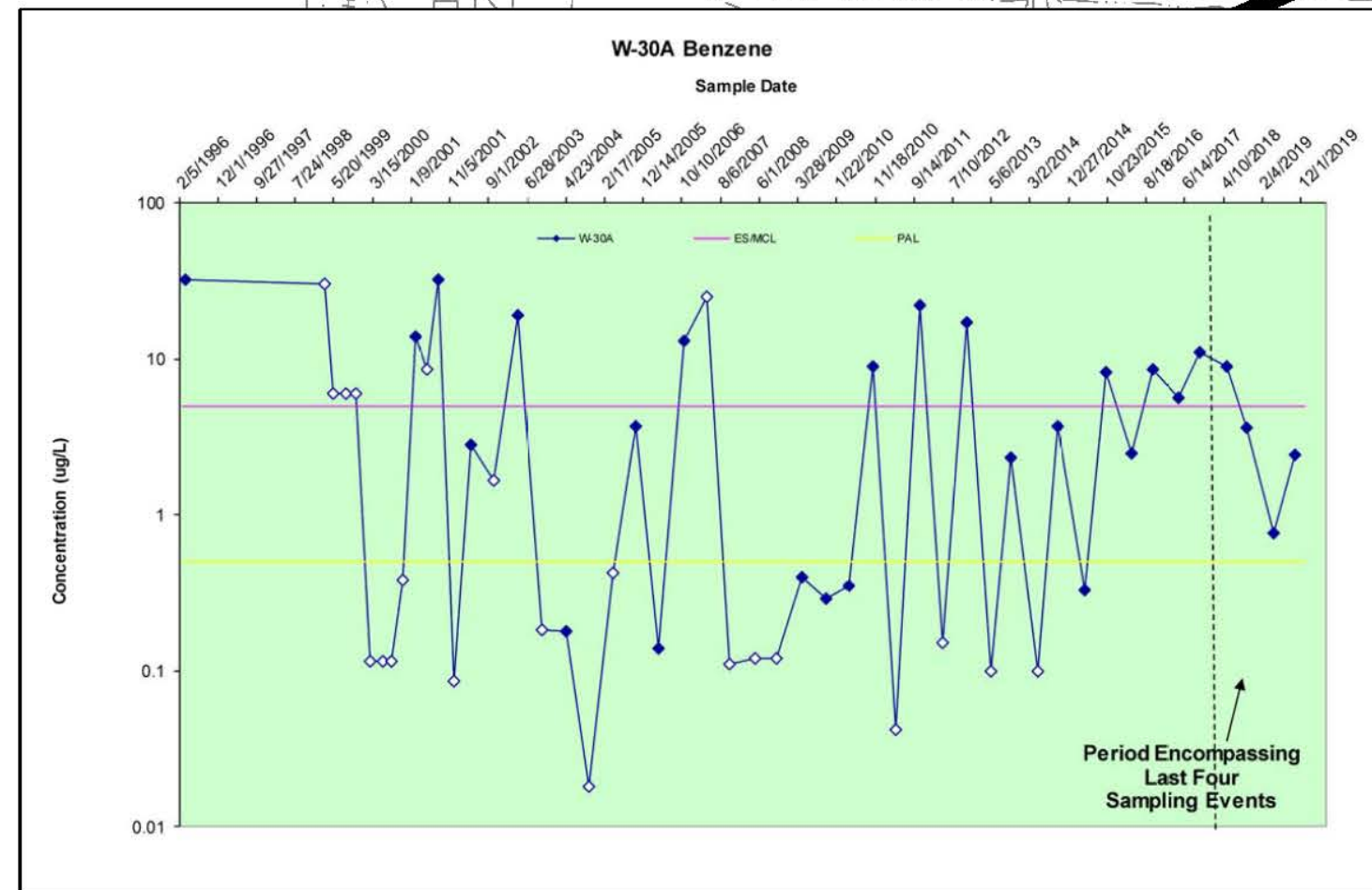
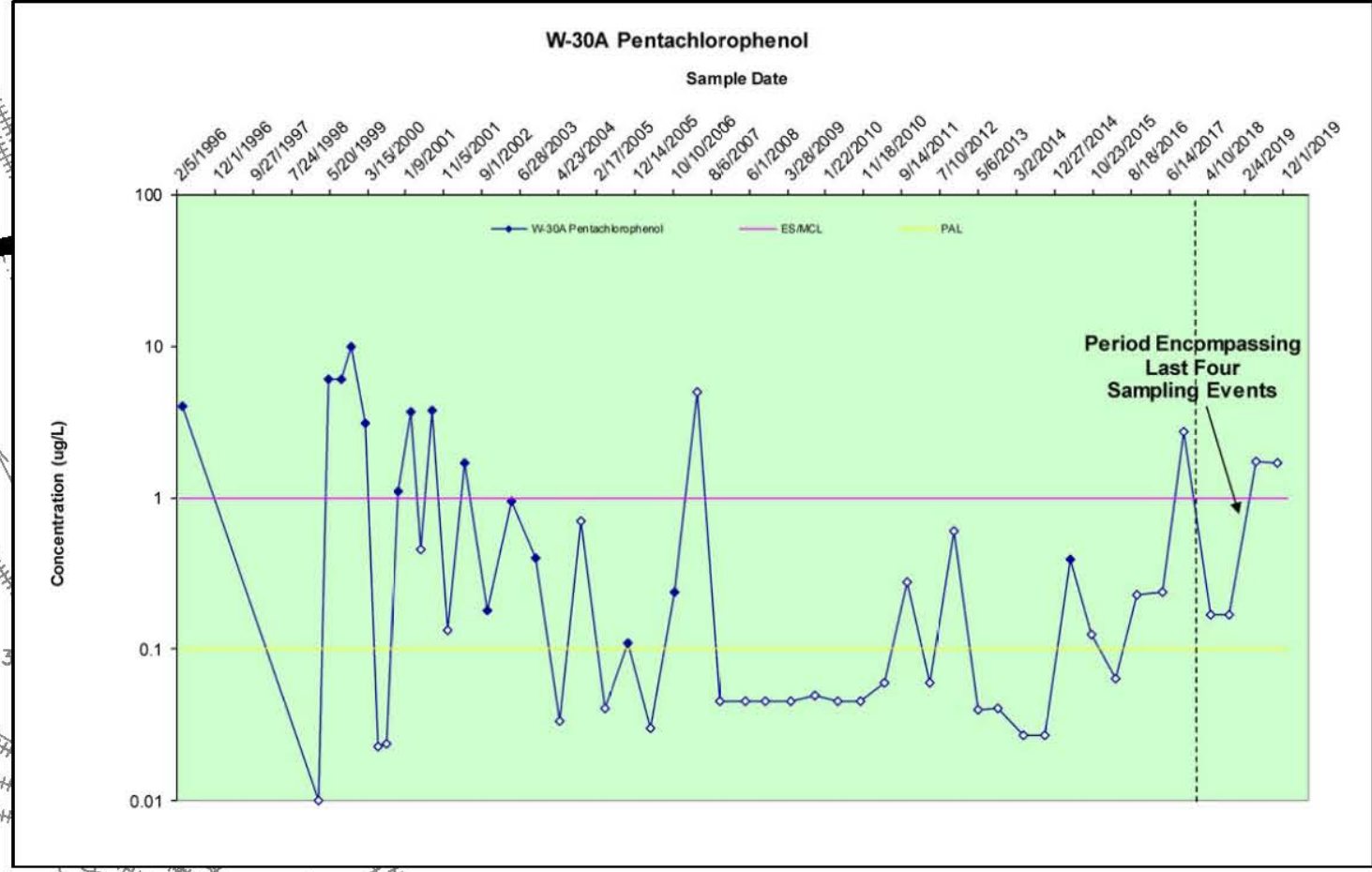
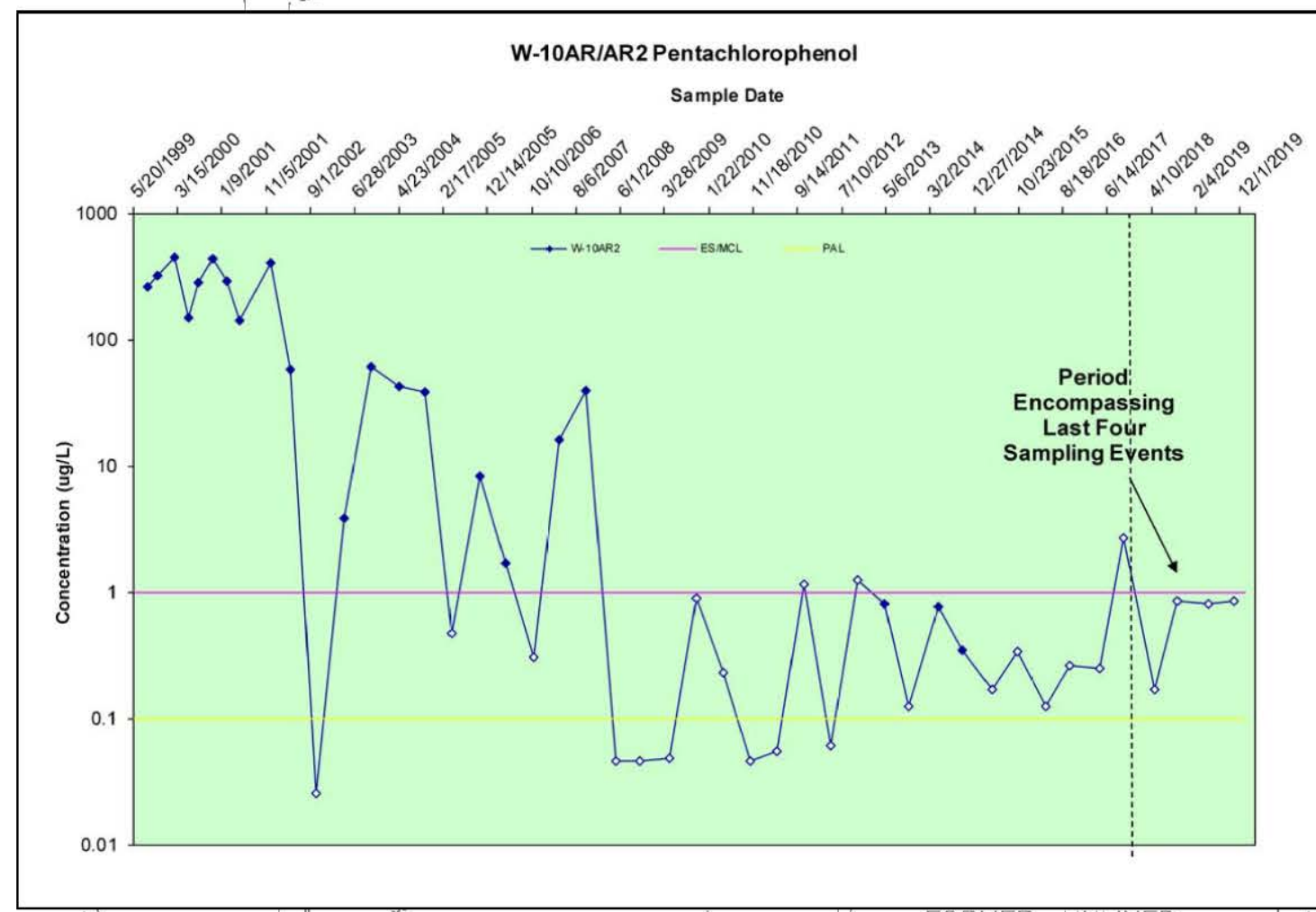
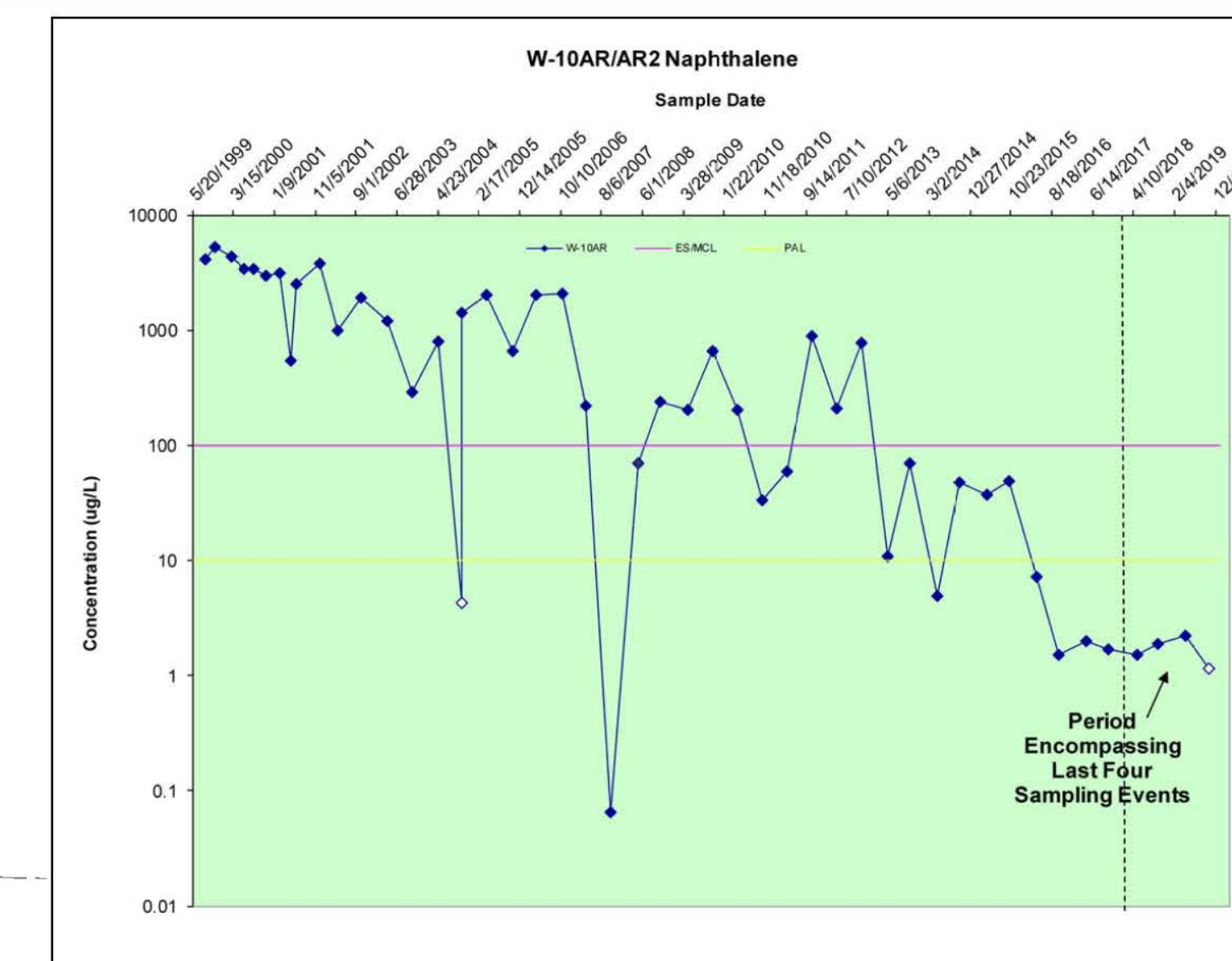
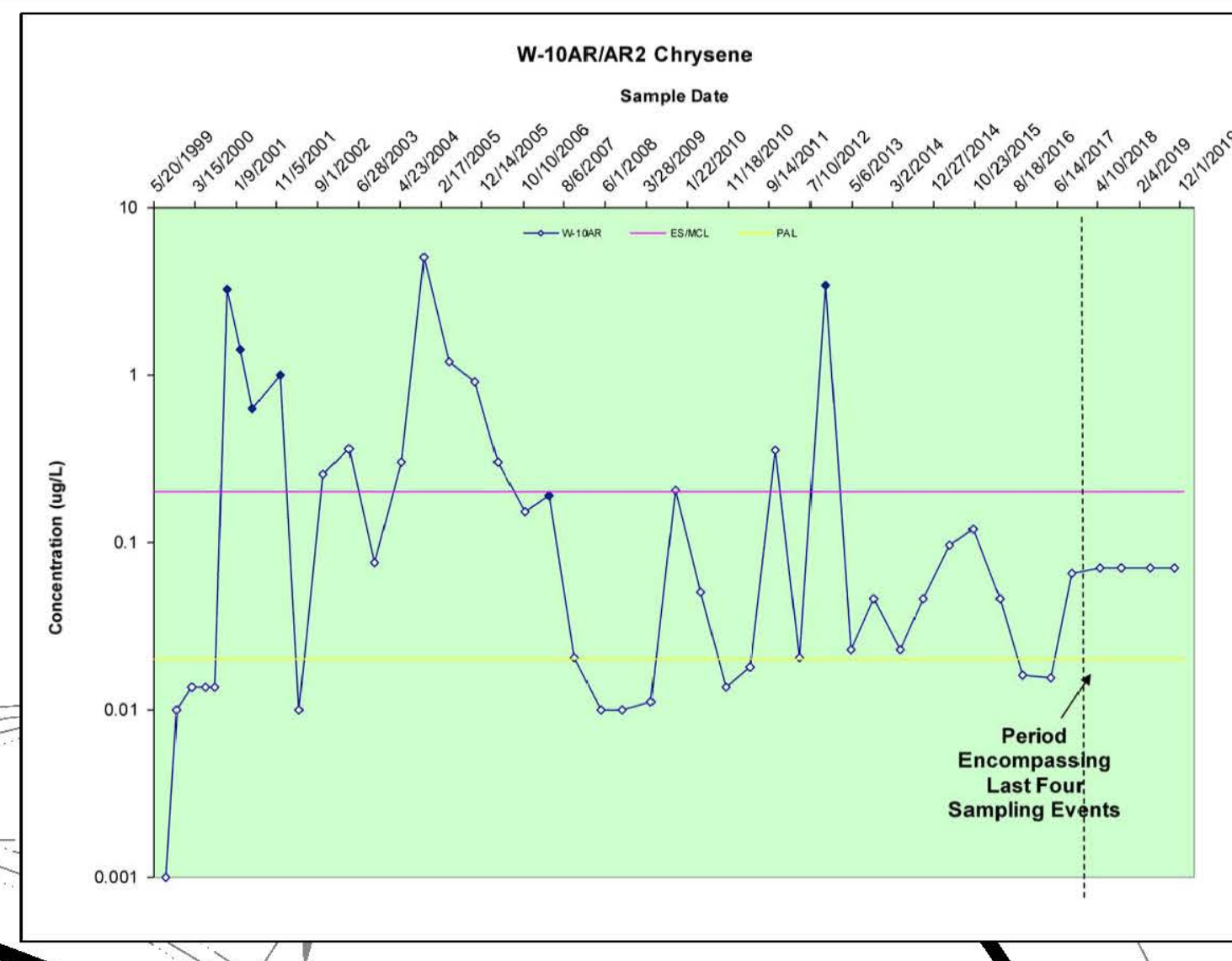
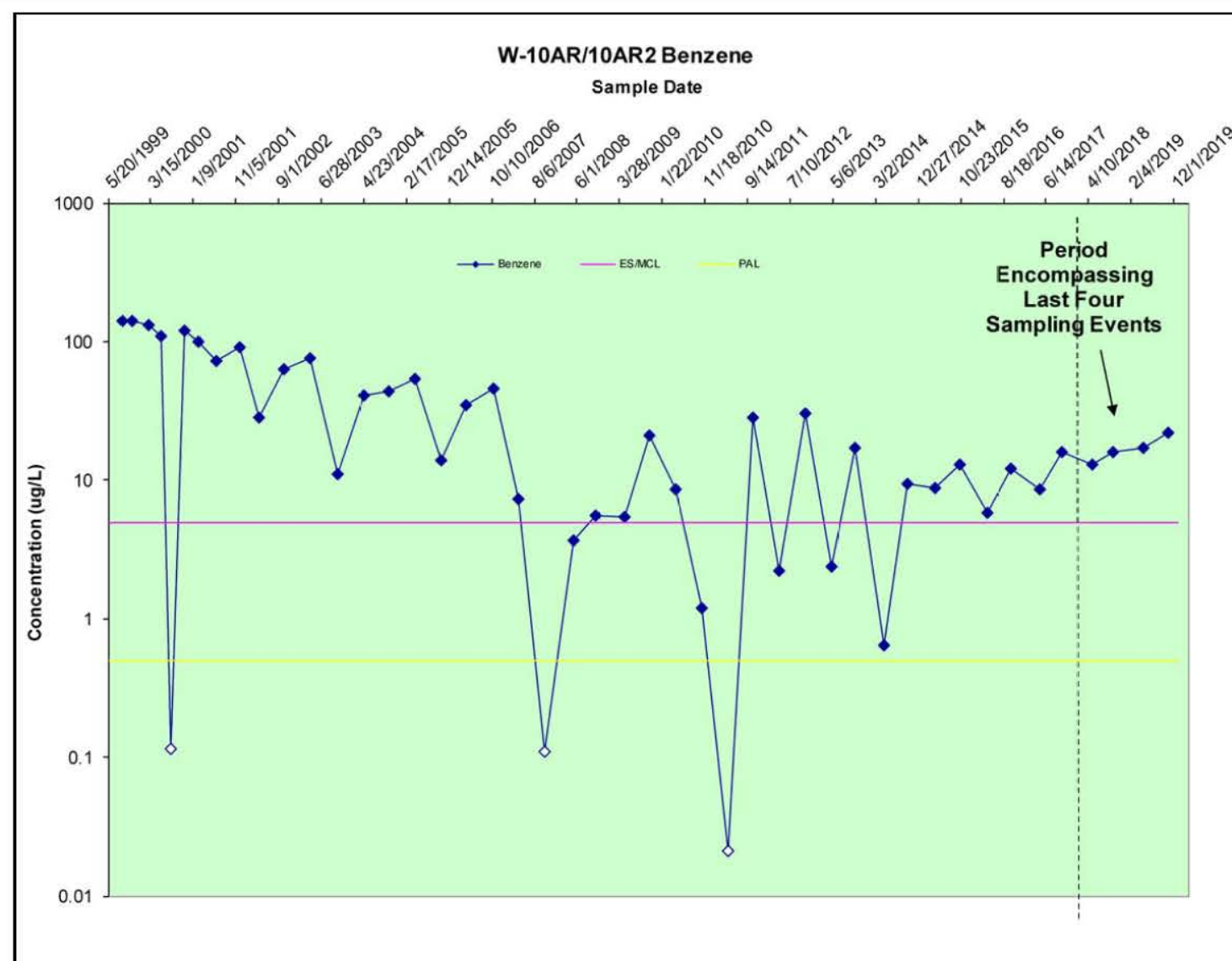
PROJECT NO: 09020819
DRAWING NUMBER
FIGURE 6

c:\projects\beazer_projects\superior\cadd\2019\annual_report\figure_6.dwg Last Saved By: schinella 12/12/2019 11:48 AM Plotted By: Kendra L. Schinella 12/12/2019 11:48 AM Scale: 1:1

REV	DATE	DESCRIPTION	APPD

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.

c:\projects\beazer_projects\superior\cadd\2019_annual_report\figure_7.dwg Last Saved By: schintala, 11/20/2019, 8:13 PM Plotted By: Kendra L. Chintala, 11/20/2019, 8:17 PM Scale: 1:1



LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-08A A ZONE GROUNDWATER MONITORING WELL
- INDICATES ANALYTICAL RESULT WAS NON DETECT. VALUE POSTED REPRESENTS ONE-HALF THE DETECTION LIMIT.

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
 BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
 ALL LOCATIONS ARE APPROXIMATE.

REV #	DATE	DESCRIPTION	APPD

BEAZER EAST, INC.
 PITTSBURGH, PENNSYLVANIA

FIELD & TECHNICAL SERVICES, LLC
 200 THIRD AVENUE
 CARNEGIE, PA 15106

FORMER KOPPERS INC. FACILITY
 SUPERIOR, WISCONSIN

A-ZONE PARAMETER CONCENTRATION
 TRENDS OF BENZENE, CHRYSENE,
 NAPHTHALENE, PENTACHLOROPHENOL

PROJECT NO: 0M055619
 DRAWING NUMBER
FIGURE 7

DRWN: KLC	DATE: 11/20/19
CHKD: TSA	DATE: 11/20/19
APPD: AMG	DATE: 12/11/19
SCALE: AS SHOWN	
ISSUE DATE:	

APPENDIX A
Project Activity Milestone Summary

Former Koppers Superior Site - Project Activity Milestone Summary

Closure and Post Closure Plan

- Beazer submitted a Closure and Post-Closure Plan for the RCRA impoundments to the WDNR in a document dated August 28, 1987 (Keystone Environmental Resources, August 28, 1987).
- The WDNR provided a Plan Approval on October 1, 1987.
 - ➔ In accordance with Plan Approval, approximately 1,358 tons of K001 sludge and subgrade soils exhibiting visible presence of K001 sludge-related material were removed from the impoundments and transported off-site by August 3, 1988.
- Subgrade sampling activities took place in August 1988.
 - ➔ It was determined that traces of K001 constituents remained in the subgrade and outer berms; therefore, the impoundments were closed as a landfill.
- Closure activities were completed by August 29, 1989 and are detailed in the document *Construction Documentation Surface Impoundment Closure Report* (Keystone Environmental Resources, November 1989).
- Beazer submitted a Permit Modification Request to the Groundwater Monitoring Program to the WDNR on April 19, 2002 (Blasland Bouck, & Lee).
 - ➔ Following a public comment period, the WDNR provided a Conditional Closure and Long-Term Care Plan Approval Modification in an October 29, 2002 letter to Beazer.

Design Management Zone

- The design management zone (DMZ) is the point of standards application for Wisconsin water quality standards.
- The closed impoundment system is subject to regulation under NR 664.0090 to 664.0100 and therefore the horizontal distance for the DMZ is zero feet.
 - ➔ The DMZ encompasses the vertical surface located along the southern boundary of the south lagoon, the western boundary of the south and north lagoons, the northern boundary of the north lagoon, and the eastern boundary of the north and south lagoons.

Monitoring Well Installation/Decommissioning

- During August 1988, 11 wells installed to monitor groundwater at the two impoundments were decommissioned to allow for capping of the impoundments.
 - ➔ The 11 decommissioned monitoring wells were L-1 S, L-2S, L-3S, L-3M, L-4S, L-4M, L-4D, L-5S, L-5M, L-5DR and L-17.
 - ➔ In accordance with the interim post closure monitoring plan, four monitoring wells (MW-1S, MW-4S, MW-4D, and MW-2S) were installed in November 1988 and 1989 to replace the decommissioned monitoring wells.
 - ➔ These four monitoring wells were subsequently re-designated (W-10B, W-12B, W-12C and W-6B, respectively) to provide a consistent nomenclature with 15 existing monitoring wells.
- In July and August of 1990, 26 new monitoring wells were installed at the Site as part of the Phase II RFI under the Site-wide RCRA corrective action program required by Federal Permit issued by the U.S. EPA September 30, 1988 pursuant to the Hazardous and Solid Waste Amendments (HSA).
- W-04C was abandoned in 2002 and W-10AR was replaced with W-10AR2 in 2003, as noted below.
- In October 2004, the monitoring well network at the Site was reevaluated. A field inspection of all Site monitoring wells indicated that some wells had been damaged due to frost heave or normal Site activities. Each well was assessed based on its location, relevance to the current sampling plan, extent of damage (if any), and potential for future damage. Based on these assessments, 14 monitoring wells were abandoned, two monitoring wells (W-5C and W-20A) were replaced, and seven monitoring wells were repaired during the fall and winter of 2004.
- In October 2006, six new A-zone monitoring wells (W-35A through W-40A) were installed for supplemental monitoring purposes.
- On July 13, 2010, monitoring wells W-16A and W-17A were abandoned in preparation for the on-property Corrective Measures Implementation (CMI) activities.
- Monitoring well W-16A was replaced with W-16AR in April 2013.

Groundwater Monitoring Program

- In March 1991 Beazer submitted a Draft Existing Conditions Report to the WDNR to propose a revised RCRA quarterly post-closure compliance monitoring program for the closed RCRA impoundments.
 - ➔ The WDNR provided comments on the Draft Existing Conditions Report, and the 1991 and 1992 Annual RCRA Groundwater Monitoring Summary reports in a letter dated July 19, 1993.
 - ➔ Beazer responded to the WDNR's comments on the Draft Existing Conditions Report on September 1, 1993, and to their comments on the 1991 and 1992 Annual RCRA Groundwater Monitoring Summary reports on September 10, 1993.
 - ➔ The Plan Approval groundwater monitoring program was subsequently approved by the WDNR.
- The analytical program of the Plan Approval groundwater monitoring program was initiated in the fourth quarter 1993, even though new monitoring well installations, needed to satisfy the modified program, had yet to be completed.
- In January 1994 Beazer submitted the documents, *Monitoring Well Installation and Abandonment Project Work Plan (PWP)* and *Groundwater Monitoring Sampling and Analysis Plan (SAP)* to the WDNR to provide a description of the methods and materials to be used to revise the monitoring well network and to perform the modified quarterly sampling, analyses, and statistics.
 - ➔ The PWP and SAP were approved by the WDNR and were implemented in June 1995.
 - ➔ The scope of work for the PWP included the installation of six monitoring wells (W-6A, W-10A, W-12A, W-12CR, W-30A, and W-30C) and the abandonment of four monitoring wells (W-6B, W-10B, W-12C, and W-12B) and the abandonment of a damaged well, W-27A.
 - ➔ As indicated in the SAP and required by the state's regulations, following four quarters of monitoring, statistical evaluation of the data are required; with the reporting of second quarter 1996 data four quarters of data were available for statistical determinations
 - ➔ In the August 5, 1996, correspondence to Fluor Daniel GTI, the WDNR deferred the statistical evaluation while an assessment of integrating the RCRA-Unit monitoring requirements into part of the Site-wide RCRA corrective action program was made.

- A Plan Approval Modification was issued by the WDNR on October 24, 1996 and represented a change in the lead status for the Site-wide RCRA Facility Investigation, from the U.S. EPA to the WDNR.
- Beazer submitted a new Groundwater Monitoring Sampling Analysis Plan to the WDNR on April 19, 2002 which included a semi-annual groundwater sampling plan, the use of bladder pumps for groundwater sampling, and the use of U.S. EPA Method 8270C (expanded list) to analyze groundwater samples for polycyclic aromatic hydrocarbons (PAHs), phenolics, and semi-volatile organic compounds (SVOCs)
 - ➔ With WDNR approval, the groundwater monitoring frequency was reduced from quarterly to semi-annual as of June 2002.
 - ➔ The WDNR conditionally approved new Groundwater Monitoring Sampling Analysis Plan in a letter (Plan Approval Modification) to Beazer dated October 29, 2002.
 - ➔ As directed by the WDNR, monitoring well W-04C was decommissioned on December 10, 2002.
 - Due to significant damage to the inner and outer casing, monitoring well W-10AR was sealed and replaced by well W-10AR2 on July 31, 2003.
 - As indicated above, 14 monitoring wells were abandoned, two monitoring wells (W-5C and W-20A) were replaced, and seven monitoring wells were repaired during the fall and winter of 2004.
 - Due to significant damage to the inner casing, monitoring well W-04AR was sealed and replaced by well W-04AR2 on July 24, 2017.

Site-Wide Corrective Action Monitoring Program

- As part of the October 24, 1996 Plan Approval Modification, the WDNR required the submittal of a proposal to begin a Site-wide corrective action monitoring program, to supplement the existing Plan Approval.
- A Site-wide corrective action monitoring program was proposed by Beazer via correspondence dated December 20, 1996 and included two minor modifications to the Plan Approval for the RCRA-Unit monitoring:
 - ➔ Eliminate arsenic from the list of parameters to be monitored, due to its lack of detection.
 - ➔ Eliminate Method 8270 analyses from the annual list of parameters due to its duplication of analytical results with the other organic compound analytical methods.

- No response was received from the WDNR regarding the December 20, 1996 request, although relevant requested modifications were incorporated into the April 19, 2002 request and associated October 29, 2002 Plan Approval Modification.
- A natural attenuation remedy for groundwater was proposed in the July 2007 Focused Corrective Measures Study (CMS). Supplemental groundwater data were collected between 2004 and 2007 (as summarized in the January 24, 2006 *Groundwater Natural Attenuation Evaluation Report* and September 18, 2007 *Summary of Supplemental Groundwater Investigations*) to demonstrate the occurrence of natural attenuation and support WDNR's approval of the proposed groundwater natural attenuation remedy.
- A work plan for additional groundwater sampling to further support the natural attenuation remedy was submitted to the WDNR on October 12, 2012, and was approved by the WDNR on December 7, 2012. Sampling events associated with this work plan were completed in April 2013, July 2013, October 2013, and January 2014. The additional groundwater sampling was summarized in a *Groundwater Natural Attenuation Demonstration Summary Report*, submitted to the WDNR on June 12, 2014.
- On October 17, 2014, ARCADIS, on behalf of Beazer, submitted a Technical Assistance and Environmental Liability Clarification Request to WDNR, requesting approval of the natural attenuation remedy for groundwater. WDNR approved the groundwater natural attenuation remedy in a letter to Beazer dated November 18, 2014.

Phase II and III RCRA Facility Investigation Reports (Phase II and III RFI Reports)

- A Phase II RFI Report was submitted to the WDNR and U.S. EPA in June 1991.
- A Phase III RFI Work Plan was submitted to the WDNR and U.S. EPA in August 1993 and conditionally approved by the U.S. EPA.
 - ➔ A meeting was held on August 2, 1994, between Beazer, U.S. EPA, and WDNR, to discuss the Phase III comments.
 - ➔ As result of this meeting, the cone penetrometer portion of the Phase III RFI Work Plan was segregated and re-evaluated.
- A revised Cone Penetrometer Work Plan was submitted to the WDNR and U.S. EPA on August 25, 1994 and was conditionally approved on September 9, 1994.
 - ➔ The required conditions were addressed and the field work was performed during October 1994 and January 1995.

- ➔ The results of the Cone Penetrometer work and the proposed Phase III RFI groundwater investigation activities were reported to the WDNR and U.S. EPA in an Interim Letter Report (ILR) in July 1995.
- Concurrent with submittal of the ILR was the submittal of an Addendum Summary Sampling Plan for Dioxins/Furans and the Surface Water and Streambed Sediment Sampling and Analysis Plan to the WDNR and U.S. EPA.
 - ➔ The ILR and Summary Sampling Plan for Dioxins/Furans were approved by the WDNR in an October 24, 1996, Plan Approval Modification.
 - ➔ Surface water and sediment sampling were performed in June 1996, and the Report of Findings was submitted to the WDNR in March 1997.
 - ➔ The Phase III RFI soil and groundwater investigations were implemented from October through December 1996 and the RFI Report was submitted to the Agencies in June 1997.

Surface Water and Streambed Sediment Activities

- The WDNR submitted comments on the Preliminary Characterization Report Surface Water and Streambed Sediment (March 1997) to Beazer via letter dated February 10, 1998, (received by Beazer February 17, 1998).
 - ➔ In accordance with the February 10, 1998, letter, Beazer submitted the document, *Supplemental Investigation Work Plan, Surface Water and Streambed Sediment* to the WDNR on May 4, 1998.
 - ➔ WDNR provided comments in a letter dated January 29, 1999.
 - ➔ Beazer responded to the comments in correspondence dated March 19, 1999.
 - ➔ A meeting was held on May 4, 1999 at the WDNR offices in Superior to discuss the Supplemental Investigation Work Plan, the Crawford Creek Surface Water and Sediment Work Plan, and the RFI Report.
- In the fall of 1999, an off-site Surface Water and Sediment Characterization Investigation was undertaken.
 - ➔ A Supplemental Investigation Work Plan for off-site surface water and sediment characterization was submitted to the WDNR on February 11, 2000.
 - ➔ The investigation summary report entitled *Supplemental Surface Water and Streambed Sediment Investigation Report* was submitted to WDNR on July 14, 2000.

- As further described below, additional investigations along Crawford Creek and the Outfall 001 drainage ditch were conducted in February 2003, May 2003, April-December 2005, and August 2013 through January 2014 and were reported to the WDNR on June 26, 2003, October 2, 2003, February 21, 2006, and April 15, 2014, respectively.
- Beazer submitted a Human Health and Ecological Risk Assessment (HHERA) for the off-property portion of the Site to the WDNR on January 15, 2009; WDNR provided comments on the HHERA on August 10, 2011 and March 14, 2012.
- On August 22, 2014, Beazer submitted to WDNR a Focused Corrective Measures Study (FCMS) for the off-property portion of the Site. Responses to WDNR comments on the HHERA were submitted to WDNR as Appendix A to the FCMS. WDNR provided draft comments on the FCMS to Beazer on November 13, 2014.

Soil Risk Evaluation Activities

- In a February 4, 1999 letter, the WDNR provided comments on the “Technical Memorandum on Soil Risk Procedures”.
 - ➔ Beazer provided responses to the comments on the “Technical Memorandum on Soil Risk Procedures” to the WDNR on April 5, 1999.
 - ➔ Following additional coordination with the WDNR and the Wisconsin Department of Health and Family Services, AMEC Earth and Environmental, Inc. (AMEC) provided a letter to the WDNR on August 29, 2001 summarizing the agreed-upon changes to the soil risk procedures.
 - ➔ The WDNR confirmed AMEC’s summary in a letter to Beazer dated October 17, 2001.
- A Post-Remediation Human Health Risk Assessment (HHRA) was submitted to the WDNR as an attachment to the March 2004 Focused CMS; the Post-Remediation HHRA was revised to reflect changes to Site conditions and additional sampling data, and was resubmitted with the revised Focused CMS in July 2007. Additional revisions were subsequently made to address WDNR comments, and an addendum to the July 2007 Post-Remediation HHRA was submitted to the WDNR on January 8, 2008. A revised HHRA Addendum was submitted in December 2009 to include additional soil sample data collected in 2008.
- In December 2009, Beazer submitted an On-Property CMI Design Report to the WDNR, which outlined the scope of work for implementing corrective measures to address impacted surface soils in the on-property portion of the Site and the on-property portion of the Outfall 001 drainage ditch. WDNR

approved the CMI Design Report in May 2010. The corrective measures construction activities were initiated in the fall of 2010, following receipt of the necessary permits, and were completed in July 2011. A Construction Documentation Report was submitted to the WDNR in September 2011. As a required component of the on-property corrective actions, Beazer submitted a *Notification of Continuing Obligations and Residual Contamination* to the property owner on June 16, 2014, and a GIS Registry Submittal to WDNR on August 5, 2015.

Bedrock Investigation Activities

- The WDNR provided comments on the RFI Report (June 1997) to Beazer in a letter dated February 15, 1999.
 - ➔ Beazer provided responses to the comments on the RFI Work Plan to the WDNR on March 26, 1999 and subsequently installed three additional wells to monitor the sandstone bedrock beneath the Site.
- An RFI Bedrock Monitoring Wells Report was submitted to WDNR on July 14, 2000.
 - ➔ Data related to sampling which was conducted at the three existing bedrock monitoring wells in the northern portion of the facility (W-18D, W-33D, and W-34D) were summarized in a letter to the WDNR dated September 21, 2001.
 - ➔ That letter proposed two additional rounds of sampling at the three existing bedrock monitoring wells and that additional off-site bedrock wells were not warranted.
 - ➔ On February 14, 2002, the WDNR issued a letter to Beazer providing comments on the *RFI Bedrock Monitoring Wells Report* and the September 21, 2001 letter.
- In a letter to the WDNR dated April 18, 2003, Beazer proposed the scope of continued short-term groundwater monitoring at the three existing bedrock wells.
- Additional bedrock groundwater sampling has been performed since 2003 in conjunction with the Site's semiannual groundwater monitoring program.

Additional Site Issues

- On May 23, 2000, Beazer submitted a Request for Modification of the Closure and Long Term Care Plan Approval and Corrective Action Management Unit (CAMU) Demonstration (CAMU Demonstration Document) to the WDNR.
 - ➔ The WDNR provided a letter on November 1, 2000 stating that enough substantive information has been provided to confirm that the CAMU application is “substantially in the approval process”.

- ➔ In a letter to Beazer dated January 23, 2002, the WDNR provided a Notice of Incompleteness related to the CAMU Demonstration Document.
 - ➔ In a letter to the WDNR dated April 15, 2002, Beazer responded to the WDNR's January 23, 2002 comments on the CAMU Demonstration Document.
 - ➔ In July, 2002, Beazer conducted wetland assessment/delineation activities at the Site to determine the presence and extent of regulated wetlands within the proposed CAMU location.
 - ➔ In a letter to Beazer dated January 17, 2003, the WDNR suggested that Beazer review Wisconsin regulations to determine the requirements for potential offset distances.
 - ➔ In a July 30, 2003 letter to the WDNR, Beazer summarized the basis for the WDNR-referenced offset distances.
 - ➔ During the November 21, 2003 project meeting, the WDNR indicated that the offset requirements were not applicable to the proposed CAMU.
- In a letter dated July 25, 2001, Beazer provided a work plan to the WDNR related to for supplemental investigations at the facility and in off-property areas.
 - ➔ The proposed investigation included fire pond probing and sampling, and additional sampling at bedrock monitoring wells, test pit excavations in the Crawford Creek floodplain, and sediment/floodplain soil sampling in the Crawford Creek area.
 - ➔ The on-site portions of these investigations were completed in December 2001 and the associated results were provided to the WDNR in a letter from BBL dated April 12, 2002.
 - ➔ In a letter to Beazer dated April 11, 2002, the WDNR provided comments on the July 25, 2001 work plan letter.
 - ➔ Beazer provided responses to the WDNR's comments in a letter dated April 30, 2002.
 - ➔ On June 24, 2002, Beazer provided a letter to the WDNR to obtain the necessary wetland-related permits/approvals to conduct the Crawford Creek floodplain investigation.
 - ➔ On December 30, 2002, Beazer provided another letter to the WDNR proposing an alternate approach for performing the Crawford Creek floodplain investigations, whereby the work would be completed

during frozen ground conditions, which would not require WDNR wetland-related permits/approvals.

- ➔ Throughout 2002, ongoing negotiations were conducted with a nearby property owner to gain access to his property, which is necessary to conduct the Crawford Creek floodplain investigation.
- ➔ The Crawford Creek investigation activities (including floodplain test pits and sediment/floodplain soil sampling) were performed in February 2003; a letter report summarizing the scope and findings of the Crawford Creek investigation activities was submitted to the WDNR on June 26, 2003.
- Additional investigations of the Outfall 001 drainage ditch (including visual characterization of manually recovered soil cores collected within and adjacent to the ditch) were performed between May 19 and 22, 2003; a letter report summarizing the scope and findings of the investigation activities was submitted to the WDNR on October 2, 2003.
- Based on a letter from the WDNR dated January 22, 2004 and discussions during a conference call on February 26, 2004, additional investigations of the Outfall 001 drainage ditch and Crawford Creek were conducted between April and December 2005; the investigation results were reported to the WDNR on February 21, 2006.
- Based on discussions during a January 20, 2005 meeting/conference call and a letter from the WDNR dated January 25, 2005, additional on-property soil sampling was conducted in April and September 2005; the sampling results were reported to the WDNR on February 22, 2006.
- Additional on-property soil samples were collected in 2006 to support revisions to the HHRA.
- In a letter to Beazer dated April 11, 2002, the WDNR requested information regarding the potential presence of PAHs and dioxins/furans in Nemadji River fish.
 - ➔ In a letter dated July 10, 2002, Beazer provided the requested information to the WDNR.
 - ➔ In a memorandum to the WDNR dated January 17, 2003, the WDHFS requested additional information to support the conclusion that collecting and analyzing samples of fish in Crawford Creek and Nemadji River is not warranted.
 - ➔ The requested additional information was provided in a letter from AMEC to the WDNR dated June 1, 2003.

- ➔ Revised dioxin/furan fish tissue concentration calculated based on data collected in May 2003 were provided to the WDNR in a letter from AMEC dated October 14, 2003.
- Additional off-property investigations (soil borings, soil sampling, temporary well installations, and groundwater sampling in the Crawford Creek floodplain area) were completed from August 2013 through January 2014 in accordance with a work plan submitted to the WDNR on June 28, 2013 and conditionally approved by the WDNR on July 3, 2013. The investigation results were reported to WDNR on April 15, 2014.

APPENDIX B
Field Data and Notes

First Semi-Annual Event



WELL No.: W-04AR2

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-04AR2</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>05/01/2019 0712</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Katie McMullen</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>35, wintry mix</u>

WATER LEVEL DATA

a.) Depth To Groundwater:	<u>2.11</u> (ft)	e.) Depth to LNAPL:	<u>NP</u> (ft)
b.) Total Well Depth:	<u>14.08</u> (ft)	f.) Depth to DNAPL:	<u>NP</u> (ft)
c.) Length of Water Column:	<u>11.97</u> (ft)	g.) LNAPL Thickness:	<u>N/A</u> (ft)
d.) Well Volume:	<u>1.95</u> (gal)	h.) DNAPL Thickness:	<u>N/A</u> (ft)

WATER PURGE DATA

Purge Method:	<u>Non-Dedicated Bladder Pump</u>	Purge Start:	<u>05/01/2019 0800</u>
Conductivity Unit:	<u>ms/cm</u>	Purge End:	<u>05/01/2019 0825</u>
Total Volume Removed (gals):	<u>0.99</u>		

Field Equipment	Calibrated	Sampling Equipment	Dedicated
YSI 556 MPS 10K101399	Yes	Bladder Pump 11710	No
Lamotte 2020we Turbidity Meter 5271-0515	Yes		
Heron water level meter 200' 22070	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	0800	150	2.85	7.99	0.716	48.0	12.98	16.40	2.50	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
1	0805	150	2.70	7.59	0.370	4.8	12.04	26.90	2.98	
2	0810	150	2.46	7.49	0.624	-8.1	11.92	19.50	3.31	
3	0815	150	2.64	7.45	0.645	-25.7	11.87	16.80	3.50	
4	0820	150	2.63	7.46	0.640	-26.3	11.91	17.00	3.59	
5	0825	150	2.58	7.52	0.642	-26.0	11.85	15.90	3.67	

SAMPLE COLLECTION INFORMATION							
Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-04AR2-050119

Sample Start time: 05/01/2019 0830

Sample Finish time: 05/01/2019 0910

Comments: _____



WELL No.: W-06A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-06A</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 1032</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Katie McMullen</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>35, windy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.53</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.23</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.70</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.75</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 1035</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 1100</u>
Total Volume Removed (gals): <u>0.50</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Lamotte 2020we Turbidity Meter 5271-0515	Yes	Bladder Pump 11710	No
YSI 556 MPS 10K101399	Yes		
Heron water level meter 200' 22070	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1035	100	3.26	8.44	0.441	86.7	10.21	18.80	2.95	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1040	75	3.35	7.71	0.831	25.5	6.59	21.70	3.38	
2	1045	75	3.17	7.62	0.823	6.5	5.10	17.70	3.95	
3	1050	75	2.98	7.54	0.803	-1.9	4.47	9.97	4.18	
4	1055	75	2.79	7.47	0.795	1.1	4.46	9.94	4.41	
5	1100	75	2.75	7.47	0.793	2.4	4.46	9.99	4.65	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06A-043019

Sample Start time: 04/30/2019 1105

Sample Finish time: 04/30/2019 1215

Comments: _____



WELL No.: W-06C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-06C</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 1217</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Katie McMullen</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>35, windy, drizzle</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>12.24</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>44.00</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>31.76</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.18</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 1225</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 1250</u>
Total Volume Removed (gals): <u>2.97</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Lamotte 2020we Turbidity Meter 5271-0515	Yes	Bladder Pump 11710	No
YSI 556 MPS 10K101399	Yes		
Heron water level meter 200' 22070	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1225	450	5.73	7.97	0.655	94.5	3.20	6.69	12.31	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1230	450	5.72	7.95	0.657	-111.4	8.51	4.46	12.31	
2	1235	450	5.72	7.96	0.656	-121.6	8.49	3.86	12.31	
3	1240	450	5.75	7.99	0.654	-123.6	8.59	3.25	12.31	
4	1245	450	5.75	8.00	0.654	-122.7	8.61	3.17	12.31	
5	1250	450	5.75	8.00	0.654	-122.1	8.60	3.09	12.31	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06C-043019

Equipment Blank :SUPE-EB-01-043019

MS/MSD Blank :SUPE-W-06C-MS/MSD-043019

Sample Start time: 04/30/2019 1255

Sample Finish time: 04/30/2019 1340

Comments:



WELL No.: W-10AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-10AR2</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 1436</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>30s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.35</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>16.53</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>13.18</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>2.15</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 1444</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 1509</u>
Total Volume Removed (gals): <u>0.50</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Hanna H198703 Turbidity Meter 08604023	Yes	Bladder Pump SN: 10983	No
Heron Dipper T Water Level Meter 200' 1312-T	No		
YSI 556 MPS 15M101116	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1444	75	2.47	7.26	1.061	-31.1	8.40	31.40	3.65	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1449	75	2.34	7.13	1.070	-45.4	4.42	20.30	3.82	
2	1454	75	2.09	7.10	1.070	-52.6	3.89	10.50	4.10	
3	1459	75	1.91	7.07	1.073	-57.6	3.25	7.22	4.35	
4	1504	75	1.90	7.06	1.072	-58.5	3.36	7.11	4.53	
5	1509	75	1.88	7.06	1.072	-59.9	3.24	7.03	4.74	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+nap htha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-10AR2-043019

Sample Start time: 04/30/2019 1514

Sample Finish time: 04/30/2019 1618

Comments: Purged at slowest sustainable rate



WELL No.: W-12A

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-12A</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 0858</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>30s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater:	<u>2.36</u> (ft)	e.) Depth to LNAPL:	<u>NP</u> (ft)
b.) Total Well Depth:	<u>13.36</u> (ft)	f.) Depth to DNAPL:	<u>NP</u> (ft)
c.) Length of Water Column:	<u>11.00</u> (ft)	g.) LNAPL Thickness:	<u>N/A</u> (ft)
d.) Well Volume:	<u>1.80</u> (gal)	h.) DNAPL Thickness:	<u>N/A</u> (ft)

WATER PURGE DATA

Purge Method:	<u>Non-Dedicated Bladder Pump</u>	Purge Start:	<u>04/30/2019 0913</u>
Conductivity Unit:	<u>ms/cm</u>	Purge End:	<u>04/30/2019 0943</u>
Total Volume Removed (gals):	<u>0.79</u>		

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Dipper T Water Level Meter 200' 1312-T	No	Bladder Pump SN: 10983	No
YSI 556 MPS 15M101116	Yes		
Hanna H198703 Turbidity Meter 08604023	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	0913	100	1.45	7.44	0.460	45.5	12.28	45.60	2.98	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
1	0918	100	1.35	7.40	0.459	52.8	8.84	42.30	3.05	
2	0923	100	1.29	7.37	0.456	55.8	9.17	26.10	3.54	
3	0928	100	1.24	7.34	0.463	59.0	10.10	19.40	3.94	
4	0933	100	1.29	7.32	0.483	60.9	10.00	9.78	4.21	
5	0938	100	1.17	7.30	0.490	63.1	9.97	9.61	4.50	
6	0943	100	1.17	7.29	0.491	64.9	9.94	9.48	4.73	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+nap htha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12A-043019

Sample Start time: 04/30/2019 0948

Sample Finish time: 04/30/2019 1030

Comments: Purged at slowest sustainable rate



WELL No.: W-12CR

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-12CR</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 1031</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>30s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.30</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>47.68</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.38</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.28</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 1039</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 1104</u>
Total Volume Removed (gals): <u>1.65</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Dipper T Water Level Meter 200' 1312-T	No	Bladder Pump SN: 10983	No
Hanna H198703 Turbidity Meter 08604023	Yes		
YSI 556 MPS 15M101116	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1039	250	4.35	7.63	1.086	5.7	3.29	5.95	15.30	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1044	250	4.36	7.62	1.100	-55.3	2.31	5.74	15.30	
2	1049	250	4.39	7.60	1.119	-110.0	1.60	5.88	15.30	
3	1054	250	4.43	7.60	1.122	-129.4	1.57	5.70	15.30	
4	1059	250	4.47	7.58	1.130	-137.0	1.55	5.64	15.30	
5	1104	250	4.44	7.58	1.134	-139.1	1.52	5.55	15.30	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12CR-043019

Trip Blank :SUPE-TB-01-043019

Blind Duplicate :SUPE-M-99A-043019

Sample Start time: 04/30/2019 1109

Sample Finish time: 04/30/2019 1143

Comments:



WELL No.: W-18D

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client: <u>Beazer East, Inc.</u>	Well ID: <u>W-18D</u>
Project Name: <u>Superior 2019 1SA Sampling</u>	Date: <u>05/01/2019 0756</u>
Project Number: <u>OM-0556-19-091</u>	Technician: <u>Ben Trask</u>
Location: <u>Superior</u>	Weather Conditions: <u>30s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>44.72</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>201.80</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>157.08</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>25.63</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/01/2019 0852</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/01/2019 0917</u>
Total Volume Removed (gals): <u>1.98</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Dipper T Water Level Meter 200' 1312-T	No	Bladder Pump SN: 10983	No
Hanna H198703 Turbidity Meter 08604023	Yes		
YSI 556 MPS 15M101116	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	0852	300	3.31	10.97	0.500	24.3	7.32	23.50	44.78	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
1	0857	300	4.14	11.27	0.501	19.3	6.23	12.30	44.78	
2	0902	300	4.23	11.33	0.509	18.6	5.81	9.63	44.78	
3	0907	300	4.27	11.34	0.513	18.9	5.90	8.43	44.78	
4	0912	300	4.28	11.34	0.515	18.8	6.10	8.12	44.78	
5	0917	300	4.28	11.35	0.515	18.6	6.22	8.03	44.78	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8270C_SVOC+Naphth	8270C_SVOC+na phtha	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-18D-050119

Sample Start time: 05/01/2019 0922

Sample Finish time: 05/01/2019 0932

Comments: _____



WELL No.: W-28C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-28C</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 1429</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Katie McMullen</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>35, windy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>13.85</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>46.40</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.55</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.31</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 1440</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 1505</u>
Total Volume Removed (gals): <u>1.65</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Lamotte 2020we Turbidity Meter 5271-0515	Yes	Bladder Pump 11710	No
Heron water level meter 200' 22070	No		
YSI 556 MPS 10K101399	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1440	250	5.45	8.28	0.827	-43.3	13.34	5.86	13.91	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1445	250	5.94	7.94	0.888	-132.0	1.40	4.74	13.91	
2	1450	250	5.92	7.93	0.890	-134.8	1.31	4.76	13.91	
3	1455	250	5.94	7.89	0.897	-148.7	0.83	3.98	13.91	
4	1500	250	5.93	7.88	0.898	-152.4	0.79	3.89	13.91	
5	1505	250	5.95	7.88	0.898	-152.6	0.75	3.95	13.91	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+nap htha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-28C-043019

Sample Start time: 04/30/2019 1510

Sample Finish time: 04/30/2019 1535

Comments: _____



WELL No.: W-30A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-30A</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 1153</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>30s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.11</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.24</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>11.13</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.82</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 1205</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 1230</u>
Total Volume Removed (gals): <u>0.50</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Hanna H198703 Turbidity Meter 08604023	Yes	Bladder Pump SN:10983	No
Heron Dipper T Water Level Meter 200' 1312-T	No		
YSI 556 MPS 15M101116	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1205	75	2.09	7.25	1.020	-49.9	9.24	43.90	3.02	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1210	75	1.52	7.08	0.925	-51.3	8.34	25.30	3.20	
2	1215	75	1.36	7.05	0.884	-55.8	8.05	13.40	3.45	
3	1220	75	1.32	7.06	0.873	-55.2	8.03	9.62	3.62	
4	1225	75	1.25	7.09	0.866	-49.7	8.10	9.14	3.81	
5	1230	75	1.24	7.10	0.862	-47.0	8.12	9.07	4.03	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+nap htha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30A-043019

Sample Start time: 04/30/2019 1235

Sample Finish time: 04/30/2019 1328

Comments: Purged at slowest sustainable rate



WELL No.: W-30C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-30C</u>
Project Name:	<u>Superior 2019 1SA Sampling</u>	Date:	<u>04/30/2019 0906</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Katie McMullen</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>35, windy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>14.92</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>48.82</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>33.90</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.53</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/30/2019 0915</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>04/30/2019 0940</u>
Total Volume Removed (gals): <u>1.32</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
YSI 556 MPS 10K101399	Yes	Bladder Pump 11710	No
Heron water level meter 200' 22070	No		
Lamotte 2020we Turbidity Meter 5271-0515	Yes		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	0915	200	5.76	7.80	0.782	121.3	4.84	15.60	14.95	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	0920	200	5.82	7.74	0.785	102.0	4.94	14.00	14.95	
2	0925	200	5.52	7.75	0.784	78.5	4.67	11.70	14.95	
3	0930	200	5.51	7.76	0.783	77.9	4.65	6.56	14.95	
4	0935	200	5.57	7.80	0.786	72.0	4.73	6.37	14.95	
5	0940	200	5.55	7.81	0.787	69.7	4.63	6.25	14.95	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2019 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2019 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30C-043019

Sample Start time: 04/30/2019 0945

Sample Finish time: 04/30/2019 1015

Comments: _____

Second Semi-Annual Event



WELL No.: W-04AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-04AR2</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/17/2019 0822</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>30s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.78</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>14.08</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.30</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.68</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/17/2019 0834</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/17/2019 0859</u>
Total Volume Removed (gals): <u>0.66</u>	

Field Equipment	Calibrated
Hanna HI 98194 Water Quality Meter 03060013991	Yes
LaMotte 2020we Turbidity Meter 6054-4515	Yes
Heron 300' WL Meter 2814-T	No

Sampling Equipment	Dedicated
GeoTech S.S. Bladder Pump 165	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	0834	100	10.24	6.75	0.165	-94.2	7.52	21.70	4.12	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	0839	100	10.23	6.72	0.946	-88.2	4.81	6.61	4.38	
2	0844	100	10.24	6.72	0.945	-84.9	4.42	4.88	4.52	
3	0849	100	10.29	6.73	0.942	-84.3	4.28	4.77	4.75	
4	0854	100	10.22	6.75	0.935	-83.6	4.24	4.71	4.75	
5	0859	100	10.31	6.77	0.924	-80.2	4.20	4.44	4.75	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
	8260B_VOA+naptha	8260B_VOA+naptha	2		40 ml glass vial	HCL	
	8270C_SVOC (less naptha)	8270C_SVOC (less naptha)	3		1 liter amber bottle	None	

SAMPLE IDENTIFICATION(S)

Normal Sample : SUPE-W-04AR2-101719

Sample Start time: 10/17/2019 0904

Sample Finish time: 10/17/2019 0955

Comments:



LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD

WELL No.: W-06A



Client:	Beazer East, Inc.	Well ID:	W-06A
Project Name:	Superior 2019 2SA Sampling	Date:	10/16/2019 1020
Project Number:	OM-0556-19-091	Technician:	Ben Trask
Location:	Superior	Weather Conditions:	40s and sunny

WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.91</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.20</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.29</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.68</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/16/2019 1031</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/16/2019 1106</u>
Total Volume Removed (gals): <u>0.92</u>	

Field Equipment	Calibrated
Hanna HI 98194 Water Quality Meter 03060013991	Yes
LaMotte 2020we Turbidity Meter 6054-4515	Yes
Heron 300' WL Meter 2814-T	No

Sampling Equipment	Dedicated
GeoTech S.S. Bladder Pump 165	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1031	100	10.55	6.93	0.549	29.6	6.71	9.23	3.38	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1036	100	10.50	6.69	0.574	17.6	4.80	7.42	3.54	
2	1041	100	11.03	6.63	0.563	25.8	4.37	6.56	3.80	
3	1046	100	11.44	6.56	0.470	60.7	4.36	6.63	4.25	
4	1051	100	12.55	6.53	0.463	85.0	4.12	6.94	4.25	
5	1056	100	12.79	6.53	0.457	97.8	4.46	6.90	4.25	
6	1101	100	12.81	6.52	0.454	102.5	4.08	6.88	4.25	
7	1106	100	12.92	6.52	0.450	106.3	4.04	6.88	4.25	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06A-101619

Sample Start time: 10/16/2019 1111

Sample Finish time: 10/16/2019 1138

Comments: _____



WELL No.: W-06C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-06C</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/16/2019 1141</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>12.30</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>44.08</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>31.78</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.19</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/16/2019 1143</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/16/2019 1208</u>
Total Volume Removed (gals): <u>1.65</u>	

Field Equipment	Calibrated
Hanna HI 98194 Water Quality Meter 03060013991	Yes
Heron 300' WL Meter 2814-T	No
LaMotte 2020we Turbidity Meter 6054-4515	Yes

Sampling Equipment	Dedicated
GeoTech S.S. Bladder Pump 165	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1143	250	8.65	7.46	0.626	-147.0	7.12	4.42	12.30	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1148	250	7.81	7.32	0.622	-160.6	5.25	2.41	12.30	
2	1153	250	7.75	7.21	0.622	-168.5	4.65	1.97	12.30	
3	1158	250	7.76	7.17	0.623	-171.9	4.52	1.94	12.30	
4	1203	250	7.85	7.15	0.624	-175.2	4.48	1.90	12.30	
5	1208	250	7.83	7.18	0.624	-179.1	4.44	1.89	12.30	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	Bottle Type	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06C-101619
 Trip Blank :SUPE-TB-02-101619

Sample Start time: 10/16/2019 1213

Sample Finish time: 10/16/2019 1223

Comments:



WELL No.: W-10AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client: Beazer East, Inc.
 Project Name: Superior 2019 2SA Sampling
 Project Number: OM-0556-19-091
 Location: Superior

Well ID: W-10AR2
 Date: 10/17/2019 1224
 Technician: Ben Trask

Weather Conditions: 40S Cloudy

WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.50</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>16.68</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>13.18</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>2.15</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: Non-Dedicated Bladder Pump
 Conductivity Unit: ms/cm
 Total Volume Removed (gals): 0.79
 Purge Start: 10/17/2019 1236
 Purge End: 10/17/2019 1306

Field Equipment	Calibrated
Hanna HI 98194 Water Quality Meter 03060013991	Yes
Heron 300' WL Meter 2814-T	No
LaMotte 2020 we Turbidity Meter 6054-4515	Yes

Sampling Equipment	Dedicated
GeoTech S.S. Bladder Pump 165	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	1236	100	11.65	7.11	0.836	-39.8	6.34	3.90	4.03	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
1	1241	100	11.57	6.69	1.003	-30.2	4.43	3.37	4.25	
2	1246	100	12.23	6.57	1.032	-29.1	4.06	3.30	4.45	
3	1251	100	11.53	6.52	1.040	-27.7	3.95	2.86	4.45	
4	1256	100	11.37	6.50	1.041	-26.0	3.88	2.21	4.45	
5	1301	100	11.45	6.48	1.044	-24.1	3.91	2.12	4.45	
6	1306	100	11.40	6.48	1.045	-22.3	3.87	2.06	4.45	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-10AR2-101719

Sample Start time: 10/17/2019 1311

Sample Finish time: 10/17/2019 1411

Comments:



WELL No.: W-12A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-12A</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/16/2019 1240</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s Cloudy</u>

WATER LEVEL DATA			
a.) Depth To Groundwater:	<u>2.54</u>	(ft)	
b.) Total Well Depth:	<u>13.36</u>	(ft)	
c.) Length of Water Column:	<u>10.82</u>	(ft)	
d.) Well Volume:	<u>1.77</u>	(gal)	
e.) Depth to LNAPL:		<u>NP</u>	(ft)
f.) Depth to DNAPL:		<u>NP</u>	(ft)
g.) LNAPL Thickness:		<u>N/A</u>	(ft)
h.) DNAPL Thickness:		<u>N/A</u>	(ft)

WATER PURGE DATA	
Purge Method:	<u>Non-Dedicated Bladder Pump</u>
Conductivity Unit:	<u>ms/cm</u>
Total Volume Removed (gals):	<u>0.50</u>
Purge Start:	<u>10/16/2019 1252</u>
Purge End:	<u>10/16/2019 1317</u>

Field Equipment	Calibrated
Hanna HI 98194 Water Quality Meter 03060013991	Yes
Heron 300' WL Meter 2814-T	No
LaMotte 2020we Turbidity Meter 6054-4515	Yes

Sampling Equipment	Dedicated
GeoTech S.S. Bladder Pump 165	No

PRE-PURGE VALUES										
Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1252	75	11.24	7.08	0.426	50.4	8.16	7.71	3.22	

PURGE VALUES										
Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1257	75	11.20	6.93	0.419	75.0	7.06	4.82	3.98	
2	1302	75	11.26	6.81	0.414	85.0	6.63	4.99	4.12	
3	1307	75	11.13	6.86	0.415	93.1	6.53	5.03	4.25	
4	1312	75	11.10	6.82	0.414	97.2	6.39	4.75	4.32	
5	1317	75	11.20	6.81	0.414	99.3	6.41	4.58	4.39	

SAMPLE COLLECTION INFORMATION								
Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program	
TABUF	8260B_VOA+naphtha	8260B_VOA+nap htha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001	
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001	

SAMPLE IDENTIFICATION(S)
Normal Sample : <u>SUPE-W-12A-101619</u>
Equipment Blank : <u>SUPE-EB-02-101619</u>

Sample Start time: 10/16/2019 1322

Sample Finish time: 10/16/2019 1354

Comments:



WELL No.: W-12CR

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-12CR</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/16/2019 1411</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s Cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.35</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>47.60</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.25</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.26</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/16/2019 1415</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/16/2019 1440</u>
Total Volume Removed (gals): <u>1.32</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
LaMotte 2020we Turbidity Meter 6054-4515	Yes	GeoTech S.S. Bladder Pump 165	No
Hanna HI 98194 Water Quality Meter 03060013991	Yes		
Heron 300' WL Meter 2814-T	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1415	200	8.20	7.33	1.098	-70.1	7.59	3.88	15.45	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1420	200	7.75	7.19	1.102	-104.4	5.61	3.28	15.45	
2	1425	200	7.68	7.14	1.101	-110.5	4.85	3.73	15.45	
3	1430	200	7.63	7.14	1.100	-114.0	4.58	3.89	15.45	
4	1435	200	7.61	7.13	1.103	-116.2	4.44	3.86	15.45	
5	1440	200	7.57	7.11	1.110	-120.2	4.40	3.81	15.45	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample : SUPE-W-12CR-101619

Sample Start time: 10/16/2019 1445

Sample Finish time: 10/16/2019 1456

Comments:



WELL No.: W-18D

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-18D</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/16/2019 1536</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>45.85</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>201.76</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>155.91</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>25.44</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/16/2019 1540</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/16/2019 1605</u>
Total Volume Removed (gals): <u>1.65</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
LaMotte 2020we Turbidity Meter 6054-4515	Yes	GeoTech S.S. Bladder Pump 165	No
Hanna HI 98194 Water Quality Meter 03060013991	Yes		
Heron 300' WL Meter 2814-T	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1540	250	9.01	10.69	0.444	12.0	8.52	3.40	46.14	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1545	250	7.97	11.02	0.463	-10.9	6.55	3.20	46.20	
2	1550	250	7.96	10.95	0.465	-19.4	5.60	3.06	46.20	
3	1555	250	7.95	10.92	0.466	-21.5	5.29	3.01	46.20	
4	1600	250	7.94	10.90	0.465	-21.1	5.19	3.01	46.20	
5	1605	250	7.93	10.89	0.466	-20.0	5.12	2.95	46.20	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	Bottle Type	Preservative	Program
TABUF	8270C_SVOC+Naphth	8270C_SVOC+na phtha	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling 001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-18D-101619

Sample Start time: 10/16/2019 1610

Sample Finish time: 10/16/2019 1628

Comments: _____



LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD

WELL No.: W-28C



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-28C</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/15/2019 1609</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s Rain</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>13.88</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>45.30</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>31.42</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.13</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/15/2019 1617</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/15/2019 1643</u>
Total Volume Removed (gals): <u>1.37</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Hanna HI98191 Water Quality Meter 03060013991	Yes	GeoTech S.S. Bladder Pump 165	No
LaMotte 2020we Turbidity Meter 6054-4515	Yes		
Heron 300ft WL meter 2814-T	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1617	200	8.36	7.25	0.779	-138.0	4.36	4.64	13.88	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1623	200	7.93	7.29	0.790	-126.2	4.23	2.59	13.88	
2	1628	200	7.78	7.25	0.791	-117.2	4.20	2.01	13.88	
3	1633	200	7.74	7.21	0.790	-111.1	4.17	1.45	13.88	
4	1638	200	7.70	7.20	0.790	-109.0	4.15	1.43	13.88	
5	1643	200	7.71	7.20	0.789	-107.6	4.11	1.44	13.88	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+nap htha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample : SUPE-W-28C-101519
 Trip Blank : SUPE-TB-01-101519
 Equipment Blank : SUPE-EB-01-101519
 MS/MSD Blank : SUPE-W-28C/MS/MSD-101519

Sample Start time: 10/15/2019 1648
 Sample Finish time: 10/15/2019 1739

Comments:



WELL No.: W-30A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-30A</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/17/2019 1027</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s cloudy</u>

WATER LEVEL DATA			
a.) Depth To Groundwater:	<u>2.58</u>	(ft)	
b.) Total Well Depth	<u>13.20</u>	(ft)	
c.) Length of Water Column:	<u>10.62</u>	(ft)	
d.) Well Volume	<u>1.73</u>	(gal)	
e.) Depth to LNAPL:	<u>NP</u>	(ft)	
f.) Depth to DNAPL:	<u>NP</u>	(ft)	
g.) LNAPL Thickness:	<u>N/A</u>	(ft)	
h.) DNAPL Thickness:	<u>N/A</u>	(ft)	

WATER PURGE DATA	
Purge Method:	<u>Non-Dedicated Bladder Pump</u>
Conductivity Unit:	<u>ms/cm</u>
Total Volume Removed (gals):	<u>0.50</u>
Purge Start:	<u>10/17/2019 1032</u>
Purge End:	<u>10/17/2019 1057</u>

Field Equipment	Calibrated	Sampling Equipment	Dedicated
LaMotte 2020 we Turbidity Meter 6054-4515	Yes	GeoTech S.S. Bladder Pump 165	No
Heron 300' WL Meter 2814-T	No		
Hanna HI 98194 Water Quality Meter 03060013991	Yes		

PRE-PURGE VALUES										
Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1032	75	11.06	6.44	1.205	-83.6	8.31	4.76	3.15	

PURGE VALUES										
Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1037	75	10.83	6.37	1.248	-88.5	5.54	3.56	3.35	
2	1042	75	10.75	6.30	1.263	-91.2	4.46	3.24	3.63	
3	1047	75	10.73	6.27	1.263	-89.6	4.28	3.18	3.93	
4	1052	75	10.80	6.26	1.257	-87.6	4.17	3.28	4.19	
5	1057	75	10.92	6.25	1.250	-84.6	4.20	3.31	4.41	

SAMPLE COLLECTION INFORMATION								
Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program	
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001	
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001	

SAMPLE IDENTIFICATION(S)
Normal Sample : <u>SUPE-W-30A-101719</u>
Trip Blank : <u>SUPE-TB-03-101719</u>
Equipment Blank : <u>SUPE-EB-03-101719</u>

Sample Start time: 10/17/2019 1102

Sample Finish time: 10/17/2019 1213

Comments:



LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD

WELL No.: W-30C



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-30C</u>
Project Name:	<u>Superior 2019 2SA Sampling</u>	Date:	<u>10/16/2019 0856</u>
Project Number:	<u>OM-0556-19-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>40s and sunny</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.03</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>48.68</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>33.65</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.49</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/16/2019 0907</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/16/2019 0937</u>
Total Volume Removed (gals): <u>2.38</u>	

Field Equipment	Calibrated
Heron 300' WL Meter 2814-T	No
Hanna HI 98194 Water Quality Meter 03060013991	Yes
LaMotte 2020we Turbidity Meter 6054-4515	Yes

Sampling Equipment	Dedicated
GeoTech S.S. Bladder Pump 165	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	0907	300	7.94	7.04	0.639	-65.5	7.63	16.40	15.10	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	0912	300	7.53	7.16	0.729	-97.2	5.05	8.21	15.14	
2	0917	300	7.52	7.26	0.736	-102.7	4.56	3.32	15.14	
3	0922	300	7.49	7.32	0.738	-113.8	4.38	3.07	15.14	
4	0927	300	7.49	7.37	0.737	-121.9	4.30	3.05	15.14	
5	0932	300	7.58	7.34	0.739	-127.6	4.22	3.00	15.14	
6	0937	300	7.47	7.42	0.739	-128.3	4.22	2.98	15.14	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	2	40 ml glass vial	HCL	Superior 2019 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2019 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30C-101619

Blind Duplicate :SUPE-M-99A-101619

Sample Start time: 10/16/2019 0942

Sample Finish time: 10/16/2019 1004

Comments: _____

APPENDIX C

Analytical Data

**First Semi-Annual Event and Second Semi-Annual Event
(.pdf files on CD)**

FTS, LLC

DATE: May 24, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 140-15153-1

SAMPLES: SUPE-W-30C-043019, SUPE-W-06A-043019, SUPE-W-06C-043019, SUPE-EB-01-043019, SUPE-W-28C-043019, SUPE-W-12A-043019, SUPE-W-12CR-043019, SUPE-W-30A-043019, SUPE-W-10AR2-043019, SUPE-M-99A-043019(W-12CR)

ANALYSES: Method 8290A (Dioxins/Furans)

LABORATORY: Eurofins TestAmerica Laboratories, Knoxville

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: None
- Laboratory Blank Contamination
Noncompliance: 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, OCDD, OCDF, total HpCDD, total HpCDF, total HxCDD, and total HxCDF were detected in the method blank. See attached page for details.
- Field Blank Contamination
Noncompliance: 1,2,3,4,7,8-HxCDF, OCDD, OCDF, total HpCDD, total HxCDF, and total PeCDD were detected in the equipment blank. See attached page for details.
- Field Duplicate Precision
Noncompliance: See attached page for details.
- Surrogate Recoveries
Noncompliance: None
- Matrix Spike/Matrix Spike Duplicate
Noncompliance: None
- Laboratory Control Sample
Noncompliance: None

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Blank Action Level</u>
1,2,3,4,6,7,8-HpCDD	3.05 JI pg/l	15.25 pg/l
1,2,3,4,6,7,8-HpCDF	1.92 JI pg/l	9.6 pg/l
1,2,3,4,7,8,9-HpCDF	1.75 JI pg/l	8.75 pg/l
1,2,3,6,7,8-HxCDD	1.73 JI pg/l	8.65 pg/l
1,2,3,7,8,9-HxCDD	2 J pg/l	10 pg/l
1,2,3,7,8,9-HxCDF	1.48 JI pg/l	7.4 pg/l
OCDD	11.4 JI pg/l	57 pg/l
OCDF	6.81 JI pg/l	34.05 pg/l
Total HpCDD	4.72 JI pg/l	23.6 pg/l
Total HpCDF	3.67 JI pg/l	18.35 pg/l
Total HxCDD	3.73 JI pg/l	18.65 pg/l
Total HxCDF	1.48 JI pg/l	7.4 pg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for laboratory blank contamination.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, SUPE-EB-01-043019, at the following concentrations:

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Blank Action Level</u>
1,2,3,4,7,8-HxCDF	0.56 JI pg/l	2.8 pg/l
OCDD	2.5 JI pg/l	12.5 pg/l
OCDF	0.81 JI pg/l	4.05 pg/l
Total HpCDD	0.82 JI pg/l	4.1 pg/l
Total HxCDF	0.56 JI pg/l	2.8 pg/l
Total PeCDD	0.32 J pg/l	1.6 pg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-12CR	QUAL	M-99A	QUAL	RPD
1,2,3,4,6,7,8-HpCDD	2.6	J	4.5	J	53.52*
1,2,3,4,6,7,8-HpCDF	0.86	J	1.8	J	70.68*
1,2,3,4,7,8,9-HpCDF	0.55	JI	0.48	U	NC
1,2,3,7,8,9-HxCDF	0.75	JI	0.5	U	NC
OCDD	18	J	60	J	107.69*
OCDF	2	J	5.1	J	87.32*
Total HpCDD	6.3	JI	11	J	54.34*
Total HpCDF	2.4	JI	4.6	J	62.86*
Total HxCDD	0.44	JI	0.63	U	NC
Total HxCDF	1.7	JI	0.97	JI	54.68*

NC – not calculated due to nondetect result

* - RPD is greater than 30%, associated samples are qualified as estimated, "J," due to laboratory or field sampling imprecision

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-15153-1
Client Project/Site: Superior 2019 1SA Sampling

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
5/22/2019 4:12:56 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	8
Default Detection Limits	18
Isotope Dilution Summary	19
QC Sample Results	20
QC Association Summary	24
Lab Chronicle	25
Certification Summary	28
Method Summary	30
Sample Summary	31
Chain of Custody	32

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Job ID: 140-15153-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative 140-15153-1

Comments

No additional comments.

Receipt

The samples were received on 5/1/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.8° C, 1.9° C and 3.0° C.

Dioxin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 140-15153-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	1.2	J I B	48	0.24	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	3.9	J B	48	0.25	pg/L	1		8290A	Total/NA
Total HpCDD	7.7	J I B	48	0.25	pg/L	1		8290A	Total/NA
OCDD	26	J B	96	0.32	pg/L	1		8290A	Total/NA
2,3,7,8-TCDF	0.41	J I	9.6	0.26	pg/L	1		8290A	Total/NA
Total TCDF	2.3	J I	9.6	0.26	pg/L	1		8290A	Total/NA
Total PeCDF	2.1	J I	48	0.39	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	1.3	J B	48	0.20	pg/L	1		8290A	Total/NA
Total HpCDF	3.2	J B	48	0.24	pg/L	1		8290A	Total/NA
OCDF	4.1	J I B	96	0.19	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 140-15153-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	0.46	J I	9.7	0.15	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	0.51	J I B	49	0.18	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.58	J B	49	0.16	pg/L	1		8290A	Total/NA
Total HxCDD	1.1	J I B	49	0.17	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	2.6	J B	49	0.21	pg/L	1		8290A	Total/NA
Total HpCDD	7.7	J B	49	0.21	pg/L	1		8290A	Total/NA
OCDD	25	J B	97	0.34	pg/L	1		8290A	Total/NA
Total PeCDF	0.45	J I	49	0.26	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	1.5	J I B	49	0.15	pg/L	1		8290A	Total/NA
Total HpCDF	3.2	J I B	49	0.17	pg/L	1		8290A	Total/NA
OCDF	4.3	J B	97	0.097	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 140-15153-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	3.2	J I B	48	0.28	pg/L	1		8290A	Total/NA
Total HpCDD	8.9	J I B	48	0.28	pg/L	1		8290A	Total/NA
OCDD	34	J B	95	0.30	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	0.95	J B	48	0.19	pg/L	1		8290A	Total/NA
Total HpCDF	2.7	J B	48	0.21	pg/L	1		8290A	Total/NA
OCDF	3.0	J B	95	0.10	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 140-15153-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	0.32	J	48	0.19	pg/L	1		8290A	Total/NA
Total HpCDD	0.82	J I B	48	0.26	pg/L	1		8290A	Total/NA
OCDD	2.5	J I B	96	0.49	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	0.56	J I	48	0.14	pg/L	1		8290A	Total/NA
Total HxCDF	0.56	J I B	48	0.15	pg/L	1		8290A	Total/NA
OCDF	0.81	J I B	96	0.22	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 140-15153-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	3.8	J I B	49	0.28	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	8.8	J B	49	0.57	pg/L	1		8290A	Total/NA
Total HpCDD	55	B	49	0.57	pg/L	1		8290A	Total/NA
OCDD	110	B	97	0.40	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Knoxville

Detection Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-28C-043019 (Continued)

Lab Sample ID: 140-15153-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.70	J I	9.7	0.30	pg/L	1		8290A	Total/NA
Total TCDF	1.4	J I	9.7	0.30	pg/L	1		8290A	Total/NA
Total PeCDF	1.6	J I	49	0.37	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	1.6	J I	49	0.30	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	1.1	J I	49	0.32	pg/L	1		8290A	Total/NA
Total HxCDF	5.0	J I B	49	0.34	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	5.6	J B	49	0.28	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.56	J I B	49	0.36	pg/L	1		8290A	Total/NA
Total HpCDF	8.6	J I B	49	0.32	pg/L	1		8290A	Total/NA
OCDF	14	J B	97	0.12	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 140-15153-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	0.84	J I	9.5	0.58	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.4	J I	48	0.58	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	3.1	J I B	48	0.61	pg/L	1		8290A	Total/NA
Total HxCDD	11	J I B	48	0.58	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	50	B	48	0.94	pg/L	1		8290A	Total/NA
Total HpCDD	97	B	48	0.94	pg/L	1		8290A	Total/NA
OCDD	560	B	95	0.64	pg/L	1		8290A	Total/NA
2,3,7,8-TCDF	1.4	J I	9.5	0.36	pg/L	1		8290A	Total/NA
Total TCDF	18	I	9.5	0.36	pg/L	1		8290A	Total/NA
Total PeCDF	49	I	48	0.85	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	3.4	J	48	0.29	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	5.9	J I	48	0.28	pg/L	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	0.98	J I	48	0.32	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDF	0.95	J I B	48	0.36	pg/L	1		8290A	Total/NA
Total HxCDF	94	I B	48	0.31	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	21	J B	48	0.63	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	3.1	J I B	48	0.79	pg/L	1		8290A	Total/NA
Total HpCDF	87	I B	48	0.71	pg/L	1		8290A	Total/NA
OCDF	52	J B	95	0.28	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 140-15153-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	0.48	J I	9.6	0.19	pg/L	1		8290A	Total/NA
Total HxCDD	0.44	J I B	48	0.32	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	2.6	J B	48	0.34	pg/L	1		8290A	Total/NA
Total HpCDD	6.3	J I B	48	0.34	pg/L	1		8290A	Total/NA
OCDD	18	J B	96	0.36	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDF	0.75	J I B	48	0.29	pg/L	1		8290A	Total/NA
Total HxCDF	1.7	J I B	48	0.25	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	0.86	J B	48	0.21	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.55	J I B	48	0.29	pg/L	1		8290A	Total/NA
Total HpCDF	2.4	J I B	48	0.25	pg/L	1		8290A	Total/NA
OCDF	2.0	J B	96	0.17	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Knoxville

Detection Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 140-15153-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	1.7	J I	53	0.57	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	18	J I B	53	0.61	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	4.3	J I B	53	0.55	pg/L	1		8290A	Total/NA
Total HxCDD	74	I B	53	0.58	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	470	B	53	8.2	pg/L	1		8290A	Total/NA
Total HpCDD	1000	B	53	8.2	pg/L	1		8290A	Total/NA
OCDD	6300	B	110	2.9	pg/L	1		8290A	Total/NA
Total TCDF	46	I	11	1.0	pg/L	1		8290A	Total/NA
Total PeCDF	240	I	53	1.2	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	23	J	53	2.6	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	31	J I	53	2.5	pg/L	1		8290A	Total/NA
Total HxCDF	550	I B	53	2.8	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	170	B	53	2.3	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	15	J B	53	3.2	pg/L	1		8290A	Total/NA
Total HpCDF	670	B	53	2.8	pg/L	1		8290A	Total/NA
OCDF	500	B	110	0.30	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 140-15153-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	0.68	J I	9.5	0.24	pg/L	1		8290A	Total/NA
Total HxCDD	1.9	J I B	48	0.45	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	19	J B	48	1.2	pg/L	1		8290A	Total/NA
Total HpCDD	41	J B	48	1.2	pg/L	1		8290A	Total/NA
OCDD	260	B	95	0.77	pg/L	1		8290A	Total/NA
Total TCDF	6.3	J I	9.5	0.47	pg/L	1		8290A	Total/NA
Total PeCDF	11	J I	48	1.2	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.0	J I	48	0.58	pg/L	1		8290A	Total/NA
Total HxCDF	19	J I B	48	0.62	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	6.1	J I B	48	0.54	pg/L	1		8290A	Total/NA
Total HpCDF	21	J I B	48	0.62	pg/L	1		8290A	Total/NA
OCDF	21	J B	95	0.18	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 140-15153-10

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	4.5	J B	48	1.2	pg/L	1		8290A	Total/NA
Total HpCDD	11	J B	48	1.2	pg/L	1		8290A	Total/NA
OCDD	60	J B	97	0.73	pg/L	1		8290A	Total/NA
Total HxCDF	0.97	J I B	48	0.43	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	1.8	J B	48	0.37	pg/L	1		8290A	Total/NA
Total HpCDF	4.6	J B	48	0.43	pg/L	1		8290A	Total/NA
OCDF	5.1	J B	97	0.24	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 140-15153-1

Date Collected: 04/30/19 09:45

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.16	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total TCDD	ND		9.6	0.16	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,7,8-PeCDD	ND		48	0.29	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total PeCDD	ND		48	0.29	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,4,7,8-HxCDD	ND		48	0.24	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,6,7,8-HxCDD	ND		48	0.25	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,7,8,9-HxCDD	ND		48	0.23	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total HxCDD	1.2	J I B	48	0.24	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,4,6,7,8-HpCDD	3.9	J B	48	0.25	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total HpCDD	7.7	J I B	48	0.25	pg/L		05/08/19 11:40	05/15/19 02:21	1
OCDD	26	J B	96	0.32	pg/L		05/08/19 11:40	05/15/19 02:21	1
2,3,7,8-TCDF	0.41	J I	9.6	0.26	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total TCDF	2.3	J I	9.6	0.26	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,7,8-PeCDF	ND		48	0.39	pg/L		05/08/19 11:40	05/15/19 02:21	1
2,3,4,7,8-PeCDF	ND		48	0.39	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total PeCDF	2.1	J I	48	0.39	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,4,7,8-HxCDF	ND		48	0.25	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,6,7,8-HxCDF	ND		48	0.25	pg/L		05/08/19 11:40	05/15/19 02:21	1
2,3,4,6,7,8-HxCDF	ND		48	0.27	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,7,8,9-HxCDF	ND		48	0.32	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total HxCDF	ND		48	0.32	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,4,6,7,8-HpCDF	1.3	J B	48	0.20	pg/L		05/08/19 11:40	05/15/19 02:21	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.27	pg/L		05/08/19 11:40	05/15/19 02:21	1
Total HpCDF	3.2	J B	48	0.24	pg/L		05/08/19 11:40	05/15/19 02:21	1
OCDF	4.1	J I B	96	0.19	pg/L		05/08/19 11:40	05/15/19 02:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,7,8-PeCDD	79		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-OCDD	98		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-2,3,7,8-TCDF	80		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,7,8-PeCDF	80		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-2,3,4,7,8-PeCDF	77		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,6,7,8-HxCDF	77		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-2,3,4,6,7,8-HxCDF	82		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,7,8,9-HxCDF	82		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-1,2,3,4,7,8,9-HpCDF	90		40 - 135	05/08/19 11:40	05/15/19 02:21	1
13C-OCDF	83		40 - 135	05/08/19 11:40	05/15/19 02:21	1

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 140-15153-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.15	pg/L		05/08/19 11:40	05/15/19 03:20	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 140-15153-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	0.46	J I	9.7	0.15	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,7,8-PeCDD	ND		49	0.18	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total PeCDD	ND		49	0.18	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,4,7,8-HxCDD	ND		49	0.17	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,6,7,8-HxCDD	0.51	J I B	49	0.18	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,7,8,9-HxCDD	0.58	J B	49	0.16	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total HxCDD	1.1	J I B	49	0.17	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,4,6,7,8-HpCDD	2.6	J B	49	0.21	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total HpCDD	7.7	J B	49	0.21	pg/L		05/08/19 11:40	05/15/19 03:20	1
OCDD	25	J B	97	0.34	pg/L		05/08/19 11:40	05/15/19 03:20	1
2,3,7,8-TCDF	ND		9.7	0.19	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total TCDF	ND		9.7	0.34	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,7,8-PeCDF	ND		49	0.26	pg/L		05/08/19 11:40	05/15/19 03:20	1
2,3,4,7,8-PeCDF	ND		49	0.26	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total PeCDF	0.45	J I	49	0.26	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,4,7,8-HxCDF	ND		49	0.23	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,6,7,8-HxCDF	ND		49	0.23	pg/L		05/08/19 11:40	05/15/19 03:20	1
2,3,4,6,7,8-HxCDF	ND		49	0.24	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,7,8,9-HxCDF	ND		49	0.29	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total HxCDF	ND		49	0.29	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,4,6,7,8-HpCDF	1.5	J I B	49	0.15	pg/L		05/08/19 11:40	05/15/19 03:20	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.20	pg/L		05/08/19 11:40	05/15/19 03:20	1
Total HpCDF	3.2	J I B	49	0.17	pg/L		05/08/19 11:40	05/15/19 03:20	1
OCDF	4.3	J B	97	0.097	pg/L		05/08/19 11:40	05/15/19 03:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,7,8-PeCDD	83		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-OCDD	102		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-2,3,7,8-TCDF	81		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,7,8-PeCDF	85		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-2,3,4,7,8-PeCDF	80		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,4,7,8-HxCDF	77		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,7,8,9-HxCDF	82		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,4,6,7,8-HpCDF	84		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-1,2,3,4,7,8,9-HpCDF	94		40 - 135	05/08/19 11:40	05/15/19 03:20	1
13C-OCDF	95		40 - 135	05/08/19 11:40	05/15/19 03:20	1

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 140-15153-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.10	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total TCDD	ND		9.5	0.39	pg/L		05/08/19 11:40	05/15/19 16:20	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 140-15153-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	ND		48	0.20	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total PeCDD	ND		48	0.20	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,4,7,8-HxCDD	ND		48	0.20	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,6,7,8-HxCDD	ND		48	0.21	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,7,8,9-HxCDD	ND		48	0.19	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total HxCDD	ND		48	0.21	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,4,6,7,8-HpCDD	3.2	J I B	48	0.28	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total HpCDD	8.9	J I B	48	0.28	pg/L		05/08/19 11:40	05/15/19 16:20	1
OCDD	34	J B	95	0.30	pg/L		05/08/19 11:40	05/15/19 16:20	1
2,3,7,8-TCDF	ND		9.5	0.18	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total TCDF	ND		9.5	0.30	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,7,8-PeCDF	ND		48	0.29	pg/L		05/08/19 11:40	05/15/19 16:20	1
2,3,4,7,8-PeCDF	ND		48	0.29	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total PeCDF	ND		48	0.29	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,4,7,8-HxCDF	ND		48	0.19	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,6,7,8-HxCDF	ND		48	0.19	pg/L		05/08/19 11:40	05/15/19 16:20	1
2,3,4,6,7,8-HxCDF	ND		48	0.20	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,7,8,9-HxCDF	ND		48	0.24	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total HxCDF	ND		48	0.24	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,4,6,7,8-HpCDF	0.95	J B	48	0.19	pg/L		05/08/19 11:40	05/15/19 16:20	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.24	pg/L		05/08/19 11:40	05/15/19 16:20	1
Total HpCDF	2.7	J B	48	0.21	pg/L		05/08/19 11:40	05/15/19 16:20	1
OCDF	3.0	J B	95	0.10	pg/L		05/08/19 11:40	05/15/19 16:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,7,8-PeCDD	84		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-OCDD	102		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-2,3,7,8-TCDF	81		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,7,8-PeCDF	84		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-2,3,4,7,8-PeCDF	78		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,6,7,8-HxCDF	75		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,7,8,9-HxCDF	84		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-1,2,3,4,7,8,9-HpCDF	97		40 - 135	05/08/19 11:40	05/15/19 16:20	1
13C-OCDF	100		40 - 135	05/08/19 11:40	05/15/19 16:20	1

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 140-15153-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.30	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total TCDD	ND		9.6	0.42	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,7,8-PeCDD	ND		48	0.19	pg/L		05/08/19 11:40	05/15/19 04:22	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 140-15153-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	0.32	J	48	0.19	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,4,7,8-HxCDD	ND		48	0.36	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,6,7,8-HxCDD	ND		48	0.37	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,7,8,9-HxCDD	ND		48	0.34	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total HxCDD	ND		48	0.37	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,4,6,7,8-HpCDD	ND		48	0.26	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total HpCDD	0.82	J I B	48	0.26	pg/L		05/08/19 11:40	05/15/19 04:22	1
OCDD	2.5	J I B	96	0.49	pg/L		05/08/19 11:40	05/15/19 04:22	1
2,3,7,8-TCDF	ND		9.6	0.21	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total TCDF	ND		9.6	0.44	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,7,8-PeCDF	ND		48	0.50	pg/L		05/08/19 11:40	05/15/19 04:22	1
2,3,4,7,8-PeCDF	ND		48	0.47	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total PeCDF	ND		48	0.50	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,4,7,8-HxCDF	0.56	J I	48	0.14	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,6,7,8-HxCDF	ND		48	0.14	pg/L		05/08/19 11:40	05/15/19 04:22	1
2,3,4,6,7,8-HxCDF	ND		48	0.15	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,7,8,9-HxCDF	ND		48	0.18	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total HxCDF	0.56	J I B	48	0.15	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,4,6,7,8-HpCDF	ND		48	0.19	pg/L		05/08/19 11:40	05/15/19 04:22	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.25	pg/L		05/08/19 11:40	05/15/19 04:22	1
Total HpCDF	ND		48	0.25	pg/L		05/08/19 11:40	05/15/19 04:22	1
OCDF	0.81	J I B	96	0.22	pg/L		05/08/19 11:40	05/15/19 04:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,7,8-PeCDD	82		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-OCDD	97		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-2,3,7,8-TCDF	81		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,7,8-PeCDF	80		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-2,3,4,7,8-PeCDF	78		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,6,7,8-HxCDF	79		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-2,3,4,6,7,8-HxCDF	82		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,7,8,9-HxCDF	83		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-1,2,3,4,7,8,9-HpCDF	95		40 - 135				05/08/19 11:40	05/15/19 04:22	1
13C-OCDF	95		40 - 135				05/08/19 11:40	05/15/19 04:22	1

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 140-15153-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.22	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total TCDD	ND		9.7	0.22	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,7,8-PeCDD	ND		49	0.22	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total PeCDD	ND		49	0.22	pg/L		05/08/19 11:40	05/15/19 05:24	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 140-15153-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	ND		49	0.28	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,6,7,8-HxCDD	ND		49	0.29	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,7,8,9-HxCDD	ND		49	0.26	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total HxCDD	3.8	J I B	49	0.28	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,4,6,7,8-HpCDD	8.8	J B	49	0.57	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total HpCDD	55	B	49	0.57	pg/L		05/08/19 11:40	05/15/19 05:24	1
OCDD	110	B	97	0.40	pg/L		05/08/19 11:40	05/15/19 05:24	1
2,3,7,8-TCDF	0.70	J I	9.7	0.30	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total TCDF	1.4	J I	9.7	0.30	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,7,8-PeCDF	ND		49	0.38	pg/L		05/08/19 11:40	05/15/19 05:24	1
2,3,4,7,8-PeCDF	ND		49	0.37	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total PeCDF	1.6	J I	49	0.37	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,4,7,8-HxCDF	1.6	J I	49	0.30	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,6,7,8-HxCDF	1.1	J I	49	0.32	pg/L		05/08/19 11:40	05/15/19 05:24	1
2,3,4,6,7,8-HxCDF	ND		49	0.33	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,7,8,9-HxCDF	ND		49	0.39	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total HxCDF	5.0	J I B	49	0.34	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,4,6,7,8-HpCDF	5.6	J B	49	0.28	pg/L		05/08/19 11:40	05/15/19 05:24	1
1,2,3,4,7,8,9-HpCDF	0.56	J I B	49	0.36	pg/L		05/08/19 11:40	05/15/19 05:24	1
Total HpCDF	8.6	J I B	49	0.32	pg/L		05/08/19 11:40	05/15/19 05:24	1
OCDF	14	J B	97	0.12	pg/L		05/08/19 11:40	05/15/19 05:24	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,7,8-PeCDD	83		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,4,7,8-HxCDD	77		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,6,7,8-HxCDD	77		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-OCDD	100		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-2,3,7,8-TCDF	80		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,7,8-PeCDF	81		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-2,3,4,7,8-PeCDF	80		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,4,7,8-HxCDF	81		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,6,7,8-HxCDF	77		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-2,3,4,6,7,8-HxCDF	82		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,7,8,9-HxCDF	84		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-1,2,3,4,7,8,9-HpCDF	97		40 - 135	05/08/19 11:40	05/15/19 05:24	1
13C-OCDF	99		40 - 135	05/08/19 11:40	05/15/19 05:24	1

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 140-15153-6

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.58	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total TCDD	0.84	J I	9.5	0.58	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,7,8-PeCDD	ND		48	0.54	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total PeCDD	ND		48	0.54	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,4,7,8-HxCDD	1.4	J I	48	0.58	pg/L		05/08/19 11:40	05/15/19 06:25	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 140-15153-6

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDD	3.1	J I B	48	0.61	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,7,8,9-HxCDD	ND		48	0.55	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total HxCDD	11	J I B	48	0.58	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,4,6,7,8-HpCDD	50	B	48	0.94	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total HpCDD	97	B	48	0.94	pg/L		05/08/19 11:40	05/15/19 06:25	1
OCDD	560	B	95	0.64	pg/L		05/08/19 11:40	05/15/19 06:25	1
2,3,7,8-TCDF	1.4	J I	9.5	0.36	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total TCDF	18	I	9.5	0.36	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,7,8-PeCDF	ND		48	0.84	pg/L		05/08/19 11:40	05/15/19 06:25	1
2,3,4,7,8-PeCDF	ND		48	0.85	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total PeCDF	49	I	48	0.85	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,4,7,8-HxCDF	3.4	J	48	0.29	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,6,7,8-HxCDF	5.9	J I	48	0.28	pg/L		05/08/19 11:40	05/15/19 06:25	1
2,3,4,6,7,8-HxCDF	0.98	J I	48	0.32	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,7,8,9-HxCDF	0.95	J I B	48	0.36	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total HxCDF	94	I B	48	0.31	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,4,6,7,8-HpCDF	21	J B	48	0.63	pg/L		05/08/19 11:40	05/15/19 06:25	1
1,2,3,4,7,8,9-HpCDF	3.1	J I B	48	0.79	pg/L		05/08/19 11:40	05/15/19 06:25	1
Total HpCDF	87	I B	48	0.71	pg/L		05/08/19 11:40	05/15/19 06:25	1
OCDF	52	J B	95	0.28	pg/L		05/08/19 11:40	05/15/19 06:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,7,8-PeCDD	76		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,4,7,8-HxCDD	71		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,6,7,8-HxCDD	71		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-OCDD	100		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-2,3,7,8-TCDF	68		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,7,8-PeCDF	73		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-2,3,4,7,8-PeCDF	71		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,4,7,8-HxCDF	76		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-2,3,4,6,7,8-HxCDF	76		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,4,6,7,8-HpCDF	82		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-1,2,3,4,7,8,9-HpCDF	90		40 - 135	05/08/19 11:40	05/15/19 06:25	1
13C-OCDF	96		40 - 135	05/08/19 11:40	05/15/19 06:25	1

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 140-15153-7

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.6	0.19	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total TCDD	0.48	J I	9.6	0.19	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,7,8-PeCDD	ND		48	0.24	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total PeCDD	ND		48	0.24	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,4,7,8-HxCDD	ND		48	0.32	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,6,7,8-HxCDD	ND		48	0.34	pg/L		05/08/19 11:40	05/15/19 11:11	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 140-15153-7

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		48	0.31	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total HxCDD	0.44	J I B	48	0.32	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,4,6,7,8-HpCDD	2.6	J B	48	0.34	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total HpCDD	6.3	J I B	48	0.34	pg/L		05/08/19 11:40	05/15/19 11:11	1
OCDD	18	J B	96	0.36	pg/L		05/08/19 11:40	05/15/19 11:11	1
2,3,7,8-TCDF	ND		9.6	0.35	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total TCDF	ND		9.6	0.35	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,7,8-PeCDF	ND		48	0.41	pg/L		05/08/19 11:40	05/15/19 11:11	1
2,3,4,7,8-PeCDF	ND		48	0.38	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total PeCDF	ND		48	0.41	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,4,7,8-HxCDF	ND		48	0.23	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,6,7,8-HxCDF	ND		48	0.23	pg/L		05/08/19 11:40	05/15/19 11:11	1
2,3,4,6,7,8-HxCDF	ND		48	0.25	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,7,8,9-HxCDF	0.75	J I B	48	0.29	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total HxCDF	1.7	J I B	48	0.25	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,4,6,7,8-HpCDF	0.86	J B	48	0.21	pg/L		05/08/19 11:40	05/15/19 11:11	1
1,2,3,4,7,8,9-HpCDF	0.55	J I B	48	0.29	pg/L		05/08/19 11:40	05/15/19 11:11	1
Total HpCDF	2.4	J I B	48	0.25	pg/L		05/08/19 11:40	05/15/19 11:11	1
OCDF	2.0	J B	96	0.17	pg/L		05/08/19 11:40	05/15/19 11:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	75		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,7,8-PeCDD	88		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,4,7,8-HxCDD	80		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-OCDD	93		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-2,3,7,8-TCDF	85		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,7,8-PeCDF	85		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-2,3,4,7,8-PeCDF	83		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,6,7,8-HxCDF	80		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-2,3,4,6,7,8-HxCDF	83		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,7,8,9-HxCDF	84		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,4,6,7,8-HpCDF	87		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-1,2,3,4,7,8,9-HpCDF	92		40 - 135				05/08/19 11:40	05/15/19 11:11	1
13C-OCDF	90		40 - 135				05/08/19 11:40	05/15/19 11:11	1

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 140-15153-8

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.50	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total TCDD	ND		11	0.66	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,7,8-PeCDD	ND		53	0.55	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total PeCDD	ND		53	0.55	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,4,7,8-HxCDD	1.7	J I	53	0.57	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,6,7,8-HxCDD	18	J I B	53	0.61	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,7,8,9-HxCDD	4.3	J I B	53	0.55	pg/L		05/08/19 11:40	05/15/19 12:13	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 140-15153-8

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	74	I B	53	0.58	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,4,6,7,8-HpCDD	470	B	53	8.2	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total HpCDD	1000	B	53	8.2	pg/L		05/08/19 11:40	05/15/19 12:13	1
OCDD	6300	B	110	2.9	pg/L		05/08/19 11:40	05/15/19 12:13	1
2,3,7,8-TCDF	ND		11	1.0	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total TCDF	46	I	11	1.0	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,7,8-PeCDF	ND		53	1.2	pg/L		05/08/19 11:40	05/15/19 12:13	1
2,3,4,7,8-PeCDF	ND		53	1.3	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total PeCDF	240	I	53	1.2	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,4,7,8-HxCDF	23	J	53	2.6	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,6,7,8-HxCDF	31	J I	53	2.5	pg/L		05/08/19 11:40	05/15/19 12:13	1
2,3,4,6,7,8-HxCDF	ND		53	2.7	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,7,8,9-HxCDF	ND		53	3.4	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total HxCDF	550	I B	53	2.8	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,4,6,7,8-HpCDF	170	B	53	2.3	pg/L		05/08/19 11:40	05/15/19 12:13	1
1,2,3,4,7,8,9-HpCDF	15	J B	53	3.2	pg/L		05/08/19 11:40	05/15/19 12:13	1
Total HpCDF	670	B	53	2.8	pg/L		05/08/19 11:40	05/15/19 12:13	1
OCDF	500	B	110	0.30	pg/L		05/08/19 11:40	05/15/19 12:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,7,8-PeCDD	81		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,4,7,8-HxCDD	80		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-OCDD	109		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-2,3,7,8-TCDF	79		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,7,8-PeCDF	84		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-2,3,4,7,8-PeCDF	80		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,4,7,8-HxCDF	84		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,6,7,8-HxCDF	78		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-2,3,4,6,7,8-HxCDF	86		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,7,8,9-HxCDF	85		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-1,2,3,4,7,8,9-HpCDF	97		40 - 135	05/08/19 11:40	05/15/19 12:13	1
13C-OCDF	107		40 - 135	05/08/19 11:40	05/15/19 12:13	1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 140-15153-9

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.5	0.24	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total TCDD	0.68	J I	9.5	0.24	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,7,8-PeCDD	ND		48	0.17	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total PeCDD	ND		48	0.17	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,4,7,8-HxCDD	ND		48	0.45	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,6,7,8-HxCDD	ND		48	0.47	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,7,8,9-HxCDD	ND		48	0.43	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total HxCDD	1.9	J I B	48	0.45	pg/L		05/08/19 11:40	05/15/19 13:15	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 140-15153-9

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	19	J B	48	1.2	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total HpCDD	41	J B	48	1.2	pg/L		05/08/19 11:40	05/15/19 13:15	1
OCDD	260	B	95	0.77	pg/L		05/08/19 11:40	05/15/19 13:15	1
2,3,7,8-TCDF	ND		9.5	0.47	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total TCDF	6.3	J I	9.5	0.47	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,7,8-PeCDF	ND		48	1.3	pg/L		05/08/19 11:40	05/15/19 13:15	1
2,3,4,7,8-PeCDF	ND		48	1.2	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total PeCDF	11	J I	48	1.2	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,4,7,8-HxCDF	ND		48	0.56	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,6,7,8-HxCDF	2.0	J I	48	0.58	pg/L		05/08/19 11:40	05/15/19 13:15	1
2,3,4,6,7,8-HxCDF	ND		48	0.61	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,7,8,9-HxCDF	ND		48	0.75	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total HxCDF	19	J I B	48	0.62	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,4,6,7,8-HpCDF	6.1	J I B	48	0.54	pg/L		05/08/19 11:40	05/15/19 13:15	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.70	pg/L		05/08/19 11:40	05/15/19 13:15	1
Total HpCDF	21	J I B	48	0.62	pg/L		05/08/19 11:40	05/15/19 13:15	1
OCDF	21	J B	95	0.18	pg/L		05/08/19 11:40	05/15/19 13:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,7,8-PeCDD	76		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,6,7,8-HxCDD	78		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-OCDD	99		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-2,3,7,8-TCDF	72		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,7,8-PeCDF	70		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-2,3,4,7,8-PeCDF	72		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,4,7,8-HxCDF	83		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,6,7,8-HxCDF	79		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-2,3,4,6,7,8-HxCDF	83		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,7,8,9-HxCDF	84		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-1,2,3,4,7,8,9-HpCDF	98		40 - 135				05/08/19 11:40	05/15/19 13:15	1
13C-OCDF	98		40 - 135				05/08/19 11:40	05/15/19 13:15	1

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 140-15153-10

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	0.33	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total TCDD	ND		9.7	0.33	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,7,8-PeCDD	ND		48	0.32	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total PeCDD	ND		48	0.32	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,4,7,8-HxCDD	ND		48	0.61	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,6,7,8-HxCDD	ND		48	0.63	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,7,8,9-HxCDD	ND		48	0.58	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total HxCDD	ND		48	0.63	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,4,6,7,8-HpCDD	4.5	J B	48	1.2	pg/L		05/08/19 11:40	05/15/19 14:16	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 140-15153-10

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 10:00

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HpCDD	11	J B	48	1.2	pg/L		05/08/19 11:40	05/15/19 14:16	1
OCDD	60	J B	97	0.73	pg/L		05/08/19 11:40	05/15/19 14:16	1
2,3,7,8-TCDF	ND		9.7	0.27	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total TCDF	ND		9.7	0.51	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,7,8-PeCDF	ND		48	0.56	pg/L		05/08/19 11:40	05/15/19 14:16	1
2,3,4,7,8-PeCDF	ND		48	0.52	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total PeCDF	ND		48	0.56	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,4,7,8-HxCDF	ND		48	0.38	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,6,7,8-HxCDF	ND		48	0.39	pg/L		05/08/19 11:40	05/15/19 14:16	1
2,3,4,6,7,8-HxCDF	ND		48	0.42	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,7,8,9-HxCDF	ND		48	0.50	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total HxCDF	0.97	J I B	48	0.43	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,4,6,7,8-HpCDF	1.8	J B	48	0.37	pg/L		05/08/19 11:40	05/15/19 14:16	1
1,2,3,4,7,8,9-HpCDF	ND		48	0.48	pg/L		05/08/19 11:40	05/15/19 14:16	1
Total HpCDF	4.6	J B	48	0.43	pg/L		05/08/19 11:40	05/15/19 14:16	1
OCDF	5.1	J B	97	0.24	pg/L		05/08/19 11:40	05/15/19 14:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	71		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,7,8-PeCDD	84		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,4,7,8-HxCDD	75		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-OCDD	91		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-2,3,7,8-TCDF	79		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,7,8-PeCDF	79		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-2,3,4,7,8-PeCDF	79		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,6,7,8-HxCDF	77		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,7,8,9-HxCDF	81		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,4,6,7,8-HpCDF	82		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-1,2,3,4,7,8,9-HpCDF	92		40 - 135				05/08/19 11:40	05/15/19 14:16	1
13C-OCDF	92		40 - 135				05/08/19 11:40	05/15/19 14:16	1

Default Detection Limits

Client: Field & Technical Services LLC
Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Prep: 8290

Analyte	RL	Units
1,2,3,4,6,7,8-HpCDD	50	pg/L
1,2,3,4,6,7,8-HpCDF	50	pg/L
1,2,3,4,7,8,9-HpCDF	50	pg/L
1,2,3,4,7,8-HxCDD	50	pg/L
1,2,3,4,7,8-HxCDF	50	pg/L
1,2,3,6,7,8-HxCDD	50	pg/L
1,2,3,6,7,8-HxCDF	50	pg/L
1,2,3,7,8,9-HxCDD	50	pg/L
1,2,3,7,8,9-HxCDF	50	pg/L
1,2,3,7,8-PeCDD	50	pg/L
1,2,3,7,8-PeCDF	50	pg/L
2,3,4,6,7,8-HxCDF	50	pg/L
2,3,4,7,8-PeCDF	50	pg/L
2,3,7,8-TCDD	10	pg/L
2,3,7,8-TCDF	10	pg/L
OCDD	100	pg/L
OCDF	100	pg/L
Total HpCDD	50	pg/L
Total HpCDF	50	pg/L
Total HxCDD	50	pg/L
Total HxCDF	50	pg/L
Total PeCDD	50	pg/L
Total PeCDF	50	pg/L
Total TCDD	10	pg/L
Total TCDF	10	pg/L

Isotope Dilution Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	PeCDD (40-135)	HxCDD (40-135)	HxDD (40-135)	HpCDD (40-135)	OCDD (40-135)	TCDF (40-135)	PeCDF (40-135)
140-15153-1	SUPE-W-30C-043019	71	79	78	76	96	98	80	80
140-15153-2	SUPE-W-06A-043019	71	83	76	75	98	102	81	85
140-15153-3	SUPE-W-06C-043019	71	84	76	76	97	102	81	84
140-15153-3 MS	SUPE-W-06C-043019	60	73	68	72	89	93	66	74
140-15153-3 MSD	SUPE-W-06C-043019	69	89	79	77	103	106	77	87
140-15153-4	SUPE-EB-01-043019	73	82	76	76	98	97	81	80
140-15153-5	SUPE-W-28C-043019	72	83	77	77	98	100	80	81
140-15153-6	SUPE-W-12A-043019	65	76	71	71	93	100	68	73
140-15153-7	SUPE-W-12CR-043019	75	88	80	79	98	93	85	85
140-15153-8	SUPE-W-30A-043019	73	81	80	79	99	109	79	84
140-15153-9	SUPE-W-10AR2-043019	66	76	78	78	97	99	72	70
140-15153-10	SUPE-M-99A-043019	71	84	75	75	96	91	79	79
LCS 140-29890/16-A	Lab Control Sample	71	80	76	77	105	109	84	76
MB 140-29890/15-A	Method Blank	65	75	78	72	90	83	74	75

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PeCF (40-135)	HxCDF (40-135)	HxDF (40-135)	13CHxCF (40-135)	HxCF (40-135)	HpCDF (40-135)	HpCDF2 (40-135)	13C-OCDF (40-135)
140-15153-1	SUPE-W-30C-043019	77	81	77	82	82	86	90	83
140-15153-2	SUPE-W-06A-043019	80	77	73	80	82	84	94	95
140-15153-3	SUPE-W-06C-043019	78	81	75	80	84	86	97	100
140-15153-3 MS	SUPE-W-06C-043019	70	71	68	72	75	77	87	92
140-15153-3 MSD	SUPE-W-06C-043019	81	79	76	80	83	86	100	105
140-15153-4	SUPE-EB-01-043019	78	81	79	82	83	86	95	95
140-15153-5	SUPE-W-28C-043019	80	81	77	82	84	86	97	99
140-15153-6	SUPE-W-12A-043019	71	76	73	76	77	82	90	96
140-15153-7	SUPE-W-12CR-043019	83	83	80	83	84	87	92	90
140-15153-8	SUPE-W-30A-043019	80	84	78	86	85	91	97	107
140-15153-9	SUPE-W-10AR2-043019	72	83	79	83	84	86	98	98
140-15153-10	SUPE-M-99A-043019	79	79	77	80	81	82	92	92
LCS 140-29890/16-A	Lab Control Sample	78	78	76	78	82	92	103	108
MB 140-29890/15-A	Method Blank	73	80	75	79	77	81	84	77

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- PeCDD = 13C-1,2,3,7,8-PeCDD
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- OCDD = 13C-OCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- 13CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- 13C-OCDF = 13C-OCDF

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 140-29890/15-A
Matrix: Water
Analysis Batch: 30038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 29890

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.38	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total TCDD	ND		10	0.92	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8-PeCDD	ND		50	0.42	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total PeCDD	ND		50	0.42	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,7,8-HxCDD	ND		50	0.44	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,6,7,8-HxCDD	1.73	J I	50	0.49	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8,9-HxCDD	2.00	J	50	0.43	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HxCDD	3.73	J I	50	0.45	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,6,7,8-HpCDD	3.05	J I	50	0.52	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HpCDD	4.72	J I	50	0.52	pg/L		05/08/19 11:40	05/15/19 01:17	1
OCDD	11.4	J I	100	1.1	pg/L		05/08/19 11:40	05/15/19 01:17	1
2,3,7,8-TCDF	ND		10	0.44	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total TCDF	ND		10	0.46	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8-PeCDF	ND		50	1.4	pg/L		05/08/19 11:40	05/15/19 01:17	1
2,3,4,7,8-PeCDF	ND		50	1.3	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total PeCDF	ND		50	1.4	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,7,8-HxCDF	ND		50	0.50	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,6,7,8-HxCDF	ND		50	0.50	pg/L		05/08/19 11:40	05/15/19 01:17	1
2,3,4,6,7,8-HxCDF	ND		50	0.56	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8,9-HxCDF	1.48	J I	50	0.66	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HxCDF	1.48	J I	50	0.56	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,6,7,8-HpCDF	1.92	J I	50	0.48	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,7,8,9-HpCDF	1.75	J I	50	0.65	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HpCDF	3.67	J I	50	0.57	pg/L		05/08/19 11:40	05/15/19 01:17	1
OCDF	6.81	J I	100	0.30	pg/L		05/08/19 11:40	05/15/19 01:17	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,7,8-PeCDD	75		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,6,7,8-HpCDD	90		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-OCDD	83		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-2,3,7,8-TCDF	74		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,7,8-PeCDF	75		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-2,3,4,7,8-PeCDF	73		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,6,7,8-HxCDF	75		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-2,3,4,6,7,8-HxCDF	79		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,6,7,8-HpCDF	81		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,7,8,9-HpCDF	84		40 - 135	05/08/19 11:40	05/15/19 01:17	1
13C-OCDF	77		40 - 135	05/08/19 11:40	05/15/19 01:17	1

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-29890/16-A
Matrix: Water
Analysis Batch: 30038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 29890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	200	245		pg/L		123	77 - 127
1,2,3,7,8-PeCDD	1000	1200		pg/L		120	78 - 128
1,2,3,4,7,8-HxCDD	1000	1190		pg/L		119	73 - 123
1,2,3,6,7,8-HxCDD	1000	1180		pg/L		118	72 - 127
1,2,3,7,8,9-HxCDD	1000	1230		pg/L		123	76 - 126
1,2,3,4,6,7,8-HpCDD	1000	1050		pg/L		105	73 - 123
OCDD	2000	2010		pg/L		101	75 - 125
2,3,7,8-TCDF	200	236		pg/L		118	74 - 124
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	74 - 124
2,3,4,7,8-PeCDF	1000	1160		pg/L		116	74 - 124
1,2,3,4,7,8-HxCDF	1000	1160		pg/L		116	75 - 125
1,2,3,6,7,8-HxCDF	1000	1130		pg/L		113	75 - 125
2,3,4,6,7,8-HxCDF	1000	1180		pg/L		118	76 - 126
1,2,3,7,8,9-HxCDF	1000	1130		pg/L		113	76 - 126
1,2,3,4,6,7,8-HpCDF	1000	1090		pg/L		109	71 - 121
1,2,3,4,7,8,9-HpCDF	1000	1100		pg/L		110	73 - 123
OCDF	2000	1860		pg/L		93	68 - 132

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	71		40 - 135
13C-1,2,3,7,8-PeCDD	80		40 - 135
13C-1,2,3,4,7,8-HxCDD	76		40 - 135
13C-1,2,3,6,7,8-HxCDD	77		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	105		40 - 135
13C-OCDD	109		40 - 135
13C-2,3,7,8-TCDF	84		40 - 135
13C-1,2,3,7,8-PeCDF	76		40 - 135
13C-2,3,4,7,8-PeCDF	78		40 - 135
13C-1,2,3,4,7,8-HxCDF	78		40 - 135
13C-1,2,3,6,7,8-HxCDF	76		40 - 135
13C-2,3,4,6,7,8-HxCDF	78		40 - 135
13C-1,2,3,7,8,9-HxCDF	82		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	103		40 - 135
13C-OCDF	108		40 - 135

Lab Sample ID: 140-15153-3 MS
Matrix: Water
Analysis Batch: 30043

Client Sample ID: SUPE-W-06C-043019
Prep Type: Total/NA
Prep Batch: 29890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	ND		195	238		pg/L		122	77 - 127
1,2,3,7,8-PeCDD	ND		977	1070		pg/L		109	78 - 128
1,2,3,4,7,8-HxCDD	ND		977	1070		pg/L		110	73 - 123
1,2,3,6,7,8-HxCDD	ND		977	1030		pg/L		106	72 - 127
1,2,3,7,8,9-HxCDD	ND		977	1110		pg/L		114	76 - 126
1,2,3,4,6,7,8-HpCDD	3.2	J I B	977	982		pg/L		100	73 - 123
OCDD	34	J B	1950	1950		pg/L		98	75 - 125
2,3,7,8-TCDF	ND		195	228		pg/L		117	74 - 124

Eurofins TestAmerica, Knoxville

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 140-15153-3 MS
Matrix: Water
Analysis Batch: 30043

Client Sample ID: SUPE-W-06C-043019
Prep Type: Total/NA
Prep Batch: 29890

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.		
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
1,2,3,7,8-PeCDF	ND		977	976		pg/L		100	74 - 124		
2,3,4,7,8-PeCDF	ND		977	1030		pg/L		106	74 - 124		
1,2,3,4,7,8-HxCDF	ND		977	1030		pg/L		105	75 - 125		
1,2,3,6,7,8-HxCDF	ND		977	1020		pg/L		104	75 - 125		
2,3,4,6,7,8-HxCDF	ND		977	1030		pg/L		105	76 - 126		
1,2,3,7,8,9-HxCDF	ND		977	1020		pg/L		105	76 - 126		
1,2,3,4,6,7,8-HpCDF	0.95	J B	977	1020		pg/L		105	71 - 121		
1,2,3,4,7,8,9-HpCDF	ND		977	1030		pg/L		106	73 - 123		
OCDF	3.0	J B	1950	1800		pg/L		92	49 - 134		
		MS MS									
Isotope Dilution		%Recovery	Qualifier	Limits							
13C-2,3,7,8-TCDD		60		40 - 135							
13C-1,2,3,7,8-PeCDD		73		40 - 135							
13C-1,2,3,4,7,8-HxCDD		68		40 - 135							
13C-1,2,3,6,7,8-HxCDD		72		40 - 135							
13C-1,2,3,4,6,7,8-HpCDD		89		40 - 135							
13C-OCDD		93		40 - 135							
13C-2,3,7,8-TCDF		66		40 - 135							
13C-1,2,3,7,8-PeCDF		74		40 - 135							
13C-2,3,4,7,8-PeCDF		70		40 - 135							
13C-1,2,3,4,7,8-HxCDF		71		40 - 135							
13C-1,2,3,6,7,8-HxCDF		68		40 - 135							
13C-2,3,4,6,7,8-HxCDF		72		40 - 135							
13C-1,2,3,7,8,9-HxCDF		75		40 - 135							
13C-1,2,3,4,6,7,8-HpCDF		77		40 - 135							
13C-1,2,3,4,7,8,9-HpCDF		87		40 - 135							
13C-OCDF		92		40 - 135							

Lab Sample ID: 140-15153-3 MSD
Matrix: Water
Analysis Batch: 30043

Client Sample ID: SUPE-W-06C-043019
Prep Type: Total/NA
Prep Batch: 29890

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
2,3,7,8-TCDD	ND		196	231		pg/L		118	77 - 127	3	15	
1,2,3,7,8-PeCDD	ND		982	1050		pg/L		107	78 - 128	2	15	
1,2,3,4,7,8-HxCDD	ND		982	1050		pg/L		107	73 - 123	3	15	
1,2,3,6,7,8-HxCDD	ND		982	1080		pg/L		110	72 - 127	4	15	
1,2,3,7,8,9-HxCDD	ND		982	1110		pg/L		113	76 - 126	0	15	
1,2,3,4,6,7,8-HpCDD	3.2	J I B	982	972		pg/L		99	73 - 123	1	15	
OCDD	34	J B	1960	1970		pg/L		99	75 - 125	1	15	
2,3,7,8-TCDF	ND		196	222		pg/L		113	74 - 124	3	15	
1,2,3,7,8-PeCDF	ND		982	976		pg/L		99	74 - 124	0	15	
2,3,4,7,8-PeCDF	ND		982	1060		pg/L		108	74 - 124	3	15	
1,2,3,4,7,8-HxCDF	ND		982	1010		pg/L		103	75 - 125	1	15	
1,2,3,6,7,8-HxCDF	ND		982	999		pg/L		102	75 - 125	2	15	
2,3,4,6,7,8-HxCDF	ND		982	1040		pg/L		106	76 - 126	1	15	
1,2,3,7,8,9-HxCDF	ND		982	1010		pg/L		103	76 - 126	1	15	
1,2,3,4,6,7,8-HpCDF	0.95	J B	982	1040		pg/L		106	71 - 121	2	15	
1,2,3,4,7,8,9-HpCDF	ND		982	1020		pg/L		104	73 - 123	1	15	

Eurofins TestAmerica, Knoxville

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 140-15153-3 MSD

Matrix: Water

Analysis Batch: 30043

Client Sample ID: SUPE-W-06C-043019

Prep Type: Total/NA

Prep Batch: 29890

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
OCDF	3.0	J B	1960	1810		pg/L		92	49 - 134	0	15
MSD MSD											
Isotope Dilution	%Recovery	Qualifier	Limits								
13C-2,3,7,8-TCDD	69		40 - 135								
13C-1,2,3,7,8-PeCDD	89		40 - 135								
13C-1,2,3,4,7,8-HxCDD	79		40 - 135								
13C-1,2,3,6,7,8-HxCDD	77		40 - 135								
13C-1,2,3,4,6,7,8-HpCDD	103		40 - 135								
13C-OCDD	106		40 - 135								
13C-2,3,7,8-TCDF	77		40 - 135								
13C-1,2,3,7,8-PeCDF	87		40 - 135								
13C-2,3,4,7,8-PeCDF	81		40 - 135								
13C-1,2,3,4,7,8-HxCDF	79		40 - 135								
13C-1,2,3,6,7,8-HxCDF	76		40 - 135								
13C-2,3,4,6,7,8-HxCDF	80		40 - 135								
13C-1,2,3,7,8,9-HxCDF	83		40 - 135								
13C-1,2,3,4,6,7,8-HpCDF	86		40 - 135								
13C-1,2,3,4,7,8,9-HpCDF	100		40 - 135								
13C-OCDF	105		40 - 135								

QC Association Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Specialty Organics

Prep Batch: 29890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-15153-1	SUPE-W-30C-043019	Total/NA	Water	8290	
140-15153-2	SUPE-W-06A-043019	Total/NA	Water	8290	
140-15153-3	SUPE-W-06C-043019	Total/NA	Water	8290	
140-15153-4	SUPE-EB-01-043019	Total/NA	Water	8290	
140-15153-5	SUPE-W-28C-043019	Total/NA	Water	8290	
140-15153-6	SUPE-W-12A-043019	Total/NA	Water	8290	
140-15153-7	SUPE-W-12CR-043019	Total/NA	Water	8290	
140-15153-8	SUPE-W-30A-043019	Total/NA	Water	8290	
140-15153-9	SUPE-W-10AR2-043019	Total/NA	Water	8290	
140-15153-10	SUPE-M-99A-043019	Total/NA	Water	8290	
MB 140-29890/15-A	Method Blank	Total/NA	Water	8290	
LCS 140-29890/16-A	Lab Control Sample	Total/NA	Water	8290	
140-15153-3 MS	SUPE-W-06C-043019	Total/NA	Water	8290	
140-15153-3 MSD	SUPE-W-06C-043019	Total/NA	Water	8290	

Analysis Batch: 30038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-15153-1	SUPE-W-30C-043019	Total/NA	Water	8290A	29890
140-15153-2	SUPE-W-06A-043019	Total/NA	Water	8290A	29890
140-15153-4	SUPE-EB-01-043019	Total/NA	Water	8290A	29890
140-15153-5	SUPE-W-28C-043019	Total/NA	Water	8290A	29890
140-15153-6	SUPE-W-12A-043019	Total/NA	Water	8290A	29890
MB 140-29890/15-A	Method Blank	Total/NA	Water	8290A	29890
LCS 140-29890/16-A	Lab Control Sample	Total/NA	Water	8290A	29890

Analysis Batch: 30043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-15153-3	SUPE-W-06C-043019	Total/NA	Water	8290A	29890
140-15153-7	SUPE-W-12CR-043019	Total/NA	Water	8290A	29890
140-15153-8	SUPE-W-30A-043019	Total/NA	Water	8290A	29890
140-15153-9	SUPE-W-10AR2-043019	Total/NA	Water	8290A	29890
140-15153-10	SUPE-M-99A-043019	Total/NA	Water	8290A	29890
140-15153-3 MS	SUPE-W-06C-043019	Total/NA	Water	8290A	29890
140-15153-3 MSD	SUPE-W-06C-043019	Total/NA	Water	8290A	29890

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 140-15153-1

Date Collected: 04/30/19 09:45

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1039.2 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 02:21	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 140-15153-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1027.5 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 03:20	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 140-15153-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1047.7 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 16:20	MSD	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 140-15153-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1046.7 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 04:22	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 140-15153-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1027.7 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 05:24	LKM	TAL KNX
Instrument ID: D11A										

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 140-15153-6

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1051.6 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 06:25	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 140-15153-7

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1036.7 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 11:11	MSD	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 140-15153-8

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			950.8 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 12:13	MSD	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 140-15153-9

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1048.8 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 13:15	MSD	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 140-15153-10

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1033.9 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 14:16	MSD	TAL KNX
Instrument ID: D11A										

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-29890/15-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1000 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 01:17	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-29890/16-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1000 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/14/19 23:08	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 140-15153-3 MS

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1023.5 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 17:22	MSD	TAL KNX
Instrument ID: D11A										

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 140-15153-3 MSD

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1018.7 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30043	05/15/19 18:23	MSD	TAL KNX
Instrument ID: D11A										

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Laboratory: Eurofins TestAmerica, Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8290A	8290	Water	1,2,3,4,6,7,8-HpCDD
8290A	8290	Water	1,2,3,4,6,7,8-HpCDF
8290A	8290	Water	1,2,3,4,7,8,9-HpCDF
8290A	8290	Water	1,2,3,4,7,8-HxCDD
8290A	8290	Water	1,2,3,4,7,8-HxCDF
8290A	8290	Water	1,2,3,6,7,8-HxCDD
8290A	8290	Water	1,2,3,6,7,8-HxCDF
8290A	8290	Water	1,2,3,7,8,9-HxCDD
8290A	8290	Water	1,2,3,7,8,9-HxCDF
8290A	8290	Water	1,2,3,7,8-PeCDD
8290A	8290	Water	1,2,3,7,8-PeCDF
8290A	8290	Water	2,3,4,6,7,8-HxCDF
8290A	8290	Water	2,3,4,7,8-PeCDF
8290A	8290	Water	2,3,7,8-TCDD
8290A	8290	Water	2,3,7,8-TCDF
8290A	8290	Water	OCDD
8290A	8290	Water	OCDF
8290A	8290	Water	Total HpCDD
8290A	8290	Water	Total HpCDF
8290A	8290	Water	Total HxCDD
8290A	8290	Water	Total HxCDF
8290A	8290	Water	Total PeCDD
8290A	8290	Water	Total PeCDF
8290A	8290	Water	Total TCDD
8290A	8290	Water	Total TCDF

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL KNX
8290	Separatory Funnel (Liquid-Liquid) Extraction of Dioxins and Furans	SW846	TAL KNX

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000



Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 1SA Sampling

Job ID: 140-15153-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Assesst ID
140-15153-1	SUPE-W-30C-043019	Water	04/30/19 09:45	05/01/19 10:00	
140-15153-2	SUPE-W-06A-043019	Water	04/30/19 11:05	05/01/19 10:00	
140-15153-3	SUPE-W-06C-043019	Water	04/30/19 12:55	05/01/19 10:00	
140-15153-4	SUPE-EB-01-043019	Water	04/30/19 13:45	05/01/19 10:00	
140-15153-5	SUPE-W-28C-043019	Water	04/30/19 15:10	05/01/19 10:00	
140-15153-6	SUPE-W-12A-043019	Water	04/30/19 09:48	05/01/19 10:00	
140-15153-7	SUPE-W-12CR-043019	Water	04/30/19 11:09	05/01/19 10:00	
140-15153-8	SUPE-W-30A-043019	Water	04/30/19 12:35	05/01/19 10:00	
140-15153-9	SUPE-W-10AR2-043019	Water	04/30/19 15:14	05/01/19 10:00	
140-15153-10	SUPE-M-99A-043019	Water	04/30/19 22:00	05/01/19 10:00	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 547

547

Project Name: Superior 2019 1SA Sampling Company: Field & Technical Services Client: Beazer East, Inc.
 Project Number: CM-0556-19# Address: 200 Third Avenue Contact: (21) 4 4-9876
 Laboratory: TAKNOX Carnegie, PA 15106 kmcullen.2006@fts.com
 Shipment Method FEDEX (412) 279-3363
 Program: Superior 2019 1SA Sampling_001



140-15153 Chain of Custody

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative	8290 Dioxins/Furans	Notes:
					None		
				Total Bottle Count			
04/30/2019	0945	GW	SUPE-W-30C-043019	2		2	
04/30/2019	1105	GW	SUPE-W-06A-043019	2		2	
04/30/2019	1255	GW	SUPE-W-06C-043019	2		2	
04/30/2019	1255	GW	SUPE-W-06C-MS/MSD-043019	4		4	
04/30/2019	1345	GW	SUPE-EB-01-043019	2		2	
04/30/2019	1510	GW	SUPE-W-28C-043019	2		2	

REC. @ 3.0c 3.0c
 1.9 1.8
 1.9 1.9
 CUSTODY SEALS INTACT
 3 COOLERS RH 5/2/19
 FED Ex# 786969473395
 786969450729

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Katie McMullen</i> Printed Name: Katie McMullen Firm: FTS Date/Time: 04/30/2019 1646	Signature: <i>Ryan Henry</i> Printed Name: RYAN HENRY Firm: TA KNOX Date/Time: 5/1/19 1000	Signature: Printed Name: Firm: Date/Time:	Signature: Printed Name: Firm: Date/Time:	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 501068

501068

Project Name: Superior 2019 1SA Sampling **Company:** Field & Technical Services **Client:** Beazer East, Inc.
Project Number: OM-0556-19 **Address:** 200 Third Avenue **Contact:** (724) 858-5953
Laboratory: TAKNOX **Address:** Carnegie, PA 15106 **Contact:** btrask.2006@fts.com
Shipment Method: FEDEX **Address:** (412) 279-3363
Program: Superior 2019 1SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		8290_Dioxins/Furans	Total Bottle Count	Notes:
					None				
04/30/2019	0948	GW	SUPE-W-12A-043019	2	2	0			
04/30/2019	1109	GW	SUPE-W-12CR-043019	2	2	0			
04/30/2019	1235	GW	SUPE-W-30A-043019	2	2	0			
04/30/2019	1514	GW	SUPE-W-10AR2-043019	2	2	0			
04/30/2019	2200	GW	SUPE-M-99A-043019	2	2	0			

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature:	Signature:	Signature:	Signature:
Printed Name: Ben Trask	Printed Name: RYAN HENRY	Printed Name:	Printed Name:
Firm: FTS	Firm: TA KRX	Firm:	Firm:
Date/Time: 04/30/2019 1650	Date/Time: 5/1/19 1000	Date/Time:	Date/Time:

<input type="checkbox"/> Rush	<input checked="" type="checkbox"/> Standard
-------------------------------	--

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>SC67</u> Correction factor: <u>0</u>	<input checked="" type="checkbox"/>			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			<input checked="" type="checkbox"/>	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace?			<input checked="" type="checkbox"/>	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			<input checked="" type="checkbox"/>		
19. For 1613B water samples is pH<9?			<input checked="" type="checkbox"/>	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			<input checked="" type="checkbox"/>	<input type="checkbox"/> Project missing info	
Project #: _____				PM Instructions: _____	

Sample Receiving Associate: Ryan Henry Date: 5/1/19
 QA026R31.doc, 112618

FTS, LLC

DATE: May 24, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 140-15154-1

SAMPLES: SUPE-W-04AR2-050119

ANALYSES: Method 8290A (Dioxins/Furans)

LABORATORY: Eurofins TestAmerica Laboratories, Knoxville

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: None
- Laboratory Blank Contamination
Noncompliance: 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,7,8,9-HxCDF, OCDD, OCDF, total HpCDD, total HpCDF, total HxCDD, and total HxCDF were detected in the method blank. See attached page for details.
- Field Blank Contamination
Noncompliance: 1,2,3,4,7,8-HxCDF, OCDD, OCDF, total HpCDD, total HxCDF, and total PeCDD were detected in the equipment blank. See data evaluation for SDG 140-15153-1 for details.
- Surrogate Recoveries
Noncompliance: The isotope dilution recoveries fell below the recovery limits in sample W-04AR2. No action was taken on this basis.
- Laboratory Control Sample
Noncompliance: None

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Blank Action Level</u>
1,2,3,4,6,7,8-HpCDD	3.05 JI pg/l	15.25 pg/l
1,2,3,4,6,7,8-HpCDF	1.92 JI pg/l	9.6 pg/l
1,2,3,4,7,8,9-HpCDF	1.75 JI pg/l	8.75 pg/l
1,2,3,6,7,8-HxCDD	1.73 JI pg/l	8.65 pg/l
1,2,3,7,8,9-HxCDD	2 J pg/l	10 pg/l
1,2,3,7,8,9-HxCDF	1.48 JI pg/l	7.4 pg/l
OCDD	11.4 JI pg/l	57 pg/l
OCDF	6.81 JI pg/l	34.05 pg/l
Total HpCDD	4.72 JI pg/l	23.6 pg/l
Total HpCDF	3.67 JI pg/l	18.35 pg/l
Total HxCDD	3.73 JI pg/l	18.65 pg/l
Total HxCDF	1.48 JI pg/l	7.4 pg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for laboratory blank contamination.

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-15154-1
Client Project/Site: Superior 2019 ISA Sampling

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
5/22/2019 11:13:41 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Default Detection Limits	7
Isotope Dilution Summary	8
QC Sample Results	9
QC Association Summary	11
Lab Chronicle	12
Certification Summary	13
Method Summary	15
Sample Summary	16
Chain of Custody	17

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Qualifiers

Dioxin

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Job ID: 140-15154-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative 140-15154-1

Comments

No additional comments.

Receipt

The sample was received on 5/2/2019 9:30 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5° C.

Dioxin

Method(s) 8290A: One ore more ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: W-04AR2-050119.

Method(s) 8290A: All Isotope Dilution Analyte (IDA) recoveries associated with the following sample are below the method recommended limit: W-04AR2-050119. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). All detection limits are below the lower calibration.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Client Sample ID: W-04AR2-050119

Lab Sample ID: 140-15154-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	3.7	J I	49	1.3	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	9.4	J	49	1.6	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	36	J B	49	1.5	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	16	J B	49	1.5	pg/L	1		8290A	Total/NA
Total HxCDD	220	B	49	1.5	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	790	B	49	8.8	pg/L	1		8290A	Total/NA
Total HpCDD	2000	B	49	8.8	pg/L	1		8290A	Total/NA
OCDD	6300	B	97	3.8	pg/L	1		8290A	Total/NA
Total TCDF	53	I	9.7	1.9	pg/L	1		8290A	Total/NA
Total PeCDF	240	I	49	2.8	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	22	J I	49	3.7	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	29	J I	49	3.4	pg/L	1		8290A	Total/NA
Total HxCDF	650	I B	49	4.1	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	200	B	49	3.4	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	17	J I B	49	4.5	pg/L	1		8290A	Total/NA
Total HpCDF	730	I B	49	3.9	pg/L	1		8290A	Total/NA
OCDF	520	B	97	1.2	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Knoxville



Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Client Sample ID: W-04AR2-050119

Lab Sample ID: 140-15154-1

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/02/19 09:30

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.7	1.5	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total TCDD	ND		9.7	3.1	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,7,8-PeCDD	ND		49	1.3	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total PeCDD	3.7	J I	49	1.3	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,4,7,8-HxCDD	9.4	J	49	1.6	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,6,7,8-HxCDD	36	J B	49	1.5	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,7,8,9-HxCDD	16	J B	49	1.5	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total HxCDD	220	B	49	1.5	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,4,6,7,8-HpCDD	790	B	49	8.8	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total HpCDD	2000	B	49	8.8	pg/L		05/08/19 11:40	05/16/19 00:12	1
OCDD	6300	B	97	3.8	pg/L		05/08/19 11:40	05/16/19 00:12	1
2,3,7,8-TCDF	ND		9.7	1.9	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total TCDF	53	I	9.7	1.9	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,7,8-PeCDF	ND		49	2.8	pg/L		05/08/19 11:40	05/16/19 00:12	1
2,3,4,7,8-PeCDF	ND		49	2.8	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total PeCDF	240	I	49	2.8	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,4,7,8-HxCDF	22	J I	49	3.7	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,6,7,8-HxCDF	29	J I	49	3.4	pg/L		05/08/19 11:40	05/16/19 00:12	1
2,3,4,6,7,8-HxCDF	ND		49	4.1	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,7,8,9-HxCDF	ND		49	5.1	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total HxCDF	650	I B	49	4.1	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,4,6,7,8-HpCDF	200	B	49	3.4	pg/L		05/08/19 11:40	05/16/19 00:12	1
1,2,3,4,7,8,9-HpCDF	17	J I B	49	4.5	pg/L		05/08/19 11:40	05/16/19 00:12	1
Total HpCDF	730	I B	49	3.9	pg/L		05/08/19 11:40	05/16/19 00:12	1
OCDF	520	B	97	1.2	pg/L		05/08/19 11:40	05/16/19 00:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	13	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,7,8-PeCDD	15	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,4,7,8-HxCDD	14	I *	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,6,7,8-HxCDD	16	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,4,6,7,8-HpCDD	20	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-OCDD	20	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-2,3,7,8-TCDF	15	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,7,8-PeCDF	16	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-2,3,4,7,8-PeCDF	15	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,4,7,8-HxCDF	16	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,6,7,8-HxCDF	16	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-2,3,4,6,7,8-HxCDF	16	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,7,8,9-HxCDF	16	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,4,6,7,8-HpCDF	19	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-1,2,3,4,7,8,9-HpCDF	19	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1
13C-OCDF	19	*	40 - 135	05/08/19 11:40	05/16/19 00:12	1

Default Detection Limits

Client: Field & Technical Services LLC
Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Prep: 8290

Analyte	RL	Units
1,2,3,4,6,7,8-HpCDD	50	pg/L
1,2,3,4,6,7,8-HpCDF	50	pg/L
1,2,3,4,7,8,9-HpCDF	50	pg/L
1,2,3,4,7,8-HxCDD	50	pg/L
1,2,3,4,7,8-HxCDF	50	pg/L
1,2,3,6,7,8-HxCDD	50	pg/L
1,2,3,6,7,8-HxCDF	50	pg/L
1,2,3,7,8,9-HxCDD	50	pg/L
1,2,3,7,8,9-HxCDF	50	pg/L
1,2,3,7,8-PeCDD	50	pg/L
1,2,3,7,8-PeCDF	50	pg/L
2,3,4,6,7,8-HxCDF	50	pg/L
2,3,4,7,8-PeCDF	50	pg/L
2,3,7,8-TCDD	10	pg/L
2,3,7,8-TCDF	10	pg/L
OCDD	100	pg/L
OCDF	100	pg/L
Total HpCDD	50	pg/L
Total HpCDF	50	pg/L
Total HxCDD	50	pg/L
Total HxCDF	50	pg/L
Total PeCDD	50	pg/L
Total PeCDF	50	pg/L
Total TCDD	10	pg/L
Total TCDF	10	pg/L

Isotope Dilution Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDD (40-135)	PeCDD (40-135)	HxCDD (40-135)	HxDD (40-135)	HpCDD (40-135)	OCDD (40-135)	TCDF (40-135)	PeCDF (40-135)
140-15154-1	W-04AR2-050119	13 *	15 *	14 *	16 *	20 *	20 *	15 *	16 *
LCS 140-29890/16-A	Lab Control Sample	71	80	76	77	105	109	84	76
MB 140-29890/15-A	Method Blank	65	75	78	72	90	83	74	75

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PeCF (40-135)	HxCDF (40-135)	HxDF (40-135)	¹³ CHxCF (40-135)	HxCF (40-135)	HpCDF (40-135)	HpCDF2 (40-135)	¹³ C-OCDF (40-135)
140-15154-1	W-04AR2-050119	15 *	16 *	16 *	16 *	16 *	19 *	19 *	19 *
LCS 140-29890/16-A	Lab Control Sample	78	78	76	78	82	92	103	108
MB 140-29890/15-A	Method Blank	73	80	75	79	77	81	84	77

Surrogate Legend

- TCDD = 13C-2,3,7,8-TCDD
- PeCDD = 13C-1,2,3,7,8-PeCDD
- HxCDD = 13C-1,2,3,4,7,8-HxCDD
- HxDD = 13C-1,2,3,6,7,8-HxCDD
- HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- OCDD = 13C-OCDD
- TCDF = 13C-2,3,7,8-TCDF
- PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCF = 13C-2,3,4,7,8-PeCDF
- HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxDF = 13C-1,2,3,6,7,8-HxCDF
- ¹³CHxCF = 13C-2,3,4,6,7,8-HxCDF
- HxCF = 13C-1,2,3,7,8,9-HxCDF
- HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
- ¹³C-OCDF = 13C-OCDF

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 140-29890/15-A
Matrix: Water
Analysis Batch: 30038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 29890

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	ND		10	0.38	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total TCDD	ND		10	0.92	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8-PeCDD	ND		50	0.42	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total PeCDD	ND		50	0.42	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,7,8-HxCDD	ND		50	0.44	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,6,7,8-HxCDD	1.73	J I	50	0.49	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8,9-HxCDD	2.00	J	50	0.43	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HxCDD	3.73	J I	50	0.45	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,6,7,8-HpCDD	3.05	J I	50	0.52	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HpCDD	4.72	J I	50	0.52	pg/L		05/08/19 11:40	05/15/19 01:17	1
OCDD	11.4	J I	100	1.1	pg/L		05/08/19 11:40	05/15/19 01:17	1
2,3,7,8-TCDF	ND		10	0.44	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total TCDF	ND		10	0.46	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8-PeCDF	ND		50	1.4	pg/L		05/08/19 11:40	05/15/19 01:17	1
2,3,4,7,8-PeCDF	ND		50	1.3	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total PeCDF	ND		50	1.4	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,7,8-HxCDF	ND		50	0.50	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,6,7,8-HxCDF	ND		50	0.50	pg/L		05/08/19 11:40	05/15/19 01:17	1
2,3,4,6,7,8-HxCDF	ND		50	0.56	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,7,8,9-HxCDF	1.48	J I	50	0.66	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HxCDF	1.48	J I	50	0.56	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,6,7,8-HpCDF	1.92	J I	50	0.48	pg/L		05/08/19 11:40	05/15/19 01:17	1
1,2,3,4,7,8,9-HpCDF	1.75	J I	50	0.65	pg/L		05/08/19 11:40	05/15/19 01:17	1
Total HpCDF	3.67	J I	50	0.57	pg/L		05/08/19 11:40	05/15/19 01:17	1
OCDF	6.81	J I	100	0.30	pg/L		05/08/19 11:40	05/15/19 01:17	1
	MB	MB					Prepared	Analyzed	Dil Fac
Isotope Dilution	%Recovery	Qualifier	Limits						
13C-2,3,7,8-TCDD	65		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,7,8-PeCDD	75		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,6,7,8-HpCDD	90		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-OCDD	83		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-2,3,7,8-TCDF	74		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,7,8-PeCDF	75		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-2,3,4,7,8-PeCDF	73		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,7,8-HxCDF	80		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,6,7,8-HxCDF	75		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-2,3,4,6,7,8-HxCDF	79		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,6,7,8-HpCDF	81		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-1,2,3,4,7,8,9-HpCDF	84		40 - 135				05/08/19 11:40	05/15/19 01:17	1
13C-OCDF	77		40 - 135				05/08/19 11:40	05/15/19 01:17	1

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-29890/16-A
Matrix: Water
Analysis Batch: 30038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 29890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	245		pg/L		123	77 - 127
1,2,3,7,8-PeCDD	1000	1200		pg/L		120	78 - 128
1,2,3,4,7,8-HxCDD	1000	1190		pg/L		119	73 - 123
1,2,3,6,7,8-HxCDD	1000	1180		pg/L		118	72 - 127
1,2,3,7,8,9-HxCDD	1000	1230		pg/L		123	76 - 126
1,2,3,4,6,7,8-HpCDD	1000	1050		pg/L		105	73 - 123
OCDD	2000	2010		pg/L		101	75 - 125
2,3,7,8-TCDF	200	236		pg/L		118	74 - 124
1,2,3,7,8-PeCDF	1000	1160		pg/L		116	74 - 124
2,3,4,7,8-PeCDF	1000	1160		pg/L		116	74 - 124
1,2,3,4,7,8-HxCDF	1000	1160		pg/L		116	75 - 125
1,2,3,6,7,8-HxCDF	1000	1130		pg/L		113	75 - 125
2,3,4,6,7,8-HxCDF	1000	1180		pg/L		118	76 - 126
1,2,3,7,8,9-HxCDF	1000	1130		pg/L		113	76 - 126
1,2,3,4,6,7,8-HpCDF	1000	1090		pg/L		109	71 - 121
1,2,3,4,7,8,9-HpCDF	1000	1100		pg/L		110	73 - 123
OCDF	2000	1860		pg/L		93	68 - 132

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	71		40 - 135
13C-1,2,3,7,8-PeCDD	80		40 - 135
13C-1,2,3,4,7,8-HxCDD	76		40 - 135
13C-1,2,3,6,7,8-HxCDD	77		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	105		40 - 135
13C-OCDD	109		40 - 135
13C-2,3,7,8-TCDF	84		40 - 135
13C-1,2,3,7,8-PeCDF	76		40 - 135
13C-2,3,4,7,8-PeCDF	78		40 - 135
13C-1,2,3,4,7,8-HxCDF	78		40 - 135
13C-1,2,3,6,7,8-HxCDF	76		40 - 135
13C-2,3,4,6,7,8-HxCDF	78		40 - 135
13C-1,2,3,7,8,9-HxCDF	82		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	103		40 - 135
13C-OCDF	108		40 - 135

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Specialty Organics

Prep Batch: 29890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-15154-1	W-04AR2-050119	Total/NA	Water	8290	
MB 140-29890/15-A	Method Blank	Total/NA	Water	8290	
LCS 140-29890/16-A	Lab Control Sample	Total/NA	Water	8290	

Analysis Batch: 30038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-29890/15-A	Method Blank	Total/NA	Water	8290A	29890
LCS 140-29890/16-A	Lab Control Sample	Total/NA	Water	8290A	29890

Analysis Batch: 30074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-15154-1	W-04AR2-050119	Total/NA	Water	8290A	29890

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Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Client Sample ID: W-04AR2-050119

Lab Sample ID: 140-15154-1

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/02/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1026 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30074	05/16/19 00:12	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-29890/15-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1000 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/15/19 01:17	LKM	TAL KNX
Instrument ID: D11A										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-29890/16-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1000 mL	20 uL	29890	05/08/19 11:40	SMA	TAL KNX
Total/NA	Analysis	8290A		1			30038	05/14/19 23:08	LKM	TAL KNX
Instrument ID: D11A										

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Laboratory: Eurofins TestAmerica, Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8290A	8290	Water	1,2,3,4,6,7,8-HpCDD
8290A	8290	Water	1,2,3,4,6,7,8-HpCDF
8290A	8290	Water	1,2,3,4,7,8,9-HpCDF
8290A	8290	Water	1,2,3,4,7,8-HxCDD
8290A	8290	Water	1,2,3,4,7,8-HxCDF
8290A	8290	Water	1,2,3,6,7,8-HxCDD
8290A	8290	Water	1,2,3,6,7,8-HxCDF
8290A	8290	Water	1,2,3,7,8,9-HxCDD
8290A	8290	Water	1,2,3,7,8,9-HxCDF
8290A	8290	Water	1,2,3,7,8-PeCDD
8290A	8290	Water	1,2,3,7,8-PeCDF
8290A	8290	Water	2,3,4,6,7,8-HxCDF
8290A	8290	Water	2,3,4,7,8-PeCDF
8290A	8290	Water	2,3,7,8-TCDD
8290A	8290	Water	2,3,7,8-TCDF
8290A	8290	Water	OCDD
8290A	8290	Water	OCDF
8290A	8290	Water	Total HpCDD
8290A	8290	Water	Total HpCDF
8290A	8290	Water	Total HxCDD
8290A	8290	Water	Total HxCDF
8290A	8290	Water	Total PeCDD
8290A	8290	Water	Total PeCDF
8290A	8290	Water	Total TCDD
8290A	8290	Water	Total TCDF

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	TAL KNX
8290	Separatory Funnel (Liquid-Liquid) Extraction of Dioxins and Furans	SW846	TAL KNX

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000



Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior 2019 ISA Sampling

Job ID: 140-15154-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Assest ID
140-15154-1	W-04AR2-050119	Water	05/01/19 08:30	05/02/19 09:30	

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Chain of Custody Record

321630

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Company Name: FTS		Client Contact		Project Manager:		Site Contact: NA		Date: 5/1/19		COC No: 1 of 1 COCs	
Address: 700 3rd Ave		Tel/Fax:		Analysis Turnaround Time		Lab Contact:		Carrier: Fed Ex		Sampler:	
City/State/Zip: Carnegie, PA 15106		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		TAT if different from Below		Perform MS/MSD (Y/N)		8290-Dioxins/Furans		For Lab Use Only:	
Phone: (412) 279-3363		2 weeks <input type="checkbox"/>		1 week <input type="checkbox"/>		Filtered Sample (Y/N)		N		Walk-in Client:	
Fax:		1 day <input type="checkbox"/>		2 days <input type="checkbox"/>		# of Cont.		2		Lab Sampling:	
Project Name: Superior 2019 ISA Sampling		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix		Job / SDG No.:	
Site: Superior, NJ		5/1/19		0830		G		W		140-15154 Chain of Custody	
PO # 0M-0556-19 091		Sample Identification		W-04RZ 050119						Sample Specific Notes:	
										 140-15154 Chain of Custody RT CT REC. @ 0.5c 0.5c CUSTODY SEAL INTACT 1 COOLER RH 5/2/19 FedEx # 786986685591	
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.											
Special Instructions/QC Requirements & Comments:											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months											
Relinquished by: Kait McNichol		Custody Seal No.:		Company: FTS		Date/Time: 5/1/19 0945		Received by: Kait McNichol		Company: TA KNUX	
Relinquished by:		Custody Temp. (°C):		Obs'd:		Corr'd:		Therm ID No.:		Date/Time: 5/2/19 0930	
Relinquished by:		Received in Laboratory by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	



TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			<input checked="" type="checkbox"/>	<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: <u>5C67</u> Correction factor: <u>0</u>	<input checked="" type="checkbox"/>			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			<input checked="" type="checkbox"/>	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			<input checked="" type="checkbox"/>	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			<input checked="" type="checkbox"/>		
19. For 1613B water samples is pH<9?			<input checked="" type="checkbox"/>	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			<input checked="" type="checkbox"/>	<input type="checkbox"/> Project missing info	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: Lynn Henry Date: 5/2/19



FTS, LLC

DATE: May 24, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 480-152847-1

SAMPLES: SUPE-W-30C-043019, SUPE-W-06A-043019, SUPE-W-06C-043019, SUPE-EB-01-043019, SUPE-W-28C-043019

ANALYSES: Method 8260C (VOCs), 8270D/8270D LL (SVOCs)

LABORATORY: Eurofins TestAmerica Laboratories, Buffalo, Chicago

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: None
- Laboratory Blank Contamination
Noncompliance: None
- Field Blank Contamination
Noncompliance: None
- Surrogate Recoveries
Noncompliance: None
- Laboratory Control Sample
Noncompliance: The LCS recovery of pentachlorophenol was above the recovery limits. No action was taken on this basis.
- Matrix Spike/Matrix Spike Duplicate Sample
Noncompliance: The MSD recovery of phenol fell below the recovery limits. The MS recovery of pentachlorophenol was above the recovery limits. No action was taken on this basis.

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-152847-1

Client Project/Site: Superior, WI Semiannual Groundwater
Revision: 1

For:

Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
5/29/2019 1:22:42 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	18
QC Sample Results	20
QC Association Summary	30
Lab Chronicle	32
Certification Summary	34
Method Summary	35
Sample Summary	36
Chain of Custody	37
Receipt Checklists	40

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Job ID: 480-152847-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-152847-1

Revised: to correct sampling dates on sample IDs

Comments

No additional comments.

Receipt

The samples were received on 5/1/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 2.9° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D LL: The laboratory control sample (LCS) for preparation batch 480-471326 and analytical batch 480-471658 recovered outside control limits for the following analytes: Pentachlorophenol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 480-152847-1

No Detections.

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 480-152847-2

No Detections.

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 480-152847-3

No Detections.

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 480-152847-4

No Detections.

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 480-152847-5

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo



Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 480-152847-1

Date Collected: 04/30/19 09:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 02:38	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 02:38	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 02:38	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 02:38	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 02:38	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 02:38	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 02:38	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 02:38	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 02:38	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 02:38	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 02:38	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 02:38	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 02:38	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 02:38	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		05/09/19 02:38	1
4-Bromofluorobenzene (Surr)	88		73 - 120		05/09/19 02:38	1
Dibromofluoromethane (Surr)	97		75 - 123		05/09/19 02:38	1
Toluene-d8 (Surr)	95		80 - 120		05/09/19 02:38	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.95	0.32	ug/L		05/06/19 08:07	05/08/19 05:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	94		24 - 146	05/06/19 08:07	05/08/19 05:19	1
2-Fluorobiphenyl	82		37 - 120	05/06/19 08:07	05/08/19 05:19	1
2-Fluorophenol (Surr)	46		10 - 120	05/06/19 08:07	05/08/19 05:19	1
Nitrobenzene-d5 (Surr)	85		26 - 120	05/06/19 08:07	05/08/19 05:19	1
Phenol-d5 (Surr)	28		11 - 120	05/06/19 08:07	05/08/19 05:19	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 19:08	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 19:08	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		05/07/19 14:39	05/09/19 19:08	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 19:08	1
1-Methylnaphthalene	ND		1.9	0.48	ug/L		05/07/19 14:39	05/09/19 19:08	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.4	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,4,5-Trichlorophenol	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,4,6-Trichlorophenol	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,4-Dichlorophenol	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,4-Dinitrotoluene	ND		0.96	0.29	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,6-Dinitrotoluene	ND		0.96	0.11	ug/L		05/07/19 14:39	05/09/19 19:08	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 19:08	1
2-Chloronaphthalene	ND		1.9	0.32	ug/L		05/07/19 14:39	05/09/19 19:08	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 480-152847-1

Date Collected: 04/30/19 09:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		4.8	0.76	ug/L		05/07/19 14:39	05/09/19 19:08	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/07/19 14:39	05/09/19 19:08	1
2-Methylphenol	ND		1.9	0.30	ug/L		05/07/19 14:39	05/09/19 19:08	1
2-Nitroaniline	ND		4.8	1.0	ug/L		05/07/19 14:39	05/09/19 19:08	1
2-Nitrophenol	ND		9.6	2.0	ug/L		05/07/19 14:39	05/09/19 19:08	1
3-Nitroaniline	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 19:08	1
4,6-Dinitro-2-methylphenol	ND		19	4.7	ug/L		05/07/19 14:39	05/09/19 19:08	1
4-Bromophenyl phenyl ether	ND		4.8	0.87	ug/L		05/07/19 14:39	05/09/19 19:08	1
4-Chloro-3-methylphenol	ND		9.6	2.1	ug/L		05/07/19 14:39	05/09/19 19:08	1
4-Chloroaniline	ND		9.6	2.0	ug/L		05/07/19 14:39	05/09/19 19:08	1
4-Chlorophenyl phenyl ether	ND		4.8	0.77	ug/L		05/07/19 14:39	05/09/19 19:08	1
4-Nitroaniline	ND		9.6	3.8	ug/L		05/07/19 14:39	05/09/19 19:08	1
4-Nitrophenol	ND		19	2.2	ug/L		05/07/19 14:39	05/09/19 19:08	1
Acenaphthene	ND		0.96	0.34	ug/L		05/07/19 14:39	05/09/19 19:08	1
Acenaphthylene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 19:08	1
Anthracene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 19:08	1
Benzo[a]pyrene	ND		0.19	0.054	ug/L		05/07/19 14:39	05/09/19 19:08	1
Benzo[b]fluoranthene	ND		0.19	0.055	ug/L		05/07/19 14:39	05/09/19 19:08	1
Benzo[g,h,i]perylene	ND		0.96	0.40	ug/L		05/07/19 14:39	05/09/19 19:08	1
Benzo[k]fluoranthene	ND		0.19	0.071	ug/L		05/07/19 14:39	05/09/19 19:08	1
Benzoic acid	ND		19	4.4	ug/L		05/07/19 14:39	05/09/19 19:08	1
Benzyl alcohol	ND		19	2.9	ug/L		05/07/19 14:39	05/09/19 19:08	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 19:08	1
Bis(2-chloroethyl)ether	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 19:08	1
Bis(2-ethylhexyl) phthalate	ND		9.6	2.3	ug/L		05/07/19 14:39	05/09/19 19:08	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 19:08	1
Chrysene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 19:08	1
Dibenz(a,h)anthracene	ND		0.29	0.061	ug/L		05/07/19 14:39	05/09/19 19:08	1
Dibenzofuran	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 19:08	1
Diethyl phthalate	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 19:08	1
Dimethyl phthalate	ND		1.9	0.36	ug/L		05/07/19 14:39	05/09/19 19:08	1
Di-n-butyl phthalate	ND		4.8	0.76	ug/L		05/07/19 14:39	05/09/19 19:08	1
Di-n-octyl phthalate	ND		9.6	2.4	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		05/07/19 14:39	05/09/19 19:08	1
Fluoranthene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 19:08	1
Fluorene	ND		0.96	0.36	ug/L		05/07/19 14:39	05/09/19 19:08	1
Hexachlorobenzene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 19:08	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 19:08	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		05/07/19 14:39	05/09/19 19:08	1
Hexachloroethane	ND		4.8	0.93	ug/L		05/07/19 14:39	05/09/19 19:08	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.080	ug/L		05/07/19 14:39	05/09/19 19:08	1
Isophorone	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 19:08	1
Nitrobenzene	ND		0.96	0.43	ug/L		05/07/19 14:39	05/09/19 19:08	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 19:08	1
N-Nitrosodiphenylamine	ND		1.9	0.32	ug/L		05/07/19 14:39	05/09/19 19:08	1
Pentachlorophenol	ND		19	5.4	ug/L		05/07/19 14:39	05/09/19 19:08	1
Phenol	ND		4.8	0.34	ug/L		05/07/19 14:39	05/09/19 19:08	1
Pyrene	ND		0.96	0.46	ug/L		05/07/19 14:39	05/09/19 19:08	1
2,4-Dimethylphenol	ND		9.6	3.2	ug/L		05/07/19 14:39	05/09/19 19:08	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 480-152847-1

Date Collected: 04/30/19 09:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.19	0.042	ug/L		05/07/19 14:39	05/09/19 19:08	1
Phenanthrene	ND		0.96	0.33	ug/L		05/07/19 14:39	05/09/19 19:08	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		05/07/19 14:39	05/09/19 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		40 - 145	05/07/19 14:39	05/09/19 19:08	1
2-Fluorobiphenyl	88		34 - 110	05/07/19 14:39	05/09/19 19:08	1
2-Fluorophenol (Surr)	45		27 - 110	05/07/19 14:39	05/09/19 19:08	1
Nitrobenzene-d5 (Surr)	94		36 - 120	05/07/19 14:39	05/09/19 19:08	1
Phenol-d5 (Surr)	30		20 - 100	05/07/19 14:39	05/09/19 19:08	1
Terphenyl-d14 (Surr)	104		40 - 145	05/07/19 14:39	05/09/19 19:08	1

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 480-152847-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 03:01	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 03:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 03:01	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 03:01	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 03:01	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 03:01	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 03:01	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 03:01	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 03:01	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 03:01	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 03:01	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 03:01	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 03:01	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 03:01	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 03:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		05/09/19 03:01	1
4-Bromofluorobenzene (Surr)	90		73 - 120		05/09/19 03:01	1
Dibromofluoromethane (Surr)	95		75 - 123		05/09/19 03:01	1
Toluene-d8 (Surr)	96		80 - 120		05/09/19 03:01	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.95	0.32	ug/L		05/06/19 08:07	05/08/19 05:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		24 - 146	05/06/19 08:07	05/08/19 05:48	1
2-Fluorobiphenyl	86		37 - 120	05/06/19 08:07	05/08/19 05:48	1
2-Fluorophenol (Surr)	45		10 - 120	05/06/19 08:07	05/08/19 05:48	1
Nitrobenzene-d5 (Surr)	81		26 - 120	05/06/19 08:07	05/08/19 05:48	1
Phenol-d5 (Surr)	28		11 - 120	05/06/19 08:07	05/08/19 05:48	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 480-152847-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 19:32	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 19:32	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		05/07/19 14:39	05/09/19 19:32	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 19:32	1
1-Methylnaphthalene	ND		1.9	0.49	ug/L		05/07/19 14:39	05/09/19 19:32	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,3,4,6-Tetrachlorophenol	ND		4.9	1.5	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,4,5-Trichlorophenol	ND		9.7	2.2	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,4,6-Trichlorophenol	ND		4.9	1.1	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,4-Dichlorophenol	ND		9.7	2.2	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,4-Dinitrophenol	ND		19	7.2	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,4-Dinitrotoluene	ND		0.97	0.29	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,6-Dinitrotoluene	ND		0.97	0.12	ug/L		05/07/19 14:39	05/09/19 19:32	1
3 & 4 Methylphenol	ND		1.9	0.43	ug/L		05/07/19 14:39	05/09/19 19:32	1
2-Chloronaphthalene	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 19:32	1
2-Chlorophenol	ND		4.9	0.78	ug/L		05/07/19 14:39	05/09/19 19:32	1
2-Methylnaphthalene	ND		1.9	0.13	ug/L		05/07/19 14:39	05/09/19 19:32	1
2-Methylphenol	ND		1.9	0.30	ug/L		05/07/19 14:39	05/09/19 19:32	1
2-Nitroaniline	ND		4.9	1.1	ug/L		05/07/19 14:39	05/09/19 19:32	1
2-Nitrophenol	ND		9.7	2.1	ug/L		05/07/19 14:39	05/09/19 19:32	1
3-Nitroaniline	ND		9.7	2.2	ug/L		05/07/19 14:39	05/09/19 19:32	1
4,6-Dinitro-2-methylphenol	ND		19	4.8	ug/L		05/07/19 14:39	05/09/19 19:32	1
4-Bromophenyl phenyl ether	ND		4.9	0.89	ug/L		05/07/19 14:39	05/09/19 19:32	1
4-Chloro-3-methylphenol	ND		9.7	2.1	ug/L		05/07/19 14:39	05/09/19 19:32	1
4-Chloroaniline	ND		9.7	2.0	ug/L		05/07/19 14:39	05/09/19 19:32	1
4-Chlorophenyl phenyl ether	ND		4.9	0.79	ug/L		05/07/19 14:39	05/09/19 19:32	1
4-Nitroaniline	ND		9.7	3.8	ug/L		05/07/19 14:39	05/09/19 19:32	1
4-Nitrophenol	ND		19	2.3	ug/L		05/07/19 14:39	05/09/19 19:32	1
Acenaphthene	ND		0.97	0.35	ug/L		05/07/19 14:39	05/09/19 19:32	1
Acenaphthylene	ND		0.97	0.31	ug/L		05/07/19 14:39	05/09/19 19:32	1
Anthracene	ND		0.97	0.31	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzo[a]pyrene	ND		0.19	0.055	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzo[b]fluoranthene	ND		0.19	0.056	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzo[g,h,i]perylene	ND		0.97	0.41	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzo[k]fluoranthene	ND		0.19	0.072	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzoic acid	ND		19	4.4	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzyl alcohol	ND		19	3.0	ug/L		05/07/19 14:39	05/09/19 19:32	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 19:32	1
Bis(2-chloroethyl)ether	ND		1.9	0.34	ug/L		05/07/19 14:39	05/09/19 19:32	1
Bis(2-ethylhexyl) phthalate	ND		9.7	2.4	ug/L		05/07/19 14:39	05/09/19 19:32	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 19:32	1
Chrysene	ND		0.49	0.14	ug/L		05/07/19 14:39	05/09/19 19:32	1
Dibenz(a,h)anthracene	ND		0.29	0.062	ug/L		05/07/19 14:39	05/09/19 19:32	1
Dibenzofuran	ND		1.9	0.34	ug/L		05/07/19 14:39	05/09/19 19:32	1
Diethyl phthalate	ND		1.9	0.43	ug/L		05/07/19 14:39	05/09/19 19:32	1
Dimethyl phthalate	ND		1.9	0.37	ug/L		05/07/19 14:39	05/09/19 19:32	1
Di-n-butyl phthalate	ND		4.9	0.78	ug/L		05/07/19 14:39	05/09/19 19:32	1
Di-n-octyl phthalate	ND		9.7	2.4	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,3,5,6-Tetrachlorophenol	ND		4.9	2.4	ug/L		05/07/19 14:39	05/09/19 19:32	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 480-152847-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.97	0.31	ug/L		05/07/19 14:39	05/09/19 19:32	1
Fluorene	ND		0.97	0.37	ug/L		05/07/19 14:39	05/09/19 19:32	1
Hexachlorobenzene	ND		0.49	0.14	ug/L		05/07/19 14:39	05/09/19 19:32	1
Hexachlorobutadiene	ND		4.9	1.1	ug/L		05/07/19 14:39	05/09/19 19:32	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		05/07/19 14:39	05/09/19 19:32	1
Hexachloroethane	ND		4.9	0.94	ug/L		05/07/19 14:39	05/09/19 19:32	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.082	ug/L		05/07/19 14:39	05/09/19 19:32	1
Isophorone	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 19:32	1
Nitrobenzene	ND		0.97	0.44	ug/L		05/07/19 14:39	05/09/19 19:32	1
N-Nitrosodi-n-propylamine	ND		0.49	0.14	ug/L		05/07/19 14:39	05/09/19 19:32	1
N-Nitrosodiphenylamine	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 19:32	1
Pentachlorophenol	ND		19	5.5	ug/L		05/07/19 14:39	05/09/19 19:32	1
Phenol	ND		4.9	0.35	ug/L		05/07/19 14:39	05/09/19 19:32	1
Pyrene	ND		0.97	0.47	ug/L		05/07/19 14:39	05/09/19 19:32	1
2,4-Dimethylphenol	ND		9.7	3.3	ug/L		05/07/19 14:39	05/09/19 19:32	1
Benzo[a]anthracene	ND		0.19	0.043	ug/L		05/07/19 14:39	05/09/19 19:32	1
Phenanthrene	ND		0.97	0.34	ug/L		05/07/19 14:39	05/09/19 19:32	1
3,3'-Dichlorobenzidine	ND		4.9	0.92	ug/L		05/07/19 14:39	05/09/19 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	94		40 - 145	05/07/19 14:39	05/09/19 19:32	1
2-Fluorobiphenyl	93		34 - 110	05/07/19 14:39	05/09/19 19:32	1
2-Fluorophenol (Surr)	49		27 - 110	05/07/19 14:39	05/09/19 19:32	1
Nitrobenzene-d5 (Surr)	99		36 - 120	05/07/19 14:39	05/09/19 19:32	1
Phenol-d5 (Surr)	33		20 - 100	05/07/19 14:39	05/09/19 19:32	1
Terphenyl-d14 (Surr)	104		40 - 145	05/07/19 14:39	05/09/19 19:32	1

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 480-152847-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 03:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 03:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 03:24	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 03:24	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 03:24	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 03:24	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 03:24	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 03:24	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 03:24	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 03:24	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 03:24	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 03:24	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 03:24	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 03:24	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 03:24	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 480-152847-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/09/19 03:24	1
4-Bromofluorobenzene (Surr)	86		73 - 120		05/09/19 03:24	1
Dibromofluoromethane (Surr)	98		75 - 123		05/09/19 03:24	1
Toluene-d8 (Surr)	94		80 - 120		05/09/19 03:24	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	* F1	0.95	0.32	ug/L		05/06/19 08:07	05/08/19 04:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	105		24 - 146	05/06/19 08:07	05/08/19 04:51	1
2-Fluorobiphenyl	97		37 - 120	05/06/19 08:07	05/08/19 04:51	1
2-Fluorophenol (Surr)	47		10 - 120	05/06/19 08:07	05/08/19 04:51	1
Nitrobenzene-d5 (Surr)	98		26 - 120	05/06/19 08:07	05/08/19 04:51	1
Phenol-d5 (Surr)	33		11 - 120	05/06/19 08:07	05/08/19 04:51	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 16:57	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 16:57	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		05/07/19 14:39	05/09/19 16:57	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 16:57	1
1-Methylnaphthalene	ND		1.9	0.48	ug/L		05/07/19 14:39	05/09/19 16:57	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.4	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,4,5-Trichlorophenol	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,4,6-Trichlorophenol	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,4-Dichlorophenol	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,4-Dinitrotoluene	ND		0.96	0.29	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,6-Dinitrotoluene	ND		0.96	0.11	ug/L		05/07/19 14:39	05/09/19 16:57	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 16:57	1
2-Chloronaphthalene	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 16:57	1
2-Chlorophenol	ND		4.8	0.77	ug/L		05/07/19 14:39	05/09/19 16:57	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/07/19 14:39	05/09/19 16:57	1
2-Methylphenol	ND		1.9	0.30	ug/L		05/07/19 14:39	05/09/19 16:57	1
2-Nitroaniline	ND		4.8	1.0	ug/L		05/07/19 14:39	05/09/19 16:57	1
2-Nitrophenol	ND		9.6	2.0	ug/L		05/07/19 14:39	05/09/19 16:57	1
3-Nitroaniline	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 16:57	1
4,6-Dinitro-2-methylphenol	ND		19	4.7	ug/L		05/07/19 14:39	05/09/19 16:57	1
4-Bromophenyl phenyl ether	ND		4.8	0.87	ug/L		05/07/19 14:39	05/09/19 16:57	1
4-Chloro-3-methylphenol	ND		9.6	2.1	ug/L		05/07/19 14:39	05/09/19 16:57	1
4-Chloroaniline	ND		9.6	2.0	ug/L		05/07/19 14:39	05/09/19 16:57	1
4-Chlorophenyl phenyl ether	ND		4.8	0.78	ug/L		05/07/19 14:39	05/09/19 16:57	1
4-Nitroaniline	ND		9.6	3.8	ug/L		05/07/19 14:39	05/09/19 16:57	1
4-Nitrophenol	ND		19	2.2	ug/L		05/07/19 14:39	05/09/19 16:57	1
Acenaphthene	ND		0.96	0.34	ug/L		05/07/19 14:39	05/09/19 16:57	1
Acenaphthylene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 16:57	1
Anthracene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 16:57	1
Benzo[a]pyrene	ND		0.19	0.054	ug/L		05/07/19 14:39	05/09/19 16:57	1
Benzo[b]fluoranthene	ND		0.19	0.056	ug/L		05/07/19 14:39	05/09/19 16:57	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 480-152847-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.96	0.40	ug/L		05/07/19 14:39	05/09/19 16:57	1
Benzo[k]fluoranthene	ND		0.19	0.071	ug/L		05/07/19 14:39	05/09/19 16:57	1
Benzoic acid	ND		19	4.4	ug/L		05/07/19 14:39	05/09/19 16:57	1
Benzyl alcohol	ND		19	2.9	ug/L		05/07/19 14:39	05/09/19 16:57	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 16:57	1
Bis(2-chloroethyl)ether	ND		1.9	0.34	ug/L		05/07/19 14:39	05/09/19 16:57	1
Bis(2-ethylhexyl) phthalate	ND		9.6	2.3	ug/L		05/07/19 14:39	05/09/19 16:57	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 16:57	1
Chrysene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 16:57	1
Dibenz(a,h)anthracene	ND		0.29	0.061	ug/L		05/07/19 14:39	05/09/19 16:57	1
Dibenzofuran	ND		1.9	0.34	ug/L		05/07/19 14:39	05/09/19 16:57	1
Diethyl phthalate	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 16:57	1
Dimethyl phthalate	ND		1.9	0.36	ug/L		05/07/19 14:39	05/09/19 16:57	1
Di-n-butyl phthalate	ND		4.8	0.77	ug/L		05/07/19 14:39	05/09/19 16:57	1
Di-n-octyl phthalate	ND		9.6	2.4	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		05/07/19 14:39	05/09/19 16:57	1
Fluoranthene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 16:57	1
Fluorene	ND		0.96	0.36	ug/L		05/07/19 14:39	05/09/19 16:57	1
Hexachlorobenzene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 16:57	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 16:57	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		05/07/19 14:39	05/09/19 16:57	1
Hexachloroethane	ND		4.8	0.93	ug/L		05/07/19 14:39	05/09/19 16:57	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.080	ug/L		05/07/19 14:39	05/09/19 16:57	1
Isophorone	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 16:57	1
Nitrobenzene	ND		0.96	0.43	ug/L		05/07/19 14:39	05/09/19 16:57	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 16:57	1
N-Nitrosodiphenylamine	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 16:57	1
Pentachlorophenol	ND		19	5.4	ug/L		05/07/19 14:39	05/09/19 16:57	1
Phenol	ND	F1	4.8	0.34	ug/L		05/07/19 14:39	05/09/19 16:57	1
Pyrene	ND		0.96	0.46	ug/L		05/07/19 14:39	05/09/19 16:57	1
2,4-Dimethylphenol	ND		9.6	3.2	ug/L		05/07/19 14:39	05/09/19 16:57	1
Benzo[a]anthracene	ND		0.19	0.042	ug/L		05/07/19 14:39	05/09/19 16:57	1
Phenanthrene	ND		0.96	0.34	ug/L		05/07/19 14:39	05/09/19 16:57	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		05/07/19 14:39	05/09/19 16:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	139		40 - 145	05/07/19 14:39	05/09/19 16:57	1
2-Fluorobiphenyl	88		34 - 110	05/07/19 14:39	05/09/19 16:57	1
2-Fluorophenol (Surr)	41		27 - 110	05/07/19 14:39	05/09/19 16:57	1
Nitrobenzene-d5 (Surr)	80		36 - 120	05/07/19 14:39	05/09/19 16:57	1
Phenol-d5 (Surr)	26		20 - 100	05/07/19 14:39	05/09/19 16:57	1
Terphenyl-d14 (Surr)	94		40 - 145	05/07/19 14:39	05/09/19 16:57	1

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 480-152847-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 03:47	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 480-152847-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 03:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 03:47	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 03:47	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 03:47	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 03:47	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 03:47	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 03:47	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 03:47	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 03:47	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 03:47	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 03:47	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 03:47	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 03:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 03:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		05/09/19 03:47	1
4-Bromofluorobenzene (Surr)	82		73 - 120		05/09/19 03:47	1
Dibromofluoromethane (Surr)	98		75 - 123		05/09/19 03:47	1
Toluene-d8 (Surr)	96		80 - 120		05/09/19 03:47	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.95	0.32	ug/L		05/06/19 08:07	05/08/19 06:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		24 - 146	05/06/19 08:07	05/08/19 06:16	1
2-Fluorobiphenyl	88		37 - 120	05/06/19 08:07	05/08/19 06:16	1
2-Fluorophenol (Surr)	44		10 - 120	05/06/19 08:07	05/08/19 06:16	1
Nitrobenzene-d5 (Surr)	86		26 - 120	05/06/19 08:07	05/08/19 06:16	1
Phenol-d5 (Surr)	31		11 - 120	05/06/19 08:07	05/08/19 06:16	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 17:20	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 17:20	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		05/07/19 14:39	05/09/19 17:20	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 17:20	1
1-Methylnaphthalene	ND		1.9	0.48	ug/L		05/07/19 14:39	05/09/19 17:20	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.4	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,4,5-Trichlorophenol	ND		9.5	2.2	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,4,6-Trichlorophenol	ND		4.8	1.0	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,4-Dichlorophenol	ND		9.5	2.2	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,4-Dinitrotoluene	ND		0.95	0.29	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,6-Dinitrotoluene	ND		0.95	0.11	ug/L		05/07/19 14:39	05/09/19 17:20	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 17:20	1
2-Chloronaphthalene	ND		1.9	0.32	ug/L		05/07/19 14:39	05/09/19 17:20	1
2-Chlorophenol	ND		4.8	0.76	ug/L		05/07/19 14:39	05/09/19 17:20	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 480-152847-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/07/19 14:39	05/09/19 17:20	1
2-Methylphenol	ND		1.9	0.30	ug/L		05/07/19 14:39	05/09/19 17:20	1
2-Nitroaniline	ND		4.8	1.0	ug/L		05/07/19 14:39	05/09/19 17:20	1
2-Nitrophenol	ND		9.5	2.0	ug/L		05/07/19 14:39	05/09/19 17:20	1
3-Nitroaniline	ND		9.5	2.2	ug/L		05/07/19 14:39	05/09/19 17:20	1
4,6-Dinitro-2-methylphenol	ND		19	4.7	ug/L		05/07/19 14:39	05/09/19 17:20	1
4-Bromophenyl phenyl ether	ND		4.8	0.87	ug/L		05/07/19 14:39	05/09/19 17:20	1
4-Chloro-3-methylphenol	ND		9.5	2.1	ug/L		05/07/19 14:39	05/09/19 17:20	1
4-Chloroaniline	ND		9.5	2.0	ug/L		05/07/19 14:39	05/09/19 17:20	1
4-Chlorophenyl phenyl ether	ND		4.8	0.77	ug/L		05/07/19 14:39	05/09/19 17:20	1
4-Nitroaniline	ND		9.5	3.7	ug/L		05/07/19 14:39	05/09/19 17:20	1
4-Nitrophenol	ND		19	2.2	ug/L		05/07/19 14:39	05/09/19 17:20	1
Acenaphthene	ND		0.95	0.34	ug/L		05/07/19 14:39	05/09/19 17:20	1
Acenaphthylene	ND		0.95	0.31	ug/L		05/07/19 14:39	05/09/19 17:20	1
Anthracene	ND		0.95	0.31	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzo[b]fluoranthene	ND		0.19	0.055	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzo[g,h,i]perylene	ND		0.95	0.40	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzo[k]fluoranthene	ND		0.19	0.071	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzoic acid	ND		19	4.4	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzyl alcohol	ND		19	2.9	ug/L		05/07/19 14:39	05/09/19 17:20	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 17:20	1
Bis(2-chloroethyl)ether	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 17:20	1
Bis(2-ethylhexyl) phthalate	ND		9.5	2.3	ug/L		05/07/19 14:39	05/09/19 17:20	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 17:20	1
Chrysene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 17:20	1
Dibenz(a,h)anthracene	ND		0.29	0.061	ug/L		05/07/19 14:39	05/09/19 17:20	1
Dibenzofuran	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 17:20	1
Diethyl phthalate	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 17:20	1
Dimethyl phthalate	ND		1.9	0.36	ug/L		05/07/19 14:39	05/09/19 17:20	1
Di-n-butyl phthalate	ND		4.8	0.76	ug/L		05/07/19 14:39	05/09/19 17:20	1
Di-n-octyl phthalate	ND		9.5	2.4	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		05/07/19 14:39	05/09/19 17:20	1
Fluoranthene	ND		0.95	0.31	ug/L		05/07/19 14:39	05/09/19 17:20	1
Fluorene	ND		0.95	0.36	ug/L		05/07/19 14:39	05/09/19 17:20	1
Hexachlorobenzene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 17:20	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 17:20	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		05/07/19 14:39	05/09/19 17:20	1
Hexachloroethane	ND		4.8	0.93	ug/L		05/07/19 14:39	05/09/19 17:20	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.080	ug/L		05/07/19 14:39	05/09/19 17:20	1
Isophorone	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 17:20	1
Nitrobenzene	ND		0.95	0.43	ug/L		05/07/19 14:39	05/09/19 17:20	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 17:20	1
N-Nitrosodiphenylamine	ND		1.9	0.32	ug/L		05/07/19 14:39	05/09/19 17:20	1
Pentachlorophenol	ND		19	5.3	ug/L		05/07/19 14:39	05/09/19 17:20	1
Phenol	ND		4.8	0.34	ug/L		05/07/19 14:39	05/09/19 17:20	1
Pyrene	ND		0.95	0.46	ug/L		05/07/19 14:39	05/09/19 17:20	1
2,4-Dimethylphenol	ND		9.5	3.2	ug/L		05/07/19 14:39	05/09/19 17:20	1
Benzo[a]anthracene	ND		0.19	0.042	ug/L		05/07/19 14:39	05/09/19 17:20	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 480-152847-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.95	0.33	ug/L		05/07/19 14:39	05/09/19 17:20	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		05/07/19 14:39	05/09/19 17:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	131		40 - 145				05/07/19 14:39	05/09/19 17:20	1
2-Fluorobiphenyl	84		34 - 110				05/07/19 14:39	05/09/19 17:20	1
2-Fluorophenol (Surr)	37		27 - 110				05/07/19 14:39	05/09/19 17:20	1
Nitrobenzene-d5 (Surr)	76		36 - 120				05/07/19 14:39	05/09/19 17:20	1
Phenol-d5 (Surr)	22		20 - 100				05/07/19 14:39	05/09/19 17:20	1
Terphenyl-d14 (Surr)	102		40 - 145				05/07/19 14:39	05/09/19 17:20	1

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 480-152847-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 04:10	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 04:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 04:10	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 04:10	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 04:10	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 04:10	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 04:10	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 04:10	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 04:10	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 04:10	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 04:10	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 04:10	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 04:10	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 04:10	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 04:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		77 - 120					05/09/19 04:10	1
4-Bromofluorobenzene (Surr)	89		73 - 120					05/09/19 04:10	1
Dibromofluoromethane (Surr)	96		75 - 123					05/09/19 04:10	1
Toluene-d8 (Surr)	95		80 - 120					05/09/19 04:10	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.95	0.32	ug/L		05/06/19 08:07	05/08/19 06:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	99		24 - 146				05/06/19 08:07	05/08/19 06:44	1
2-Fluorobiphenyl	87		37 - 120				05/06/19 08:07	05/08/19 06:44	1
2-Fluorophenol (Surr)	53		10 - 120				05/06/19 08:07	05/08/19 06:44	1
Nitrobenzene-d5 (Surr)	96		26 - 120				05/06/19 08:07	05/08/19 06:44	1
Phenol-d5 (Surr)	31		11 - 120				05/06/19 08:07	05/08/19 06:44	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 480-152847-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 17:42	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 17:42	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		05/07/19 14:39	05/09/19 17:42	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 17:42	1
1-Methylnaphthalene	ND		1.9	0.48	ug/L		05/07/19 14:39	05/09/19 17:42	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.4	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,4,5-Trichlorophenol	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,4,6-Trichlorophenol	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,4-Dichlorophenol	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,4-Dinitrotoluene	ND		0.96	0.29	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,6-Dinitrotoluene	ND		0.96	0.11	ug/L		05/07/19 14:39	05/09/19 17:42	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 17:42	1
2-Chloronaphthalene	ND		1.9	0.32	ug/L		05/07/19 14:39	05/09/19 17:42	1
2-Chlorophenol	ND		4.8	0.76	ug/L		05/07/19 14:39	05/09/19 17:42	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		05/07/19 14:39	05/09/19 17:42	1
2-Methylphenol	ND		1.9	0.30	ug/L		05/07/19 14:39	05/09/19 17:42	1
2-Nitroaniline	ND		4.8	1.0	ug/L		05/07/19 14:39	05/09/19 17:42	1
2-Nitrophenol	ND		9.6	2.0	ug/L		05/07/19 14:39	05/09/19 17:42	1
3-Nitroaniline	ND		9.6	2.2	ug/L		05/07/19 14:39	05/09/19 17:42	1
4,6-Dinitro-2-methylphenol	ND		19	4.7	ug/L		05/07/19 14:39	05/09/19 17:42	1
4-Bromophenyl phenyl ether	ND		4.8	0.87	ug/L		05/07/19 14:39	05/09/19 17:42	1
4-Chloro-3-methylphenol	ND		9.6	2.1	ug/L		05/07/19 14:39	05/09/19 17:42	1
4-Chloroaniline	ND		9.6	2.0	ug/L		05/07/19 14:39	05/09/19 17:42	1
4-Chlorophenyl phenyl ether	ND		4.8	0.77	ug/L		05/07/19 14:39	05/09/19 17:42	1
4-Nitroaniline	ND		9.6	3.8	ug/L		05/07/19 14:39	05/09/19 17:42	1
4-Nitrophenol	ND		19	2.2	ug/L		05/07/19 14:39	05/09/19 17:42	1
Acenaphthene	ND		0.96	0.34	ug/L		05/07/19 14:39	05/09/19 17:42	1
Acenaphthylene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 17:42	1
Anthracene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzo[b]fluoranthene	ND		0.19	0.055	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzo[g,h,i]perylene	ND		0.96	0.40	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzo[k]fluoranthene	ND		0.19	0.071	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzoic acid	ND		19	4.4	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzyl alcohol	ND		19	2.9	ug/L		05/07/19 14:39	05/09/19 17:42	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		05/07/19 14:39	05/09/19 17:42	1
Bis(2-chloroethyl)ether	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 17:42	1
Bis(2-ethylhexyl) phthalate	ND		9.6	2.3	ug/L		05/07/19 14:39	05/09/19 17:42	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		05/07/19 14:39	05/09/19 17:42	1
Chrysene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 17:42	1
Dibenz(a,h)anthracene	ND		0.29	0.061	ug/L		05/07/19 14:39	05/09/19 17:42	1
Dibenzofuran	ND		1.9	0.33	ug/L		05/07/19 14:39	05/09/19 17:42	1
Diethyl phthalate	ND		1.9	0.42	ug/L		05/07/19 14:39	05/09/19 17:42	1
Dimethyl phthalate	ND		1.9	0.36	ug/L		05/07/19 14:39	05/09/19 17:42	1
Di-n-butyl phthalate	ND		4.8	0.76	ug/L		05/07/19 14:39	05/09/19 17:42	1
Di-n-octyl phthalate	ND		9.6	2.4	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		05/07/19 14:39	05/09/19 17:42	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 480-152847-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.96	0.31	ug/L		05/07/19 14:39	05/09/19 17:42	1
Fluorene	ND		0.96	0.36	ug/L		05/07/19 14:39	05/09/19 17:42	1
Hexachlorobenzene	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 17:42	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		05/07/19 14:39	05/09/19 17:42	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		05/07/19 14:39	05/09/19 17:42	1
Hexachloroethane	ND		4.8	0.93	ug/L		05/07/19 14:39	05/09/19 17:42	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.080	ug/L		05/07/19 14:39	05/09/19 17:42	1
Isophorone	ND		1.9	0.28	ug/L		05/07/19 14:39	05/09/19 17:42	1
Nitrobenzene	ND		0.96	0.43	ug/L		05/07/19 14:39	05/09/19 17:42	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		05/07/19 14:39	05/09/19 17:42	1
N-Nitrosodiphenylamine	ND		1.9	0.32	ug/L		05/07/19 14:39	05/09/19 17:42	1
Pentachlorophenol	ND		19	5.3	ug/L		05/07/19 14:39	05/09/19 17:42	1
Phenol	ND		4.8	0.34	ug/L		05/07/19 14:39	05/09/19 17:42	1
Pyrene	ND		0.96	0.46	ug/L		05/07/19 14:39	05/09/19 17:42	1
2,4-Dimethylphenol	ND		9.6	3.2	ug/L		05/07/19 14:39	05/09/19 17:42	1
Benzo[a]anthracene	ND		0.19	0.042	ug/L		05/07/19 14:39	05/09/19 17:42	1
Phenanthrene	ND		0.96	0.33	ug/L		05/07/19 14:39	05/09/19 17:42	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		05/07/19 14:39	05/09/19 17:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	124		40 - 145				05/07/19 14:39	05/09/19 17:42	1
2-Fluorobiphenyl	81		34 - 110				05/07/19 14:39	05/09/19 17:42	1
2-Fluorophenol (Surr)	38		27 - 110				05/07/19 14:39	05/09/19 17:42	1
Nitrobenzene-d5 (Surr)	71		36 - 120				05/07/19 14:39	05/09/19 17:42	1
Phenol-d5 (Surr)	21		20 - 100				05/07/19 14:39	05/09/19 17:42	1
Terphenyl-d14 (Surr)	102		40 - 145				05/07/19 14:39	05/09/19 17:42	1

Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-152847-1	SUPE-W-30C-043019	102	88	97	95
480-152847-2	SUPE-W-06A-043019	104	90	95	96
480-152847-3	SUPE-W-06C-043019	98	86	98	94
480-152847-3 MS	SUPE-W-06C-043019	94	92	91	101
480-152847-3 MSD	SUPE-W-06C-043019	95	95	91	101
480-152847-4	SUPE-EB-01-043019	102	82	98	96
480-152847-5	SUPE-W-28C-043019	101	89	96	95
LCS 480-471924/5	Lab Control Sample	94	90	87	98
MB 480-471924/7	Method Blank	104	87	95	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-152847-1	SUPE-W-30C-043019	92	88	45	94	30	104
480-152847-2	SUPE-W-06A-043019	94	93	49	99	33	104
480-152847-3	SUPE-W-06C-043019	139	88	41	80	26	94
480-152847-3 MS	SUPE-W-06C-043019	134	83	45	72	30	87
480-152847-3 MSD	SUPE-W-06C-043019	124	80	42	72	29	85
480-152847-4	SUPE-EB-01-043019	131	84	37	76	22	102
480-152847-5	SUPE-W-28C-043019	124	81	38	71	21	102
LCS 500-484079/2-A	Lab Control Sample	90	81	53	82	34	88
MB 500-484079/1-A	Method Blank	90	89	52	95	41	106

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)
480-152847-1	SUPE-W-30C-043019	94	82	46	85	28
480-152847-2	SUPE-W-06A-043019	96	86	45	81	28
480-152847-3	SUPE-W-06C-043019	105	97	47	98	33
480-152847-3 MS	SUPE-W-06C-043019	108	98	44	86	33
480-152847-3 MSD	SUPE-W-06C-043019	97	89	45	82	32

Eurofins TestAmerica, Buffalo

Surrogate Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)
480-152847-4	SUPE-EB-01-043019	76	88	44	86	31
480-152847-5	SUPE-W-28C-043019	99	87	53	96	31
LCS 480-471326/2-A	Lab Control Sample	107	93	45	87	34
MB 480-471326/1-A	Method Blank	84	97	52	100	36

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-471924/7
Matrix: Water
Analysis Batch: 471924

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/08/19 21:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/08/19 21:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/19 21:22	1
Benzene	ND		1.0	0.41	ug/L			05/08/19 21:22	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/19 21:22	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/08/19 21:22	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/19 21:22	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/08/19 21:22	1
Naphthalene	ND		1.0	0.43	ug/L			05/08/19 21:22	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/19 21:22	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/19 21:22	1
o-Xylene	ND		1.0	0.76	ug/L			05/08/19 21:22	1
Styrene	ND		1.0	0.73	ug/L			05/08/19 21:22	1
Toluene	ND		1.0	0.51	ug/L			05/08/19 21:22	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/08/19 21:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		05/08/19 21:22	1
4-Bromofluorobenzene (Surr)	87		73 - 120		05/08/19 21:22	1
Dibromofluoromethane (Surr)	95		75 - 123		05/08/19 21:22	1
Toluene-d8 (Surr)	94		80 - 120		05/08/19 21:22	1

Lab Sample ID: LCS 480-471924/5
Matrix: Water
Analysis Batch: 471924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	23.0		ug/L		92	73 - 126
1,2,4-Trimethylbenzene	25.0	24.1		ug/L		96	76 - 121
1,3,5-Trimethylbenzene	25.0	24.1		ug/L		97	77 - 121
Benzene	25.0	24.8		ug/L		99	71 - 124
Chloromethane	25.0	29.3		ug/L		117	68 - 124
Ethylbenzene	25.0	23.8		ug/L		95	77 - 123
Methyl tert-butyl ether	25.0	20.4		ug/L		82	77 - 120
m-Xylene & p-Xylene	25.0	23.1		ug/L		92	76 - 122
Naphthalene	25.0	20.7		ug/L		83	66 - 125
n-Butylbenzene	25.0	24.4		ug/L		98	71 - 128
N-Propylbenzene	25.0	25.0		ug/L		100	75 - 127
o-Xylene	25.0	22.1		ug/L		88	76 - 122
Styrene	25.0	23.6		ug/L		94	80 - 120
Toluene	25.0	24.5		ug/L		98	80 - 122
Xylenes, Total	50.0	45.2		ug/L		90	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	90		73 - 120
Dibromofluoromethane (Surr)	87		75 - 123
Toluene-d8 (Surr)	98		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: 480-152847-3 MS

Matrix: Water

Analysis Batch: 471924

Client Sample ID: SUPE-W-06C-043019

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		25.0	23.3		ug/L		93	73 - 126
1,2,4-Trimethylbenzene	ND		25.0	23.5		ug/L		94	76 - 121
1,3,5-Trimethylbenzene	ND		25.0	23.4		ug/L		94	77 - 121
Benzene	ND		25.0	25.4		ug/L		101	71 - 124
Chloromethane	ND		25.0	30.5		ug/L		122	68 - 124
Ethylbenzene	ND		25.0	23.8		ug/L		95	77 - 123
Methyl tert-butyl ether	ND		25.0	19.6		ug/L		78	77 - 120
m-Xylene & p-Xylene	ND		25.0	23.4		ug/L		94	76 - 122
Naphthalene	ND		25.0	21.1		ug/L		85	66 - 125
n-Butylbenzene	ND		25.0	23.9		ug/L		96	71 - 128
N-Propylbenzene	ND		25.0	24.3		ug/L		97	75 - 127
o-Xylene	ND		25.0	22.2		ug/L		89	76 - 122
Styrene	ND		25.0	23.7		ug/L		95	80 - 120
Toluene	ND		25.0	25.0		ug/L		100	80 - 122
Xylenes, Total	ND		50.0	45.6		ug/L		91	76 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	92		73 - 120
Dibromofluoromethane (Surr)	91		75 - 123
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 480-152847-3 MSD

Matrix: Water

Analysis Batch: 471924

Client Sample ID: SUPE-W-06C-043019

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		25.0	23.0		ug/L		92	73 - 126	1	15
1,2,4-Trimethylbenzene	ND		25.0	24.1		ug/L		96	76 - 121	2	20
1,3,5-Trimethylbenzene	ND		25.0	23.9		ug/L		96	77 - 121	2	20
Benzene	ND		25.0	25.2		ug/L		101	71 - 124	1	13
Chloromethane	ND		25.0	28.9		ug/L		115	68 - 124	6	15
Ethylbenzene	ND		25.0	24.7		ug/L		99	77 - 123	4	15
Methyl tert-butyl ether	ND		25.0	19.4		ug/L		78	77 - 120	1	37
m-Xylene & p-Xylene	ND		25.0	23.9		ug/L		96	76 - 122	2	16
Naphthalene	ND		25.0	20.7		ug/L		83	66 - 125	2	20
n-Butylbenzene	ND		25.0	24.6		ug/L		98	71 - 128	3	15
N-Propylbenzene	ND		25.0	25.3		ug/L		101	75 - 127	4	15
o-Xylene	ND		25.0	22.6		ug/L		91	76 - 122	2	16
Styrene	ND		25.0	24.1		ug/L		96	80 - 120	1	20
Toluene	ND		25.0	25.5		ug/L		102	80 - 122	2	15
Xylenes, Total	ND		50.0	46.5		ug/L		93	76 - 122	2	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		77 - 120
4-Bromofluorobenzene (Surr)	95		73 - 120
Dibromofluoromethane (Surr)	91		75 - 123
Toluene-d8 (Surr)	101		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-484079/1-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484079

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/07/19 14:39	05/09/19 14:23	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/07/19 14:39	05/09/19 14:23	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/07/19 14:39	05/09/19 14:23	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/07/19 14:39	05/09/19 14:23	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		05/07/19 14:39	05/09/19 14:23	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		05/07/19 14:39	05/09/19 14:23	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		05/07/19 14:39	05/09/19 14:23	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		05/07/19 14:39	05/09/19 14:23	1
2-Chlorophenol	ND		5.0	0.80	ug/L		05/07/19 14:39	05/09/19 14:23	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/07/19 14:39	05/09/19 14:23	1
2-Methylphenol	ND		2.0	0.31	ug/L		05/07/19 14:39	05/09/19 14:23	1
2-Nitroaniline	ND		5.0	1.1	ug/L		05/07/19 14:39	05/09/19 14:23	1
2-Nitrophenol	ND		10	2.1	ug/L		05/07/19 14:39	05/09/19 14:23	1
3-Nitroaniline	ND		10	2.3	ug/L		05/07/19 14:39	05/09/19 14:23	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		05/07/19 14:39	05/09/19 14:23	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		05/07/19 14:39	05/09/19 14:23	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		05/07/19 14:39	05/09/19 14:23	1
4-Chloroaniline	ND		10	2.1	ug/L		05/07/19 14:39	05/09/19 14:23	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		05/07/19 14:39	05/09/19 14:23	1
4-Nitroaniline	ND		10	3.9	ug/L		05/07/19 14:39	05/09/19 14:23	1
4-Nitrophenol	ND		20	2.3	ug/L		05/07/19 14:39	05/09/19 14:23	1
Acenaphthene	ND		1.0	0.36	ug/L		05/07/19 14:39	05/09/19 14:23	1
Acenaphthylene	ND		1.0	0.32	ug/L		05/07/19 14:39	05/09/19 14:23	1
Anthracene	ND		1.0	0.32	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzoic acid	ND		20	4.6	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzyl alcohol	ND		20	3.1	ug/L		05/07/19 14:39	05/09/19 14:23	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/07/19 14:39	05/09/19 14:23	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		05/07/19 14:39	05/09/19 14:23	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		05/07/19 14:39	05/09/19 14:23	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/07/19 14:39	05/09/19 14:23	1
Chrysene	ND		0.50	0.14	ug/L		05/07/19 14:39	05/09/19 14:23	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		05/07/19 14:39	05/09/19 14:23	1
Dibenzofuran	ND		2.0	0.35	ug/L		05/07/19 14:39	05/09/19 14:23	1
Diethyl phthalate	ND		2.0	0.44	ug/L		05/07/19 14:39	05/09/19 14:23	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		05/07/19 14:39	05/09/19 14:23	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		05/07/19 14:39	05/09/19 14:23	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		05/07/19 14:39	05/09/19 14:23	1

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-484079/1-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484079

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		05/07/19 14:39	05/09/19 14:23	1
Fluoranthene	ND		1.0	0.32	ug/L		05/07/19 14:39	05/09/19 14:23	1
Fluorene	ND		1.0	0.38	ug/L		05/07/19 14:39	05/09/19 14:23	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		05/07/19 14:39	05/09/19 14:23	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		05/07/19 14:39	05/09/19 14:23	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		05/07/19 14:39	05/09/19 14:23	1
Hexachloroethane	ND		5.0	0.97	ug/L		05/07/19 14:39	05/09/19 14:23	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		05/07/19 14:39	05/09/19 14:23	1
Isophorone	ND		2.0	0.29	ug/L		05/07/19 14:39	05/09/19 14:23	1
Nitrobenzene	ND		1.0	0.45	ug/L		05/07/19 14:39	05/09/19 14:23	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		05/07/19 14:39	05/09/19 14:23	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		05/07/19 14:39	05/09/19 14:23	1
Pentachlorophenol	ND		20	5.6	ug/L		05/07/19 14:39	05/09/19 14:23	1
Phenol	ND		5.0	0.36	ug/L		05/07/19 14:39	05/09/19 14:23	1
Pyrene	ND		1.0	0.48	ug/L		05/07/19 14:39	05/09/19 14:23	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		05/07/19 14:39	05/09/19 14:23	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		05/07/19 14:39	05/09/19 14:23	1
Phenanthrene	ND		1.0	0.35	ug/L		05/07/19 14:39	05/09/19 14:23	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		05/07/19 14:39	05/09/19 14:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		40 - 145	05/07/19 14:39	05/09/19 14:23	1
2-Fluorobiphenyl	89		34 - 110	05/07/19 14:39	05/09/19 14:23	1
2-Fluorophenol (Surr)	52		27 - 110	05/07/19 14:39	05/09/19 14:23	1
Nitrobenzene-d5 (Surr)	95		36 - 120	05/07/19 14:39	05/09/19 14:23	1
Phenol-d5 (Surr)	41		20 - 100	05/07/19 14:39	05/09/19 14:23	1
Terphenyl-d14 (Surr)	106		40 - 145	05/07/19 14:39	05/09/19 14:23	1

Lab Sample ID: LCS 500-484079/2-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484079

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	40.0	30.0		ug/L		75	26 - 110
1,2-Dichlorobenzene	40.0	30.0		ug/L		75	26 - 110
1,3-Dichlorobenzene	40.0	29.7		ug/L		74	22 - 110
1,4-Dichlorobenzene	40.0	30.0		ug/L		75	23 - 110
1-Methylnaphthalene	40.0	33.2		ug/L		83	38 - 110
bis(chloroisopropyl) ether	40.0	26.5		ug/L		66	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	28.8		ug/L		72	44 - 118
2,4,5-Trichlorophenol	40.0	29.2		ug/L		73	63 - 120
2,4,6-Trichlorophenol	40.0	32.7		ug/L		82	62 - 110
2,4-Dichlorophenol	40.0	34.0		ug/L		85	62 - 110
2,4-Dinitrophenol	80.0	59.8		ug/L		75	37 - 130
2,4-Dinitrotoluene	40.0	31.8		ug/L		80	63 - 122
2,6-Dinitrotoluene	40.0	34.0		ug/L		85	63 - 119
3 & 4 Methylphenol	40.0	29.4		ug/L		73	53 - 110
2-Chloronaphthalene	40.0	30.8		ug/L		77	39 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-484079/2-A

Matrix: Water

Analysis Batch: 484422

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 484079

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorophenol	40.0	32.9		ug/L		82	59 - 110
2-Methylnaphthalene	40.0	33.9		ug/L		85	34 - 110
2-Methylphenol	40.0	28.8		ug/L		72	53 - 110
2-Nitroaniline	40.0	31.0		ug/L		78	59 - 122
2-Nitrophenol	40.0	32.2		ug/L		80	58 - 110
3-Nitroaniline	40.0	31.7		ug/L		79	47 - 123
4,6-Dinitro-2-methylphenol	80.0	83.6		ug/L		104	50 - 117
4-Bromophenyl phenyl ether	40.0	33.6		ug/L		84	58 - 120
4-Chloro-3-methylphenol	40.0	33.1		ug/L		83	64 - 120
4-Chloroaniline	40.0	38.7		ug/L		97	35 - 128
4-Chlorophenyl phenyl ether	40.0	31.4		ug/L		79	47 - 112
4-Nitroaniline	40.0	26.2		ug/L		66	52 - 147
4-Nitrophenol	80.0	18.9	J	ug/L		24	20 - 110
Acenaphthene	40.0	32.3		ug/L		81	46 - 110
Acenaphthylene	40.0	32.3		ug/L		81	47 - 110
Anthracene	40.0	36.4		ug/L		91	67 - 110
Benzo[a]pyrene	40.0	38.3		ug/L		96	70 - 120
Benzo[b]fluoranthene	40.0	34.6		ug/L		87	69 - 123
Benzo[g,h,i]perylene	40.0	36.9		ug/L		92	70 - 120
Benzo[k]fluoranthene	40.0	43.1		ug/L		108	70 - 120
Benzoic acid	80.0	20.6		ug/L		26	10 - 100
Benzyl alcohol	40.0	37.8		ug/L		95	33 - 127
Bis(2-chloroethoxy)methane	40.0	34.8		ug/L		87	60 - 110
Bis(2-chloroethyl)ether	40.0	32.3		ug/L		81	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	33.3		ug/L		83	69 - 120
Butyl benzyl phthalate	40.0	31.8		ug/L		80	68 - 120
Chrysene	40.0	37.3		ug/L		93	68 - 120
Dibenz(a,h)anthracene	40.0	38.5		ug/L		96	70 - 127
Dibenzofuran	40.0	32.1		ug/L		80	51 - 110
Diethyl phthalate	40.0	31.6		ug/L		79	62 - 120
Dimethyl phthalate	40.0	32.2		ug/L		80	63 - 120
Di-n-butyl phthalate	40.0	34.2		ug/L		86	70 - 120
Di-n-octyl phthalate	40.0	33.4		ug/L		84	70 - 122
Fluoranthene	40.0	35.7		ug/L		89	68 - 120
Fluorene	40.0	33.7		ug/L		84	53 - 120
Hexachlorobenzene	40.0	36.8		ug/L		92	61 - 120
Hexachlorobutadiene	40.0	27.3		ug/L		68	20 - 100
Hexachlorocyclopentadiene	40.0	26.5		ug/L		66	10 - 100
Hexachloroethane	40.0	27.2		ug/L		68	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	38.6		ug/L		97	65 - 133
Isophorone	40.0	32.8		ug/L		82	57 - 110
Naphthalene	40.0	31.9		ug/L		80	36 - 110
Nitrobenzene	40.0	32.7		ug/L		82	53 - 110
N-Nitrosodi-n-propylamine	40.0	32.1		ug/L		80	58 - 110
N-Nitrosodiphenylamine	40.0	37.0		ug/L		92	66 - 110
Pentachlorophenol	80.0	59.1		ug/L		74	23 - 129
Phenol	40.0	16.3		ug/L		41	33 - 100
Pyrene	40.0	34.4		ug/L		86	70 - 110
2,4-Dimethylphenol	40.0	32.1		ug/L		80	51 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-484079/2-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484079

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	40.0	33.0		ug/L		83	70 - 120
Phenanthrene	40.0	35.5		ug/L		89	65 - 120
3,3'-Dichlorobenzidine	40.0	30.5		ug/L		76	60 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	90		40 - 145
2-Fluorobiphenyl	81		34 - 110
2-Fluorophenol (Surr)	53		27 - 110
Nitrobenzene-d5 (Surr)	82		36 - 120
Phenol-d5 (Surr)	34		20 - 100
Terphenyl-d14 (Surr)	88		40 - 145

Lab Sample ID: 480-152847-3 MS
Matrix: Water
Analysis Batch: 484464

Client Sample ID: SUPE-W-06C-043019
Prep Type: Total/NA
Prep Batch: 484079

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		38.3	31.2		ug/L		82	26 - 110
1,2-Dichlorobenzene	ND		38.3	29.9		ug/L		78	26 - 110
1,3-Dichlorobenzene	ND		38.3	28.2		ug/L		74	22 - 110
1,4-Dichlorobenzene	ND		38.3	28.8		ug/L		75	23 - 110
1-Methylnaphthalene	ND		38.3	35.3		ug/L		92	38 - 110
bis(chloroisopropyl) ether	ND		38.3	16.4		ug/L		43	38 - 110
2,3,4,6-Tetrachlorophenol	ND		38.3	36.4		ug/L		95	44 - 118
2,4,5-Trichlorophenol	ND		38.3	34.9		ug/L		91	63 - 120
2,4,6-Trichlorophenol	ND		38.3	36.4		ug/L		95	62 - 110
2,4-Dichlorophenol	ND		38.3	35.9		ug/L		94	62 - 110
2,4-Dinitrophenol	ND		76.5	43.5		ug/L		57	37 - 130
2,4-Dinitrotoluene	ND		38.3	35.6		ug/L		93	63 - 122
2,6-Dinitrotoluene	ND		38.3	37.9		ug/L		99	63 - 119
3 & 4 Methylphenol	ND		38.3	28.2		ug/L		74	53 - 110
2-Chloronaphthalene	ND		38.3	33.5		ug/L		88	39 - 110
2-Chlorophenol	ND		38.3	33.2		ug/L		87	59 - 110
2-Methylnaphthalene	ND		38.3	33.8		ug/L		88	34 - 110
2-Methylphenol	ND		38.3	30.0		ug/L		78	53 - 110
2-Nitroaniline	ND		38.3	26.1		ug/L		68	59 - 122
2-Nitrophenol	ND		38.3	34.3		ug/L		90	58 - 110
3-Nitroaniline	ND		38.3	25.5		ug/L		67	47 - 123
4,6-Dinitro-2-methylphenol	ND		76.5	58.0		ug/L		76	50 - 117
4-Bromophenyl phenyl ether	ND		38.3	37.6		ug/L		98	58 - 120
4-Chloro-3-methylphenol	ND		38.3	34.2		ug/L		89	64 - 120
4-Chloroaniline	ND		38.3	25.6		ug/L		67	35 - 128
4-Chlorophenyl phenyl ether	ND		38.3	35.8		ug/L		93	47 - 112
4-Nitroaniline	ND		38.3	25.0		ug/L		65	52 - 147
4-Nitrophenol	ND		76.5	17.2	J	ug/L		23	20 - 110
Acenaphthene	ND		38.3	33.3		ug/L		87	46 - 110
Acenaphthylene	ND		38.3	33.5		ug/L		88	47 - 110
Anthracene	ND		38.3	36.4		ug/L		95	67 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-152847-3 MS

Client Sample ID: SUPE-W-06C-043019

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 484464

Prep Batch: 484079

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[a]pyrene	ND		38.3	41.8		ug/L		109	70 - 120
Benzo[b]fluoranthene	ND		38.3	35.3		ug/L		92	69 - 123
Benzo[g,h,i]perylene	ND		38.3	34.9		ug/L		91	70 - 120
Benzo[k]fluoranthene	ND		38.3	37.1		ug/L		97	70 - 120
Benzoic acid	ND		76.5	34.6		ug/L		45	10 - 100
Benzyl alcohol	ND		38.3	19.7		ug/L		52	33 - 127
Bis(2-chloroethoxy)methane	ND		38.3	30.1		ug/L		79	60 - 110
Bis(2-chloroethyl)ether	ND		38.3	30.1		ug/L		79	49 - 110
Bis(2-ethylhexyl) phthalate	ND		38.3	34.9		ug/L		91	69 - 120
Butyl benzyl phthalate	ND		38.3	33.8		ug/L		88	68 - 120
Chrysene	ND		38.3	41.8		ug/L		109	68 - 120
Dibenz(a,h)anthracene	ND		38.3	41.4		ug/L		108	70 - 127
Dibenzofuran	ND		38.3	33.4		ug/L		87	51 - 110
Diethyl phthalate	ND		38.3	34.6		ug/L		91	62 - 120
Dimethyl phthalate	ND		38.3	36.6		ug/L		96	63 - 120
Di-n-butyl phthalate	ND		38.3	34.1		ug/L		89	70 - 120
Di-n-octyl phthalate	ND		38.3	32.6		ug/L		85	70 - 122
Fluoranthene	ND		38.3	35.6		ug/L		93	68 - 120
Fluorene	ND		38.3	36.9		ug/L		96	53 - 120
Hexachlorobenzene	ND		38.3	42.3		ug/L		110	61 - 120
Hexachlorobutadiene	ND		38.3	30.3		ug/L		79	20 - 100
Hexachlorocyclopentadiene	ND		38.3	18.8	J	ug/L		49	10 - 100
Hexachloroethane	ND		38.3	25.5		ug/L		67	20 - 100
Indeno[1,2,3-cd]pyrene	ND		38.3	38.9		ug/L		102	65 - 133
Isophorone	ND		38.3	29.4		ug/L		77	57 - 110
Naphthalene	ND		38.3	33.2		ug/L		87	36 - 110
Nitrobenzene	ND		38.3	27.2		ug/L		71	53 - 110
N-Nitrosodi-n-propylamine	ND		38.3	28.4		ug/L		74	58 - 110
N-Nitrosodiphenylamine	ND		38.3	36.5		ug/L		95	66 - 110
Pentachlorophenol	ND		76.5	58.6		ug/L		77	23 - 129
Phenol	ND	F1	38.3	12.7		ug/L		33	33 - 100
Pyrene	ND		38.3	36.8		ug/L		96	70 - 110
2,4-Dimethylphenol	ND		38.3	32.8		ug/L		86	51 - 110
Benzo[a]anthracene	ND		38.3	36.9		ug/L		96	70 - 120
Phenanthrene	ND		38.3	36.4		ug/L		95	65 - 120
3,3'-Dichlorobenzidine	ND		38.3	33.1		ug/L		86	60 - 132

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	134		40 - 145
2-Fluorobiphenyl	83		34 - 110
2-Fluorophenol (Surr)	45		27 - 110
Nitrobenzene-d5 (Surr)	72		36 - 120
Phenol-d5 (Surr)	30		20 - 100
Terphenyl-d14 (Surr)	87		40 - 145

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-152847-3 MSD

Matrix: Water

Analysis Batch: 484464

Client Sample ID: SUPE-W-06C-043019

Prep Type: Total/NA

Prep Batch: 484079

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier								
1,2,4-Trichlorobenzene	ND		38.8	30.1		ug/L		78		26 - 110	4		20
1,2-Dichlorobenzene	ND		38.8	27.6		ug/L		71		26 - 110	8		20
1,3-Dichlorobenzene	ND		38.8	27.1		ug/L		70		22 - 110	4		20
1,4-Dichlorobenzene	ND		38.8	27.7		ug/L		71		23 - 110	4		20
1-Methylnaphthalene	ND		38.8	33.8		ug/L		87		38 - 110	4		20
bis(chloroisopropyl) ether	ND		38.8	15.7		ug/L		40		38 - 110	4		20
2,3,4,6-Tetrachlorophenol	ND		38.8	35.0		ug/L		90		44 - 118	4		20
2,4,5-Trichlorophenol	ND		38.8	33.2		ug/L		86		63 - 120	5		20
2,4,6-Trichlorophenol	ND		38.8	34.6		ug/L		89		62 - 110	5		20
2,4-Dichlorophenol	ND		38.8	34.8		ug/L		90		62 - 110	3		20
2,4-Dinitrophenol	ND		77.6	44.3		ug/L		57		37 - 130	2		20
2,4-Dinitrotoluene	ND		38.8	34.5		ug/L		89		63 - 122	3		20
2,6-Dinitrotoluene	ND		38.8	36.3		ug/L		93		63 - 119	4		20
3 & 4 Methylphenol	ND		38.8	26.5		ug/L		68		53 - 110	6		20
2-Chloronaphthalene	ND		38.8	31.9		ug/L		82		39 - 110	5		20
2-Chlorophenol	ND		38.8	31.1		ug/L		80		59 - 110	6		20
2-Methylnaphthalene	ND		38.8	32.2		ug/L		83		34 - 110	5		20
2-Methylphenol	ND		38.8	28.1		ug/L		73		53 - 110	6		20
2-Nitroaniline	ND		38.8	25.0		ug/L		64		59 - 122	4		20
2-Nitrophenol	ND		38.8	33.1		ug/L		85		58 - 110	3		20
3-Nitroaniline	ND		38.8	25.3		ug/L		65		47 - 123	1		20
4,6-Dinitro-2-methylphenol	ND		77.6	58.7		ug/L		76		50 - 117	1		20
4-Bromophenyl phenyl ether	ND		38.8	37.8		ug/L		97		58 - 120	0		20
4-Chloro-3-methylphenol	ND		38.8	33.0		ug/L		85		64 - 120	3		20
4-Chloroaniline	ND		38.8	25.5		ug/L		66		35 - 128	0		20
4-Chlorophenyl phenyl ether	ND		38.8	34.8		ug/L		90		47 - 112	3		20
4-Nitroaniline	ND		38.8	24.6		ug/L		63		52 - 147	2		20
4-Nitrophenol	ND		77.6	16.7 J		ug/L		21		20 - 110	3		20
Acenaphthene	ND		38.8	31.8		ug/L		82		46 - 110	4		20
Acenaphthylene	ND		38.8	32.1		ug/L		83		47 - 110	4		20
Anthracene	ND		38.8	36.2		ug/L		93		67 - 110	0		20
Benzo[a]pyrene	ND		38.8	40.6		ug/L		105		70 - 120	3		20
Benzo[b]fluoranthene	ND		38.8	36.0		ug/L		93		69 - 123	2		20
Benzo[g,h,i]perylene	ND		38.8	34.2		ug/L		88		70 - 120	2		20
Benzo[k]fluoranthene	ND		38.8	40.2		ug/L		104		70 - 120	8		20
Benzoic acid	ND		77.6	34.0		ug/L		44		10 - 100	2		20
Benzyl alcohol	ND		38.8	23.0		ug/L		59		33 - 127	15		20
Bis(2-chloroethoxy)methane	ND		38.8	29.1		ug/L		75		60 - 110	3		20
Bis(2-chloroethyl)ether	ND		38.8	28.2		ug/L		73		49 - 110	6		20
Bis(2-ethylhexyl) phthalate	ND		38.8	34.0		ug/L		87		69 - 120	3		20
Butyl benzyl phthalate	ND		38.8	32.5		ug/L		84		68 - 120	4		20
Chrysene	ND		38.8	40.9		ug/L		105		68 - 120	2		20
Dibenz(a,h)anthracene	ND		38.8	41.1		ug/L		106		70 - 127	1		20
Dibenzofuran	ND		38.8	32.0		ug/L		83		51 - 110	4		20
Diethyl phthalate	ND		38.8	33.0		ug/L		85		62 - 120	5		20
Dimethyl phthalate	ND		38.8	35.5		ug/L		91		63 - 120	3		20
Di-n-butyl phthalate	ND		38.8	33.6		ug/L		86		70 - 120	2		20
Di-n-octyl phthalate	ND		38.8	32.9		ug/L		85		70 - 122	1		20

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-152847-3 MSD

Client Sample ID: SUPE-W-06C-043019

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 484464

Prep Batch: 484079

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Fluoranthene	ND		38.8	35.1		ug/L		90	68 - 120	1	20
Fluorene	ND		38.8	35.3		ug/L		91	53 - 120	4	20
Hexachlorobenzene	ND		38.8	41.9		ug/L		108	61 - 120	1	20
Hexachlorobutadiene	ND		38.8	29.7		ug/L		76	20 - 100	2	20
Hexachlorocyclopentadiene	ND		38.8	18.9	J	ug/L		49	10 - 100	0	20
Hexachloroethane	ND		38.8	24.7		ug/L		64	20 - 100	3	20
Indeno[1,2,3-cd]pyrene	ND		38.8	38.6		ug/L		100	65 - 133	1	20
Isophorone	ND		38.8	29.0		ug/L		75	57 - 110	1	20
Naphthalene	ND		38.8	31.8		ug/L		82	36 - 110	4	20
Nitrobenzene	ND		38.8	26.4		ug/L		68	53 - 110	3	20
N-Nitrosodi-n-propylamine	ND		38.8	27.1		ug/L		70	58 - 110	5	20
N-Nitrosodiphenylamine	ND		38.8	36.0		ug/L		93	66 - 110	1	20
Pentachlorophenol	ND		77.6	55.7		ug/L		72	23 - 129	5	20
Phenol	ND	F1	38.8	11.7	F1	ug/L		30	33 - 100	8	20
Pyrene	ND		38.8	35.4		ug/L		91	70 - 110	4	20
2,4-Dimethylphenol	ND		38.8	31.6		ug/L		81	51 - 110	4	20
Benzo[a]anthracene	ND		38.8	35.9		ug/L		92	70 - 120	3	20
Phenanthrene	ND		38.8	35.5		ug/L		91	65 - 120	2	20
3,3'-Dichlorobenzidine	ND		38.8	32.4		ug/L		83	60 - 132	2	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	124		40 - 145
2-Fluorobiphenyl	80		34 - 110
2-Fluorophenol (Surr)	42		27 - 110
Nitrobenzene-d5 (Surr)	72		36 - 120
Phenol-d5 (Surr)	29		20 - 100
Terphenyl-d14 (Surr)	85		40 - 145

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-471326/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 471658

Prep Batch: 471326

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pentachlorophenol	ND		1.0	0.34	ug/L		05/06/19 08:07	05/08/19 02:57	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	84		24 - 146	05/06/19 08:07	05/08/19 02:57	1
2-Fluorobiphenyl	97		37 - 120	05/06/19 08:07	05/08/19 02:57	1
2-Fluorophenol (Surr)	52		10 - 120	05/06/19 08:07	05/08/19 02:57	1
Nitrobenzene-d5 (Surr)	100		26 - 120	05/06/19 08:07	05/08/19 02:57	1
Phenol-d5 (Surr)	36		11 - 120	05/06/19 08:07	05/08/19 02:57	1

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 480-471326/2-A
Matrix: Water
Analysis Batch: 471658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Pentachlorophenol	16.0	21.1	*	ug/L		132	10 - 131
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	107		24 - 146				
2-Fluorobiphenyl	93		37 - 120				
2-Fluorophenol (Surr)	45		10 - 120				
Nitrobenzene-d5 (Surr)	87		26 - 120				
Phenol-d5 (Surr)	34		11 - 120				

Lab Sample ID: 480-152847-3 MS
Matrix: Water
Analysis Batch: 471658

Client Sample ID: SUPE-W-06C-043019
Prep Type: Total/NA
Prep Batch: 471326

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Pentachlorophenol	ND	* F1	15.2	21.3	F1	ug/L		140	10 - 131
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	108		24 - 146						
2-Fluorobiphenyl	98		37 - 120						
2-Fluorophenol (Surr)	44		10 - 120						
Nitrobenzene-d5 (Surr)	86		26 - 120						
Phenol-d5 (Surr)	33		11 - 120						

Lab Sample ID: 480-152847-3 MSD
Matrix: Water
Analysis Batch: 471658

Client Sample ID: SUPE-W-06C-043019
Prep Type: Total/NA
Prep Batch: 471326

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Pentachlorophenol	ND	* F1	15.2	19.2		ug/L		126	10 - 131	11	37
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	97		24 - 146								
2-Fluorobiphenyl	89		37 - 120								
2-Fluorophenol (Surr)	45		10 - 120								
Nitrobenzene-d5 (Surr)	82		26 - 120								
Phenol-d5 (Surr)	32		11 - 120								

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

GC/MS VOA

Analysis Batch: 471924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-1	SUPE-W-30C-043019	Total/NA	Water	8260C	
480-152847-2	SUPE-W-06A-043019	Total/NA	Water	8260C	
480-152847-3	SUPE-W-06C-043019	Total/NA	Water	8260C	
480-152847-4	SUPE-EB-01-043019	Total/NA	Water	8260C	
480-152847-5	SUPE-W-28C-043019	Total/NA	Water	8260C	
MB 480-471924/7	Method Blank	Total/NA	Water	8260C	
LCS 480-471924/5	Lab Control Sample	Total/NA	Water	8260C	
480-152847-3 MS	SUPE-W-06C-043019	Total/NA	Water	8260C	
480-152847-3 MSD	SUPE-W-06C-043019	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 471326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-1	SUPE-W-30C-043019	Total/NA	Water	3510C	
480-152847-2	SUPE-W-06A-043019	Total/NA	Water	3510C	
480-152847-3	SUPE-W-06C-043019	Total/NA	Water	3510C	
480-152847-4	SUPE-EB-01-043019	Total/NA	Water	3510C	
480-152847-5	SUPE-W-28C-043019	Total/NA	Water	3510C	
MB 480-471326/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-471326/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-152847-3 MS	SUPE-W-06C-043019	Total/NA	Water	3510C	
480-152847-3 MSD	SUPE-W-06C-043019	Total/NA	Water	3510C	

Analysis Batch: 471658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-1	SUPE-W-30C-043019	Total/NA	Water	8270D LL	471326
480-152847-2	SUPE-W-06A-043019	Total/NA	Water	8270D LL	471326
480-152847-3	SUPE-W-06C-043019	Total/NA	Water	8270D LL	471326
480-152847-4	SUPE-EB-01-043019	Total/NA	Water	8270D LL	471326
480-152847-5	SUPE-W-28C-043019	Total/NA	Water	8270D LL	471326
MB 480-471326/1-A	Method Blank	Total/NA	Water	8270D LL	471326
LCS 480-471326/2-A	Lab Control Sample	Total/NA	Water	8270D LL	471326
480-152847-3 MS	SUPE-W-06C-043019	Total/NA	Water	8270D LL	471326
480-152847-3 MSD	SUPE-W-06C-043019	Total/NA	Water	8270D LL	471326

Prep Batch: 484079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-1	SUPE-W-30C-043019	Total/NA	Water	3510C	
480-152847-2	SUPE-W-06A-043019	Total/NA	Water	3510C	
480-152847-3	SUPE-W-06C-043019	Total/NA	Water	3510C	
480-152847-4	SUPE-EB-01-043019	Total/NA	Water	3510C	
480-152847-5	SUPE-W-28C-043019	Total/NA	Water	3510C	
MB 500-484079/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-484079/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-152847-3 MS	SUPE-W-06C-043019	Total/NA	Water	3510C	
480-152847-3 MSD	SUPE-W-06C-043019	Total/NA	Water	3510C	

Analysis Batch: 484422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-1	SUPE-W-30C-043019	Total/NA	Water	8270D	484079

Eurofins TestAmerica, Buffalo

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

GC/MS Semi VOA (Continued)

Analysis Batch: 484422 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-2	SUPE-W-06A-043019	Total/NA	Water	8270D	484079
MB 500-484079/1-A	Method Blank	Total/NA	Water	8270D	484079
LCS 500-484079/2-A	Lab Control Sample	Total/NA	Water	8270D	484079

Analysis Batch: 484464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152847-3	SUPE-W-06C-043019	Total/NA	Water	8270D	484079
480-152847-4	SUPE-EB-01-043019	Total/NA	Water	8270D	484079
480-152847-5	SUPE-W-28C-043019	Total/NA	Water	8270D	484079
480-152847-3 MS	SUPE-W-06C-043019	Total/NA	Water	8270D	484079
480-152847-3 MSD	SUPE-W-06C-043019	Total/NA	Water	8270D	484079

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-30C-043019

Lab Sample ID: 480-152847-1

Date Collected: 04/30/19 09:45

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471924	05/09/19 02:38	AMM	TAL BUF
Total/NA	Prep	3510C			484079	05/07/19 14:39	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 19:08	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 05:19	PJQ	TAL BUF

Client Sample ID: SUPE-W-06A-043019

Lab Sample ID: 480-152847-2

Date Collected: 04/30/19 11:05

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471924	05/09/19 03:01	AMM	TAL BUF
Total/NA	Prep	3510C			484079	05/07/19 14:39	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 19:32	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 05:48	PJQ	TAL BUF

Client Sample ID: SUPE-W-06C-043019

Lab Sample ID: 480-152847-3

Date Collected: 04/30/19 12:55

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471924	05/09/19 03:24	AMM	TAL BUF
Total/NA	Prep	3510C			484079	05/07/19 14:39	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484464	05/09/19 16:57	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 04:51	PJQ	TAL BUF

Client Sample ID: SUPE-EB-01-043019

Lab Sample ID: 480-152847-4

Date Collected: 04/30/19 13:45

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471924	05/09/19 03:47	AMM	TAL BUF
Total/NA	Prep	3510C			484079	05/07/19 14:39	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484464	05/09/19 17:20	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 06:16	PJQ	TAL BUF

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 480-152847-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471924	05/09/19 04:10	AMM	TAL BUF

Eurofins TestAmerica, Buffalo

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Client Sample ID: SUPE-W-28C-043019

Lab Sample ID: 480-152847-5

Date Collected: 04/30/19 15:10

Matrix: Water

Date Received: 05/01/19 09:30

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	3510C			484079	05/07/19 14:39	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484464	05/09/19 17:42	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 06:44	PJQ	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998310390	08-31-19

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19 *

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152847-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-152847-1	SUPE-W-30C-043019	Water	04/30/19 09:45	05/01/19 09:30	
480-152847-2	SUPE-W-06A-043019	Water	04/30/19 11:05	05/01/19 09:30	
480-152847-3	SUPE-W-06C-043019	Water	04/30/19 12:55	05/01/19 09:30	
480-152847-4	SUPE-EB-01-043019	Water	04/30/19 13:45	05/01/19 09:30	
480-152847-5	SUPE-W-28C-043019	Water	04/30/19 15:10	05/01/19 09:30	

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 546

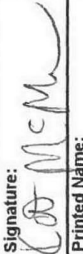

546

Project Name: Superior 2019 1SA Sampling Company: Field & Technical Services Client: Beazer East, Inc.
 Project Number: OM-0556-19 Address: 200 Third Avenue Contact: (21) 4 4-9876
 Laboratory: TABUF Carnegie, PA 15106 krmcmullen.2006@f-ts.com
 Shipment Method: FEDEX (412) 279-3363

Program: Superior 2019 1SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					HCL	None		
04/30/2019	0945	GW	SUPE-W-30C-043019	8260B_VOA+naphtha	8270C_SVOC (less naphtha)	3	3	 480-152847 Chain of Custody
04/30/2019	1105	GW	SUPE-W-06A-043019	6	3	3		
04/30/2019	1255	GW	SUPE-W-06C-MS/MSD-043019	12	6	6		
04/30/2019	1255	GW	SUPE-W-06C-043019	6	3	3		
04/30/2019	1345	GW	SUPE-EB-01-043019	6	3	3		
04/30/2019	1510	GW	SUPE-W-28C-043019	6	3	3		

TEMP 214 2,9 H1JCF

Relinquished by:		Received by:		Turnaround Requirements	
Signature: 	Signature: 	Signature:	Signature:	<input type="checkbox"/> Rush	<input type="checkbox"/> Standard
Printed Name: Katie McMullen	Printed Name: Vankow	Printed Name:	Printed Name:	<input type="checkbox"/> Rush	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:		
Date/Time: 04/30/2019 1646	Date/Time: 05/16/19 0930	Date/Time:	Date/Time:		



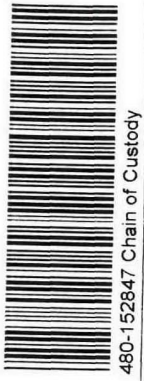
**CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS
REQUEST FORM**

REF.# 546

546

Project Name: Superior 2019 1SA Sampling
 Project Number: OM-05556-19
 Laboratory: TABUF
 Shipment Method: FEDEX
 Program: Superior 2019 1SA Sampling_001
 Company: Field & Technical Services
 Address: 200 Third Avenue
 Carnegie, PA 15106
 (412) 279-3363
 Client: Beazer East, Inc.
 Contact: (21) 4 4-8876
 kmcullen.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					HCL	None		
04/30/2019	0945	GW	SUPE-W-30C-043019	8260B_VOA+naphtha	8270C_SVOC (less naphtha)	3	3	
04/30/2019	1105	GW	SUPE-W-06A-043019			3	3	
04/30/2019	1255	GW	SUPE-W-06C-MS/MSD-043019			6	6	
04/30/2019	1255	GW	SUPE-W-06C-043019			3	3	
04/30/2019	1345	GW	SUPE-EB-01-043019			3	3	
04/30/2019	1510	GW	SUPE-W-28C-043019			3	3	



TEMP 214 2,9 #17CE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Katie McMullen</i>	Signature: <i>Ummkhow</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Katie McMullen	Printed Name: Ummkhow	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: Ummkhow	Firm:	Firm:	
Date/Time: 04/30/2019 1646	Date/Time: 05/01/19 0930	Date/Time:	Date/Time:	



Eurofins TestAmerica, Buffalo

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record



Environment Testing
TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:																										
Client Contact: Shipping/Receiving		Phone:	Bortot, Veronica		480-49466.1																										
Company: TestAmerica Laboratories, Inc.		E-Mail:	veronica.bortot@testamericainc.com	State of Origin:	Page:																										
Address: 2417 Bond Street, 480-152847 COC		Accreditations Required (See note): State Program - Wisconsin		Wisconsin	Page 1 of 1																										
City: University Park		Job #:		480-152847-1																											
State, Zip: IL, 60484		Due Date Requested: 5/17/2019		Analysis Requested																											
Phone: 708-534-5200(Tel) 708-534-5211(Fax)		TAT Requested (days):		<table border="1"> <tr> <td colspan="2">Preservation Codes:</td> </tr> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDA</td> <td>Z - other (specify)</td> </tr> </table>		Preservation Codes:		A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4-5	L - EDA	Z - other (specify)
Preservation Codes:																															
A - HCL	M - Hexane																														
B - NaOH	N - None																														
C - Zn Acetate	O - AsNaO2																														
D - Nitric Acid	P - Na2O4S																														
E - NaHSO4	Q - Na2SO3																														
F - MeOH	R - Na2S2O3																														
G - Amchlor	S - H2SO4																														
H - Ascorbic Acid	T - TSP Dodecahydrate																														
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J - DI Water	V - MCAA																														
K - EDTA	W - pH 4-5																														
L - EDA	Z - other (specify)																														
Email:		PO #:		<table border="1"> <tr> <td colspan="2">Special Instructions/Note:</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2"> </td> </tr> </table>		Special Instructions/Note:																									
Special Instructions/Note:																															
Project Name: Superior, WI Semiannual Groundwater		Project #: 18015916		<table border="1"> <tr> <td colspan="2">Field Filtered Sample (Yes or No)</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">Parform, MS/MSD (Yes or No)</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">8270D/3610C (MOD) Semivolatiles, project list with n</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">Total Number of containers</td> </tr> <tr> <td colspan="2"> </td> </tr> </table>		Field Filtered Sample (Yes or No)				Parform, MS/MSD (Yes or No)				8270D/3610C (MOD) Semivolatiles, project list with n				Total Number of containers													
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Parform, MS/MSD (Yes or No)																															
8270D/3610C (MOD) Semivolatiles, project list with n																															
Total Number of containers																															
Site:		SSOW#:																													
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)																										
SUPE-W-30C-040319 (480-152847-1)		4/30/19	09:45 Central		Water																										
SUPE-W-06A-040319 (480-152847-2)		4/30/19	11:05 Central		Water																										
SUPE-W-06C-040319 (480-152847-3)		4/30/19	12:55 Central		Water																										
SUPE-W-06C-040319 (480-152847-3MS)		4/30/19	12:55 Central	MS	Water																										
SUPE-W-06C-040319 (480-152847-3MSD)		4/30/19	12:55 Central	MSD	Water																										
SUPE-EB-01-043019 (480-152847-4)		4/30/19	13:45 Central		Water																										
SUPE-W-28C-043019 (480-152847-5)		4/30/19	15:10 Central		Water																										
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>																															
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																												
Unconfirmed			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																												
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:																											
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:																											
Relinquished by: <i>Martinez</i>		Date/Time: 5/6/19 1800	Company: TA-BUFFALO	Received by: <i>Shirley Scott</i>	Date/Time: 5/7/19 1008																										
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:																										
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:																										
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.0																											

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-152847-1

Login Number: 152847

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Harper, Marcus D

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	FTS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-152847-1

Login Number: 152847

List Source: Eurofins TestAmerica, Buffalo

List Number: 2

Creator: Harper, Marcus D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-152847-1

Login Number: 152847

List Number: 3

Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago

List Creation: 05/07/19 02:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

FTS, LLC

DATE: May 24, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 480-152848-1

SAMPLES: SUPE-TB-01-043019, SUPE-W-12A-043019, SUPE-W-12CR-043019, SUPE-W-30A-043019, SUPE-W-10AR2-043019, SUPE-M-99A-043019(W-12CR)

ANALYSES: Method 8260C (VOCs), 8270D/8270D LL (SVOCs)

LABORATORY: Eurofins TestAmerica Laboratories, Buffalo, Chicago

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: None
- Laboratory Blank Contamination
Noncompliance: None
- Field Blank Contamination
Noncompliance: None
- Field Duplicate Precision
Noncompliance: See attached page for details.
- Surrogate Recoveries
Noncompliance: The surrogate recoveries of 2,4,6-tribromophenol, 2-fluorobiphenyl, 2-fluorophenol, nitrobenzene-d5, phenol-d5, and terphenyl-d14 fell below the recovery limits in sample W-30A. The laboratory did not add surrogate solution during the extraction process and no action was taken on this basis.
- Laboratory Control Sample
Noncompliance: The LCS recoveries of 4,6-dinitro-2-methylphenol, benzo(k)fluoranthene, and pentachlorophenol were above the recovery limits. The LCSD RPD of benzoic acid was above the recovery limits. No action was taken on this basis.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-12CR	QUAL	M-99A	QUAL	RPD
2,4,6-Trichlorophenol	1.9	J	1.6	J	17.14

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-152848-1

Client Project/Site: Superior, WI Semiannual Groundwater

For:

Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
5/22/2019 11:16:34 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	19
QC Sample Results	21
QC Association Summary	30
Lab Chronicle	32
Certification Summary	34
Method Summary	35
Sample Summary	36
Chain of Custody	37
Receipt Checklists	40

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Job ID: 480-152848-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-152848-1

Comments

No additional comments.

Receipt

The samples were received on 5/1/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 3.2° C.

GC/MS VOA

Method(s) 8260C: The following volatile sample was analyzed with significant headspace in the sample containers: SUPE-W-10AR2-043019. Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D LL: The following samples were diluted due to the nature of the sample matrix: SUPE-W-30A-043019 and SUPE-W-10AR2-043019. Elevated reporting limits (RLs) are provided.

Method(s) 8270D LL: The laboratory control sample (LCS) for preparation batch 480-471326 and analytical batch 480-471658 recovered outside control limits for the following analytes: Pentachlorophenol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: Surrogate recoveries for the following sample were outside of acceptance limits: SUPE-W-30A-043019. It appears that no surrogate solution was added during the extraction process. There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8270D: LCS 500-483721/2-A had 4,6-Dinitro-2--methylphenol and Benzo[k]fluoranthene biased high. These analytes were in control in the LCSD. LCS 500-483721/2-A

Method(s) 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 500-483721 and analytical batch 500-484422 recovered outside control limits for Benzoic acid. The % recoveries were within limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-TB-01-043019

Lab Sample ID: 480-152848-1

No Detections.

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 480-152848-2

No Detections.

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 480-152848-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trichlorophenol	1.9	J	5.0	1.1	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 480-152848-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.76	J	1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	1.6		1.0	0.74	ug/L	1		8260C	Total/NA
Naphthalene	22		1.0	0.43	ug/L	1		8260C	Total/NA

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	8.9		1.0	0.75	ug/L	1		8260C	Total/NA
Benzene	17		1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	34		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	5.0		2.0	0.66	ug/L	1		8260C	Total/NA
Naphthalene	2.2		1.0	0.43	ug/L	1		8260C	Total/NA
o-Xylene	16		1.0	0.76	ug/L	1		8260C	Total/NA
Toluene	2.3		1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	21		2.0	0.66	ug/L	1		8260C	Total/NA
Acenaphthylene	1.5		0.98	0.31	ug/L	1		8270D	Total/NA
Anthracene	1.2		0.98	0.31	ug/L	1		8270D	Total/NA
Dibenzofuran	42		2.0	0.34	ug/L	1		8270D	Total/NA
Fluoranthene	2.2		0.98	0.31	ug/L	1		8270D	Total/NA
Fluorene	32		0.98	0.37	ug/L	1		8270D	Total/NA
Pyrene	1.3		0.98	0.47	ug/L	1		8270D	Total/NA
Phenanthrene	6.0		0.98	0.34	ug/L	1		8270D	Total/NA
1-Methylnaphthalene - DL	57		9.8	2.5	ug/L	5		8270D	Total/NA
Acenaphthene - DL	110		4.9	1.8	ug/L	5		8270D	Total/NA

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 480-152848-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trichlorophenol	1.6	J	4.9	1.1	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-TB-01-043019

Lab Sample ID: 480-152848-1

Date Collected: 04/30/19 00:00

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 16:00	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 16:00	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 16:00	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 16:00	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 16:00	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 16:00	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 16:00	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 16:00	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 16:00	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 16:00	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 16:00	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 16:00	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 16:00	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 16:00	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 16:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120					05/09/19 16:00	1
4-Bromofluorobenzene (Surr)	88		73 - 120					05/09/19 16:00	1
Dibromofluoromethane (Surr)	96		75 - 123					05/09/19 16:00	1
Toluene-d8 (Surr)	94		80 - 120					05/09/19 16:00	1

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 480-152848-2

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 16:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 16:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 16:24	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 16:24	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 16:24	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 16:24	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 16:24	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 16:24	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 16:24	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 16:24	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 16:24	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 16:24	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 16:24	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 16:24	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 16:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120					05/09/19 16:24	1
4-Bromofluorobenzene (Surr)	88		73 - 120					05/09/19 16:24	1
Dibromofluoromethane (Surr)	94		75 - 123					05/09/19 16:24	1
Toluene-d8 (Surr)	94		80 - 120					05/09/19 16:24	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 480-152848-2

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.95	0.32	ug/L		05/06/19 08:07	05/08/19 07:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		24 - 146				05/06/19 08:07	05/08/19 07:13	1
2-Fluorobiphenyl	67		37 - 120				05/06/19 08:07	05/08/19 07:13	1
2-Fluorophenol (Surr)	33		10 - 120				05/06/19 08:07	05/08/19 07:13	1
Nitrobenzene-d5 (Surr)	54		26 - 120				05/06/19 08:07	05/08/19 07:13	1
Phenol-d5 (Surr)	21		11 - 120				05/06/19 08:07	05/08/19 07:13	1
p-Terphenyl-d14	66		64 - 127				05/06/19 08:07	05/08/19 07:13	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:10	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 17:10	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/06/19 07:24	05/09/19 17:10	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 17:10	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		05/06/19 07:24	05/09/19 17:10	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		05/06/19 07:24	05/09/19 17:10	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 17:10	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 17:10	1
2-Chlorophenol	ND		5.0	0.81	ug/L		05/06/19 07:24	05/09/19 17:10	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/06/19 07:24	05/09/19 17:10	1
2-Methylphenol	ND		2.0	0.31	ug/L		05/06/19 07:24	05/09/19 17:10	1
2-Nitroaniline	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 17:10	1
2-Nitrophenol	ND		10	2.2	ug/L		05/06/19 07:24	05/09/19 17:10	1
3-Nitroaniline	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 17:10	1
4,6-Dinitro-2-methylphenol	ND	*	20	5.0	ug/L		05/06/19 07:24	05/09/19 17:10	1
4-Bromophenyl phenyl ether	ND		5.0	0.92	ug/L		05/06/19 07:24	05/09/19 17:10	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		05/06/19 07:24	05/09/19 17:10	1
4-Chloroaniline	ND		10	2.1	ug/L		05/06/19 07:24	05/09/19 17:10	1
4-Chlorophenyl phenyl ether	ND		5.0	0.82	ug/L		05/06/19 07:24	05/09/19 17:10	1
4-Nitroaniline	ND		10	4.0	ug/L		05/06/19 07:24	05/09/19 17:10	1
4-Nitrophenol	ND		20	2.4	ug/L		05/06/19 07:24	05/09/19 17:10	1
Acenaphthene	ND		1.0	0.36	ug/L		05/06/19 07:24	05/09/19 17:10	1
Acenaphthylene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 17:10	1
Anthracene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzo[k]fluoranthene	ND	*	0.20	0.075	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzoic acid	ND	*	20	4.6	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzyl alcohol	ND		20	3.1	ug/L		05/06/19 07:24	05/09/19 17:10	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:10	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 480-152848-2

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 17:10	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		05/06/19 07:24	05/09/19 17:10	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 17:10	1
Chrysene	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 17:10	1
Dibenz(a,h)anthracene	ND		0.30	0.065	ug/L		05/06/19 07:24	05/09/19 17:10	1
Dibenzofuran	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 17:10	1
Diethyl phthalate	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 17:10	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		05/06/19 07:24	05/09/19 17:10	1
Di-n-butyl phthalate	ND		5.0	0.81	ug/L		05/06/19 07:24	05/09/19 17:10	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		05/06/19 07:24	05/09/19 17:10	1
Fluoranthene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 17:10	1
Fluorene	ND		1.0	0.38	ug/L		05/06/19 07:24	05/09/19 17:10	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 17:10	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 17:10	1
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		05/06/19 07:24	05/09/19 17:10	1
Hexachloroethane	ND		5.0	0.98	ug/L		05/06/19 07:24	05/09/19 17:10	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.085	ug/L		05/06/19 07:24	05/09/19 17:10	1
Isophorone	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 17:10	1
Nitrobenzene	ND		1.0	0.45	ug/L		05/06/19 07:24	05/09/19 17:10	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 17:10	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 17:10	1
Pentachlorophenol	ND		20	5.6	ug/L		05/06/19 07:24	05/09/19 17:10	1
Phenol	ND		5.0	0.36	ug/L		05/06/19 07:24	05/09/19 17:10	1
Pyrene	ND		1.0	0.48	ug/L		05/06/19 07:24	05/09/19 17:10	1
2,4-Dimethylphenol	ND		10	3.4	ug/L		05/06/19 07:24	05/09/19 17:10	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		05/06/19 07:24	05/09/19 17:10	1
Phenanthrene	ND		1.0	0.35	ug/L		05/06/19 07:24	05/09/19 17:10	1
3,3'-Dichlorobenzidine	ND		5.0	0.95	ug/L		05/06/19 07:24	05/09/19 17:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	106		40 - 145	05/06/19 07:24	05/09/19 17:10	1
2-Fluorobiphenyl	78		34 - 110	05/06/19 07:24	05/09/19 17:10	1
2-Fluorophenol (Surr)	40		27 - 110	05/06/19 07:24	05/09/19 17:10	1
Nitrobenzene-d5 (Surr)	82		36 - 120	05/06/19 07:24	05/09/19 17:10	1
Phenol-d5 (Surr)	29		20 - 100	05/06/19 07:24	05/09/19 17:10	1
Terphenyl-d14 (Surr)	114		40 - 145	05/06/19 07:24	05/09/19 17:10	1

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 480-152848-3

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 16:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 16:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 16:47	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 16:47	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 16:47	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 16:47	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 480-152848-3

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 16:47	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 16:47	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 16:47	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 16:47	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 16:47	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 16:47	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 16:47	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 16:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/09/19 16:47	1
4-Bromofluorobenzene (Surr)	84		73 - 120		05/09/19 16:47	1
Dibromofluoromethane (Surr)	97		75 - 123		05/09/19 16:47	1
Toluene-d8 (Surr)	98		80 - 120		05/09/19 16:47	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.96	0.33	ug/L		05/06/19 08:07	05/08/19 07:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		24 - 146	05/06/19 08:07	05/08/19 07:42	1
2-Fluorobiphenyl	82		37 - 120	05/06/19 08:07	05/08/19 07:42	1
2-Fluorophenol (Surr)	49		10 - 120	05/06/19 08:07	05/08/19 07:42	1
Nitrobenzene-d5 (Surr)	74		26 - 120	05/06/19 08:07	05/08/19 07:42	1
Phenol-d5 (Surr)	31		11 - 120	05/06/19 08:07	05/08/19 07:42	1
p-Terphenyl-d14	82		64 - 127	05/06/19 08:07	05/08/19 07:42	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:33	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 17:33	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/06/19 07:24	05/09/19 17:33	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 17:33	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		05/06/19 07:24	05/09/19 17:33	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,4,6-Trichlorophenol	1.9	J	5.0	1.1	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		05/06/19 07:24	05/09/19 17:33	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 17:33	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 17:33	1
2-Chlorophenol	ND		5.0	0.80	ug/L		05/06/19 07:24	05/09/19 17:33	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/06/19 07:24	05/09/19 17:33	1
2-Methylphenol	ND		2.0	0.31	ug/L		05/06/19 07:24	05/09/19 17:33	1
2-Nitroaniline	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 17:33	1
2-Nitrophenol	ND		10	2.1	ug/L		05/06/19 07:24	05/09/19 17:33	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 480-152848-3

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 17:33	1
4,6-Dinitro-2-methylphenol	ND	*	20	4.9	ug/L		05/06/19 07:24	05/09/19 17:33	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		05/06/19 07:24	05/09/19 17:33	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		05/06/19 07:24	05/09/19 17:33	1
4-Chloroaniline	ND		10	2.1	ug/L		05/06/19 07:24	05/09/19 17:33	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		05/06/19 07:24	05/09/19 17:33	1
4-Nitroaniline	ND		10	3.9	ug/L		05/06/19 07:24	05/09/19 17:33	1
4-Nitrophenol	ND		20	2.3	ug/L		05/06/19 07:24	05/09/19 17:33	1
Acenaphthene	ND		1.0	0.36	ug/L		05/06/19 07:24	05/09/19 17:33	1
Acenaphthylene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 17:33	1
Anthracene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzo[k]fluoranthene	ND	*	0.20	0.074	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzoic acid	ND	*	20	4.5	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzyl alcohol	ND		20	3.0	ug/L		05/06/19 07:24	05/09/19 17:33	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 17:33	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 17:33	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		05/06/19 07:24	05/09/19 17:33	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 17:33	1
Chrysene	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 17:33	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		05/06/19 07:24	05/09/19 17:33	1
Dibenzofuran	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 17:33	1
Diethyl phthalate	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 17:33	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		05/06/19 07:24	05/09/19 17:33	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		05/06/19 07:24	05/09/19 17:33	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		05/06/19 07:24	05/09/19 17:33	1
Fluoranthene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 17:33	1
Fluorene	ND		1.0	0.38	ug/L		05/06/19 07:24	05/09/19 17:33	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 17:33	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 17:33	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		05/06/19 07:24	05/09/19 17:33	1
Hexachloroethane	ND		5.0	0.97	ug/L		05/06/19 07:24	05/09/19 17:33	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		05/06/19 07:24	05/09/19 17:33	1
Isophorone	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 17:33	1
Nitrobenzene	ND		1.0	0.45	ug/L		05/06/19 07:24	05/09/19 17:33	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 17:33	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 17:33	1
Pentachlorophenol	ND		20	5.6	ug/L		05/06/19 07:24	05/09/19 17:33	1
Phenol	ND		5.0	0.36	ug/L		05/06/19 07:24	05/09/19 17:33	1
Pyrene	ND		1.0	0.48	ug/L		05/06/19 07:24	05/09/19 17:33	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		05/06/19 07:24	05/09/19 17:33	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		05/06/19 07:24	05/09/19 17:33	1
Phenanthrene	ND		1.0	0.35	ug/L		05/06/19 07:24	05/09/19 17:33	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		05/06/19 07:24	05/09/19 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	112		40 - 145	05/06/19 07:24	05/09/19 17:33	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 480-152848-3

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		34 - 110	05/06/19 07:24	05/09/19 17:33	1
2-Fluorophenol (Surr)	44		27 - 110	05/06/19 07:24	05/09/19 17:33	1
Nitrobenzene-d5 (Surr)	99		36 - 120	05/06/19 07:24	05/09/19 17:33	1
Phenol-d5 (Surr)	37		20 - 100	05/06/19 07:24	05/09/19 17:33	1
Terphenyl-d14 (Surr)	113		40 - 145	05/06/19 07:24	05/09/19 17:33	1

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 480-152848-4

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/10/19 01:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/10/19 01:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/10/19 01:57	1
Benzene	0.76	J	1.0	0.41	ug/L			05/10/19 01:57	1
Chloromethane	ND		1.0	0.35	ug/L			05/10/19 01:57	1
Ethylbenzene	1.6		1.0	0.74	ug/L			05/10/19 01:57	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/10/19 01:57	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/10/19 01:57	1
Naphthalene	22		1.0	0.43	ug/L			05/10/19 01:57	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/10/19 01:57	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/10/19 01:57	1
o-Xylene	ND		1.0	0.76	ug/L			05/10/19 01:57	1
Styrene	ND		1.0	0.73	ug/L			05/10/19 01:57	1
Toluene	ND		1.0	0.51	ug/L			05/10/19 01:57	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/10/19 01:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		05/10/19 01:57	1
4-Bromofluorobenzene (Surr)	88		73 - 120		05/10/19 01:57	1
Dibromofluoromethane (Surr)	93		75 - 123		05/10/19 01:57	1
Toluene-d8 (Surr)	94		80 - 120		05/10/19 01:57	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	10	3.5	ug/L		05/06/19 08:07	05/08/19 08:10	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		24 - 146	05/06/19 08:07	05/08/19 08:10	10
2-Fluorobiphenyl	90		37 - 120	05/06/19 08:07	05/08/19 08:10	10
2-Fluorophenol (Surr)	39		10 - 120	05/06/19 08:07	05/08/19 08:10	10
Nitrobenzene-d5 (Surr)	63		26 - 120	05/06/19 08:07	05/08/19 08:10	10
Phenol-d5 (Surr)	24		11 - 120	05/06/19 08:07	05/08/19 08:10	10
p-Terphenyl-d14	88		64 - 127	05/06/19 08:07	05/08/19 08:10	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		05/06/19 07:24	05/09/19 17:57	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		05/06/19 07:24	05/09/19 17:57	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 480-152848-4

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		05/06/19 07:24	05/09/19 17:57	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		05/06/19 07:24	05/09/19 17:57	1
1-Methylnaphthalene	ND		1.9	0.48	ug/L		05/06/19 07:24	05/09/19 17:57	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.5	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,4,5-Trichlorophenol	ND		9.6	2.2	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,4,6-Trichlorophenol	ND		4.8	1.1	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,4-Dichlorophenol	ND		9.6	2.2	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,4-Dinitrotoluene	ND		0.96	0.29	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,6-Dinitrotoluene	ND		0.96	0.12	ug/L		05/06/19 07:24	05/09/19 17:57	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		05/06/19 07:24	05/09/19 17:57	1
2-Chloronaphthalene	ND		1.9	0.33	ug/L		05/06/19 07:24	05/09/19 17:57	1
2-Chlorophenol	ND		4.8	0.77	ug/L		05/06/19 07:24	05/09/19 17:57	1
2-Methylnaphthalene	ND		1.9	0.13	ug/L		05/06/19 07:24	05/09/19 17:57	1
2-Methylphenol	ND		1.9	0.30	ug/L		05/06/19 07:24	05/09/19 17:57	1
2-Nitroaniline	ND		4.8	1.0	ug/L		05/06/19 07:24	05/09/19 17:57	1
2-Nitrophenol	ND		9.6	2.1	ug/L		05/06/19 07:24	05/09/19 17:57	1
3-Nitroaniline	ND		9.6	2.2	ug/L		05/06/19 07:24	05/09/19 17:57	1
4,6-Dinitro-2-methylphenol	ND *		19	4.7	ug/L		05/06/19 07:24	05/09/19 17:57	1
4-Bromophenyl phenyl ether	ND		4.8	0.88	ug/L		05/06/19 07:24	05/09/19 17:57	1
4-Chloro-3-methylphenol	ND		9.6	2.1	ug/L		05/06/19 07:24	05/09/19 17:57	1
4-Chloroaniline	ND		9.6	2.0	ug/L		05/06/19 07:24	05/09/19 17:57	1
4-Chlorophenyl phenyl ether	ND		4.8	0.78	ug/L		05/06/19 07:24	05/09/19 17:57	1
4-Nitroaniline	ND		9.6	3.8	ug/L		05/06/19 07:24	05/09/19 17:57	1
4-Nitrophenol	ND		19	2.3	ug/L		05/06/19 07:24	05/09/19 17:57	1
Acenaphthene	ND		0.96	0.35	ug/L		05/06/19 07:24	05/09/19 17:57	1
Acenaphthylene	ND		0.96	0.31	ug/L		05/06/19 07:24	05/09/19 17:57	1
Anthracene	ND		0.96	0.31	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzo[a]pyrene	ND		0.19	0.054	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzo[b]fluoranthene	ND		0.19	0.056	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzo[g,h,i]perylene	ND		0.96	0.40	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzo[k]fluoranthene	ND *		0.19	0.071	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzoic acid	ND *		19	4.4	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzyl alcohol	ND		19	2.9	ug/L		05/06/19 07:24	05/09/19 17:57	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		05/06/19 07:24	05/09/19 17:57	1
Bis(2-chloroethyl)ether	ND		1.9	0.34	ug/L		05/06/19 07:24	05/09/19 17:57	1
Bis(2-ethylhexyl) phthalate	ND		9.6	2.3	ug/L		05/06/19 07:24	05/09/19 17:57	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		05/06/19 07:24	05/09/19 17:57	1
Chrysene	ND		0.48	0.13	ug/L		05/06/19 07:24	05/09/19 17:57	1
Dibenz(a,h)anthracene	ND		0.29	0.062	ug/L		05/06/19 07:24	05/09/19 17:57	1
Dibenzofuran	ND		1.9	0.34	ug/L		05/06/19 07:24	05/09/19 17:57	1
Diethyl phthalate	ND		1.9	0.42	ug/L		05/06/19 07:24	05/09/19 17:57	1
Dimethyl phthalate	ND		1.9	0.37	ug/L		05/06/19 07:24	05/09/19 17:57	1
Di-n-butyl phthalate	ND		4.8	0.77	ug/L		05/06/19 07:24	05/09/19 17:57	1
Di-n-octyl phthalate	ND		9.6	2.4	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		05/06/19 07:24	05/09/19 17:57	1
Fluoranthene	ND		0.96	0.31	ug/L		05/06/19 07:24	05/09/19 17:57	1
Fluorene	ND		0.96	0.37	ug/L		05/06/19 07:24	05/09/19 17:57	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 480-152848-4

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.48	0.13	ug/L		05/06/19 07:24	05/09/19 17:57	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		05/06/19 07:24	05/09/19 17:57	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		05/06/19 07:24	05/09/19 17:57	1
Hexachloroethane	ND		4.8	0.93	ug/L		05/06/19 07:24	05/09/19 17:57	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.081	ug/L		05/06/19 07:24	05/09/19 17:57	1
Isophorone	ND		1.9	0.28	ug/L		05/06/19 07:24	05/09/19 17:57	1
Nitrobenzene	ND		0.96	0.43	ug/L		05/06/19 07:24	05/09/19 17:57	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		05/06/19 07:24	05/09/19 17:57	1
N-Nitrosodiphenylamine	ND		1.9	0.33	ug/L		05/06/19 07:24	05/09/19 17:57	1
Pentachlorophenol	ND		19	5.4	ug/L		05/06/19 07:24	05/09/19 17:57	1
Phenol	ND		4.8	0.35	ug/L		05/06/19 07:24	05/09/19 17:57	1
Pyrene	ND		0.96	0.46	ug/L		05/06/19 07:24	05/09/19 17:57	1
2,4-Dimethylphenol	ND		9.6	3.2	ug/L		05/06/19 07:24	05/09/19 17:57	1
Benzo[a]anthracene	ND		0.19	0.042	ug/L		05/06/19 07:24	05/09/19 17:57	1
Phenanthrene	ND		0.96	0.34	ug/L		05/06/19 07:24	05/09/19 17:57	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		05/06/19 07:24	05/09/19 17:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	0	X	40 - 145				05/06/19 07:24	05/09/19 17:57	1
2-Fluorobiphenyl	0	X	34 - 110				05/06/19 07:24	05/09/19 17:57	1
2-Fluorophenol (Surr)	0	X	27 - 110				05/06/19 07:24	05/09/19 17:57	1
Nitrobenzene-d5 (Surr)	0	X	36 - 120				05/06/19 07:24	05/09/19 17:57	1
Phenol-d5 (Surr)	0	X	20 - 100				05/06/19 07:24	05/09/19 17:57	1
Terphenyl-d14 (Surr)	0	X	40 - 145				05/06/19 07:24	05/09/19 17:57	1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 17:33	1
1,2,4-Trimethylbenzene	8.9		1.0	0.75	ug/L			05/09/19 17:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 17:33	1
Benzene	17		1.0	0.41	ug/L			05/09/19 17:33	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 17:33	1
Ethylbenzene	34		1.0	0.74	ug/L			05/09/19 17:33	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 17:33	1
m-Xylene & p-Xylene	5.0		2.0	0.66	ug/L			05/09/19 17:33	1
Naphthalene	2.2		1.0	0.43	ug/L			05/09/19 17:33	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 17:33	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 17:33	1
o-Xylene	16		1.0	0.76	ug/L			05/09/19 17:33	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 17:33	1
Toluene	2.3		1.0	0.51	ug/L			05/09/19 17:33	1
Xylenes, Total	21		2.0	0.66	ug/L			05/09/19 17:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		77 - 120					05/09/19 17:33	1
4-Bromofluorobenzene (Surr)	90		73 - 120					05/09/19 17:33	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		75 - 123		05/09/19 17:33	1
Toluene-d8 (Surr)	97		80 - 120		05/09/19 17:33	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	4.8	1.6	ug/L		05/06/19 08:07	05/08/19 08:39	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		24 - 146	05/06/19 08:07	05/08/19 08:39	5
2-Fluorobiphenyl	90		37 - 120	05/06/19 08:07	05/08/19 08:39	5
2-Fluorophenol (Surr)	47		10 - 120	05/06/19 08:07	05/08/19 08:39	5
Nitrobenzene-d5 (Surr)	82		26 - 120	05/06/19 08:07	05/08/19 08:39	5
Phenol-d5 (Surr)	28		11 - 120	05/06/19 08:07	05/08/19 08:39	5
p-Terphenyl-d14	93		64 - 127	05/06/19 08:07	05/08/19 08:39	5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:21	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 18:21	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/06/19 07:24	05/09/19 18:21	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 18:21	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,3,4,6-Tetrachlorophenol	ND		4.9	1.5	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,4,5-Trichlorophenol	ND		9.8	2.3	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,4,6-Trichlorophenol	ND		4.9	1.1	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,4-Dichlorophenol	ND		9.8	2.2	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,4-Dinitrophenol	ND		20	7.3	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,4-Dinitrotoluene	ND		0.98	0.30	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,6-Dinitrotoluene	ND		0.98	0.12	ug/L		05/06/19 07:24	05/09/19 18:21	1
3 & 4 Methylphenol	ND		2.0	0.43	ug/L		05/06/19 07:24	05/09/19 18:21	1
2-Chloronaphthalene	ND		2.0	0.33	ug/L		05/06/19 07:24	05/09/19 18:21	1
2-Chlorophenol	ND		4.9	0.79	ug/L		05/06/19 07:24	05/09/19 18:21	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/06/19 07:24	05/09/19 18:21	1
2-Methylphenol	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:21	1
2-Nitroaniline	ND		4.9	1.1	ug/L		05/06/19 07:24	05/09/19 18:21	1
2-Nitrophenol	ND		9.8	2.1	ug/L		05/06/19 07:24	05/09/19 18:21	1
3-Nitroaniline	ND		9.8	2.3	ug/L		05/06/19 07:24	05/09/19 18:21	1
4,6-Dinitro-2-methylphenol	ND	*	20	4.8	ug/L		05/06/19 07:24	05/09/19 18:21	1
4-Bromophenyl phenyl ether	ND		4.9	0.90	ug/L		05/06/19 07:24	05/09/19 18:21	1
4-Chloro-3-methylphenol	ND		9.8	2.2	ug/L		05/06/19 07:24	05/09/19 18:21	1
4-Chloroaniline	ND		9.8	2.1	ug/L		05/06/19 07:24	05/09/19 18:21	1
4-Chlorophenyl phenyl ether	ND		4.9	0.80	ug/L		05/06/19 07:24	05/09/19 18:21	1
4-Nitroaniline	ND		9.8	3.9	ug/L		05/06/19 07:24	05/09/19 18:21	1
4-Nitrophenol	ND		20	2.3	ug/L		05/06/19 07:24	05/09/19 18:21	1
Acenaphthylene	1.5		0.98	0.31	ug/L		05/06/19 07:24	05/09/19 18:21	1
Anthracene	1.2		0.98	0.31	ug/L		05/06/19 07:24	05/09/19 18:21	1
Benzo[a]pyrene	ND		0.20	0.055	ug/L		05/06/19 07:24	05/09/19 18:21	1
Benzo[b]fluoranthene	ND		0.20	0.057	ug/L		05/06/19 07:24	05/09/19 18:21	1
Benzo[g,h,i]perylene	ND		0.98	0.41	ug/L		05/06/19 07:24	05/09/19 18:21	1
Benzo[k]fluoranthene	ND	*	0.20	0.073	ug/L		05/06/19 07:24	05/09/19 18:21	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzoic acid	ND	*	20	4.5	ug/L		05/06/19 07:24	05/09/19 18:21	1
Benzyl alcohol	ND		20	3.0	ug/L		05/06/19 07:24	05/09/19 18:21	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:21	1
Bis(2-chloroethyl)ether	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 18:21	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.4	ug/L		05/06/19 07:24	05/09/19 18:21	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 18:21	1
Chrysene	ND		0.49	0.14	ug/L		05/06/19 07:24	05/09/19 18:21	1
Dibenz(a,h)anthracene	ND		0.30	0.063	ug/L		05/06/19 07:24	05/09/19 18:21	1
Dibenzofuran	42		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 18:21	1
Diethyl phthalate	ND		2.0	0.43	ug/L		05/06/19 07:24	05/09/19 18:21	1
Dimethyl phthalate	ND		2.0	0.37	ug/L		05/06/19 07:24	05/09/19 18:21	1
Di-n-butyl phthalate	ND		4.9	0.79	ug/L		05/06/19 07:24	05/09/19 18:21	1
Di-n-octyl phthalate	ND		9.8	2.4	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,3,5,6-Tetrachlorophenol	ND		4.9	2.5	ug/L		05/06/19 07:24	05/09/19 18:21	1
Fluoranthene	2.2		0.98	0.31	ug/L		05/06/19 07:24	05/09/19 18:21	1
Fluorene	32		0.98	0.37	ug/L		05/06/19 07:24	05/09/19 18:21	1
Hexachlorobenzene	ND		0.49	0.14	ug/L		05/06/19 07:24	05/09/19 18:21	1
Hexachlorobutadiene	ND		4.9	1.1	ug/L		05/06/19 07:24	05/09/19 18:21	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		05/06/19 07:24	05/09/19 18:21	1
Hexachloroethane	ND		4.9	0.95	ug/L		05/06/19 07:24	05/09/19 18:21	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.083	ug/L		05/06/19 07:24	05/09/19 18:21	1
Isophorone	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 18:21	1
Nitrobenzene	ND		0.98	0.44	ug/L		05/06/19 07:24	05/09/19 18:21	1
N-Nitrosodi-n-propylamine	ND		0.49	0.14	ug/L		05/06/19 07:24	05/09/19 18:21	1
N-Nitrosodiphenylamine	ND		2.0	0.33	ug/L		05/06/19 07:24	05/09/19 18:21	1
Pentachlorophenol	ND		20	5.5	ug/L		05/06/19 07:24	05/09/19 18:21	1
Phenol	ND		4.9	0.35	ug/L		05/06/19 07:24	05/09/19 18:21	1
Pyrene	1.3		0.98	0.47	ug/L		05/06/19 07:24	05/09/19 18:21	1
2,4-Dimethylphenol	ND		9.8	3.3	ug/L		05/06/19 07:24	05/09/19 18:21	1
Benzo[a]anthracene	ND		0.20	0.043	ug/L		05/06/19 07:24	05/09/19 18:21	1
Phenanthrene	6.0		0.98	0.34	ug/L		05/06/19 07:24	05/09/19 18:21	1
3,3'-Dichlorobenzidine	ND		4.9	0.92	ug/L		05/06/19 07:24	05/09/19 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	115		40 - 145	05/06/19 07:24	05/09/19 18:21	1
2-Fluorobiphenyl	89		34 - 110	05/06/19 07:24	05/09/19 18:21	1
2-Fluorophenol (Surr)	54		27 - 110	05/06/19 07:24	05/09/19 18:21	1
Nitrobenzene-d5 (Surr)	99		36 - 120	05/06/19 07:24	05/09/19 18:21	1
Phenol-d5 (Surr)	32		20 - 100	05/06/19 07:24	05/09/19 18:21	1
Terphenyl-d14 (Surr)	110		40 - 145	05/06/19 07:24	05/09/19 18:21	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	57		9.8	2.5	ug/L		05/06/19 07:24	05/22/19 11:27	5
Acenaphthene	110		4.9	1.8	ug/L		05/06/19 07:24	05/22/19 11:27	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		40 - 145	05/06/19 07:24	05/22/19 11:27	5
2-Fluorobiphenyl	74		34 - 110	05/06/19 07:24	05/22/19 11:27	5
2-Fluorophenol (Surr)	43		27 - 110	05/06/19 07:24	05/22/19 11:27	5

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	75		36 - 120	05/06/19 07:24	05/22/19 11:27	5
Phenol-d5 (Surr)	30		20 - 100	05/06/19 07:24	05/22/19 11:27	5
Terphenyl-d14 (Surr)	83		40 - 145	05/06/19 07:24	05/22/19 11:27	5

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 480-152848-6

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/10/19 11:41	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/10/19 11:41	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/10/19 11:41	1
Benzene	ND		1.0	0.41	ug/L			05/10/19 11:41	1
Chloromethane	ND		1.0	0.35	ug/L			05/10/19 11:41	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/10/19 11:41	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/10/19 11:41	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/10/19 11:41	1
Naphthalene	ND		1.0	0.43	ug/L			05/10/19 11:41	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/10/19 11:41	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/10/19 11:41	1
o-Xylene	ND		1.0	0.76	ug/L			05/10/19 11:41	1
Styrene	ND		1.0	0.73	ug/L			05/10/19 11:41	1
Toluene	ND		1.0	0.51	ug/L			05/10/19 11:41	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/10/19 11:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		77 - 120		05/10/19 11:41	1
4-Bromofluorobenzene (Surr)	104		73 - 120		05/10/19 11:41	1
Dibromofluoromethane (Surr)	104		75 - 123		05/10/19 11:41	1
Toluene-d8 (Surr)	99		80 - 120		05/10/19 11:41	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	*	0.96	0.33	ug/L		05/06/19 08:07	05/08/19 09:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	107		24 - 146	05/06/19 08:07	05/08/19 09:08	1
2-Fluorobiphenyl	84		37 - 120	05/06/19 08:07	05/08/19 09:08	1
2-Fluorophenol (Surr)	43		10 - 120	05/06/19 08:07	05/08/19 09:08	1
Nitrobenzene-d5 (Surr)	83		26 - 120	05/06/19 08:07	05/08/19 09:08	1
Phenol-d5 (Surr)	30		11 - 120	05/06/19 08:07	05/08/19 09:08	1
p-Terphenyl-d14	97		64 - 127	05/06/19 08:07	05/08/19 09:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:45	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 18:45	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/06/19 07:24	05/09/19 18:45	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 18:45	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 480-152848-6

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		2.0	0.49	ug/L		05/06/19 07:24	05/09/19 18:45	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,3,4,6-Tetrachlorophenol	ND		4.9	1.5	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,4,5-Trichlorophenol	ND		9.9	2.3	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,4,6-Trichlorophenol	1.6	J	4.9	1.1	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,4-Dichlorophenol	ND		9.9	2.3	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,4-Dinitrotoluene	ND		0.99	0.30	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,6-Dinitrotoluene	ND		0.99	0.12	ug/L		05/06/19 07:24	05/09/19 18:45	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 18:45	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 18:45	1
2-Chlorophenol	ND		4.9	0.79	ug/L		05/06/19 07:24	05/09/19 18:45	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/06/19 07:24	05/09/19 18:45	1
2-Methylphenol	ND		2.0	0.31	ug/L		05/06/19 07:24	05/09/19 18:45	1
2-Nitroaniline	ND		4.9	1.1	ug/L		05/06/19 07:24	05/09/19 18:45	1
2-Nitrophenol	ND		9.9	2.1	ug/L		05/06/19 07:24	05/09/19 18:45	1
3-Nitroaniline	ND		9.9	2.3	ug/L		05/06/19 07:24	05/09/19 18:45	1
4,6-Dinitro-2-methylphenol	ND *		20	4.9	ug/L		05/06/19 07:24	05/09/19 18:45	1
4-Bromophenyl phenyl ether	ND		4.9	0.90	ug/L		05/06/19 07:24	05/09/19 18:45	1
4-Chloro-3-methylphenol	ND		9.9	2.2	ug/L		05/06/19 07:24	05/09/19 18:45	1
4-Chloroaniline	ND		9.9	2.1	ug/L		05/06/19 07:24	05/09/19 18:45	1
4-Chlorophenyl phenyl ether	ND		4.9	0.80	ug/L		05/06/19 07:24	05/09/19 18:45	1
4-Nitroaniline	ND		9.9	3.9	ug/L		05/06/19 07:24	05/09/19 18:45	1
4-Nitrophenol	ND		20	2.3	ug/L		05/06/19 07:24	05/09/19 18:45	1
Acenaphthene	ND		0.99	0.36	ug/L		05/06/19 07:24	05/09/19 18:45	1
Acenaphthylene	ND		0.99	0.32	ug/L		05/06/19 07:24	05/09/19 18:45	1
Anthracene	ND		0.99	0.32	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzo[a]pyrene	ND		0.20	0.055	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzo[b]fluoranthene	ND		0.20	0.057	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzo[g,h,i]perylene	ND		0.99	0.42	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzo[k]fluoranthene	ND *		0.20	0.073	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzoic acid	ND *		20	4.5	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzyl alcohol	ND		20	3.0	ug/L		05/06/19 07:24	05/09/19 18:45	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 18:45	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 18:45	1
Bis(2-ethylhexyl) phthalate	ND		9.9	2.4	ug/L		05/06/19 07:24	05/09/19 18:45	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 18:45	1
Chrysene	ND		0.49	0.14	ug/L		05/06/19 07:24	05/09/19 18:45	1
Dibenz(a,h)anthracene	ND		0.30	0.063	ug/L		05/06/19 07:24	05/09/19 18:45	1
Dibenzofuran	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 18:45	1
Diethyl phthalate	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 18:45	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		05/06/19 07:24	05/09/19 18:45	1
Di-n-butyl phthalate	ND		4.9	0.79	ug/L		05/06/19 07:24	05/09/19 18:45	1
Di-n-octyl phthalate	ND		9.9	2.4	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,3,5,6-Tetrachlorophenol	ND		4.9	2.5	ug/L		05/06/19 07:24	05/09/19 18:45	1
Fluoranthene	ND		0.99	0.32	ug/L		05/06/19 07:24	05/09/19 18:45	1
Fluorene	ND		0.99	0.38	ug/L		05/06/19 07:24	05/09/19 18:45	1
Hexachlorobenzene	ND		0.49	0.14	ug/L		05/06/19 07:24	05/09/19 18:45	1
Hexachlorobutadiene	ND		4.9	1.1	ug/L		05/06/19 07:24	05/09/19 18:45	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 480-152848-6

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		05/06/19 07:24	05/09/19 18:45	1
Hexachloroethane	ND		4.9	0.96	ug/L		05/06/19 07:24	05/09/19 18:45	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.083	ug/L		05/06/19 07:24	05/09/19 18:45	1
Isophorone	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 18:45	1
Nitrobenzene	ND		0.99	0.45	ug/L		05/06/19 07:24	05/09/19 18:45	1
N-Nitrosodi-n-propylamine	ND		0.49	0.14	ug/L		05/06/19 07:24	05/09/19 18:45	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 18:45	1
Pentachlorophenol	ND		20	5.5	ug/L		05/06/19 07:24	05/09/19 18:45	1
Phenol	ND		4.9	0.36	ug/L		05/06/19 07:24	05/09/19 18:45	1
Pyrene	ND		0.99	0.48	ug/L		05/06/19 07:24	05/09/19 18:45	1
2,4-Dimethylphenol	ND		9.9	3.3	ug/L		05/06/19 07:24	05/09/19 18:45	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		05/06/19 07:24	05/09/19 18:45	1
Phenanthrene	ND		0.99	0.35	ug/L		05/06/19 07:24	05/09/19 18:45	1
3,3'-Dichlorobenzidine	ND		4.9	0.93	ug/L		05/06/19 07:24	05/09/19 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	115		40 - 145	05/06/19 07:24	05/09/19 18:45	1
2-Fluorobiphenyl	92		34 - 110	05/06/19 07:24	05/09/19 18:45	1
2-Fluorophenol (Surr)	50		27 - 110	05/06/19 07:24	05/09/19 18:45	1
Nitrobenzene-d5 (Surr)	99		36 - 120	05/06/19 07:24	05/09/19 18:45	1
Phenol-d5 (Surr)	35		20 - 100	05/06/19 07:24	05/09/19 18:45	1
Terphenyl-d14 (Surr)	111		40 - 145	05/06/19 07:24	05/09/19 18:45	1

Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-152848-1	SUPE-TB-01-043019	100	88	96	94
480-152848-2	SUPE-W-12A-043019	100	88	94	94
480-152848-3	SUPE-W-12CR-043019	98	84	97	98
480-152848-4	SUPE-W-30A-043019	100	88	93	94
480-152848-5	SUPE-W-10AR2-043019	101	90	96	97
480-152848-6	SUPE-M-99A-043019	96	104	104	99
LCS 480-471956/5	Lab Control Sample	95	92	87	99
LCS 480-472158/5	Lab Control Sample	94	95	89	102
LCS 480-472194/5	Lab Control Sample	97	107	105	103
MB 480-471956/7	Method Blank	98	92	93	98
MB 480-472158/7	Method Blank	99	89	93	97
MB 480-472194/7	Method Blank	99	100	107	93

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-152848-2	SUPE-W-12A-043019	106	78	40	82	29	114
480-152848-3	SUPE-W-12CR-043019	112	93	44	99	37	113
480-152848-4	SUPE-W-30A-043019	0 X	0 X	0 X	0 X	0 X	0 X
480-152848-5	SUPE-W-10AR2-043019	115	89	54	99	32	110
480-152848-5 - DL	SUPE-W-10AR2-043019	79	74	43	75	30	83
480-152848-6	SUPE-M-99A-043019	115	92	50	99	35	111
LCS 500-483721/2-A	Lab Control Sample	112	92	60	95	38	106
LCSD 500-483721/3-A	Lab Control Sample Dup	104	82	54	86	35	101
MB 500-483721/1-A	Method Blank	96	80	53	92	41	109

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-152848-2	SUPE-W-12A-043019	78	67	33	54	21	66
480-152848-3	SUPE-W-12CR-043019	100	82	49	74	31	82

Eurofins TestAmerica, Buffalo

Surrogate Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP	FBP	2FP	NBZ	PHL	TPHd14
		(24-146)	(37-120)	(10-120)	(26-120)	(11-120)	(64-127)
480-152848-4	SUPE-W-30A-043019	86	90	39	63	24	88
480-152848-5	SUPE-W-10AR2-043019	100	90	47	82	28	93
480-152848-6	SUPE-M-99A-043019	107	84	43	83	30	97
LCS 480-471326/2-A	Lab Control Sample	107	93	45	87	34	99
MB 480-471326/1-A	Method Blank	84	97	52	100	36	111

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHd14 = p-Terphenyl-d14

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-471956/7
Matrix: Water
Analysis Batch: 471956

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 09:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 09:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 09:48	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 09:48	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 09:48	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 09:48	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 09:48	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 09:48	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 09:48	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 09:48	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 09:48	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 09:48	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 09:48	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 09:48	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 09:48	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/09/19 09:48	1
4-Bromofluorobenzene (Surr)	92		73 - 120		05/09/19 09:48	1
Dibromofluoromethane (Surr)	93		75 - 123		05/09/19 09:48	1
Toluene-d8 (Surr)	98		80 - 120		05/09/19 09:48	1

Lab Sample ID: LCS 480-471956/5
Matrix: Water
Analysis Batch: 471956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	25.0	22.2		ug/L		89	73 - 126
1,2,4-Trimethylbenzene	25.0	23.3		ug/L		93	76 - 121
1,3,5-Trimethylbenzene	25.0	23.0		ug/L		92	77 - 121
Benzene	25.0	24.9		ug/L		99	71 - 124
Chloromethane	25.0	25.7		ug/L		103	68 - 124
Ethylbenzene	25.0	23.5		ug/L		94	77 - 123
Methyl tert-butyl ether	25.0	20.7		ug/L		83	77 - 120
m-Xylene & p-Xylene	25.0	23.4		ug/L		94	76 - 122
Naphthalene	25.0	21.2		ug/L		85	66 - 125
n-Butylbenzene	25.0	23.8		ug/L		95	71 - 128
N-Propylbenzene	25.0	23.9		ug/L		96	75 - 127
o-Xylene	25.0	22.1		ug/L		88	76 - 122
Styrene	25.0	24.6		ug/L		98	80 - 120
Toluene	25.0	24.6		ug/L		98	80 - 122
Xylenes, Total	50.0	45.5		ug/L		91	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		77 - 120
4-Bromofluorobenzene (Surr)	92		73 - 120
Dibromofluoromethane (Surr)	87		75 - 123
Toluene-d8 (Surr)	99		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-472158/7
Matrix: Water
Analysis Batch: 472158

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/09/19 21:25	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/09/19 21:25	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/09/19 21:25	1
Benzene	ND		1.0	0.41	ug/L			05/09/19 21:25	1
Chloromethane	ND		1.0	0.35	ug/L			05/09/19 21:25	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/09/19 21:25	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/09/19 21:25	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/09/19 21:25	1
Naphthalene	ND		1.0	0.43	ug/L			05/09/19 21:25	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/09/19 21:25	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/09/19 21:25	1
o-Xylene	ND		1.0	0.76	ug/L			05/09/19 21:25	1
Styrene	ND		1.0	0.73	ug/L			05/09/19 21:25	1
Toluene	ND		1.0	0.51	ug/L			05/09/19 21:25	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/09/19 21:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		05/09/19 21:25	1
4-Bromofluorobenzene (Surr)	89		73 - 120		05/09/19 21:25	1
Dibromofluoromethane (Surr)	93		75 - 123		05/09/19 21:25	1
Toluene-d8 (Surr)	97		80 - 120		05/09/19 21:25	1

Lab Sample ID: LCS 480-472158/5
Matrix: Water
Analysis Batch: 472158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.5		ug/L		90	73 - 126
1,2,4-Trimethylbenzene	25.0	22.6		ug/L		90	76 - 121
1,3,5-Trimethylbenzene	25.0	22.5		ug/L		90	77 - 121
Benzene	25.0	24.4		ug/L		97	71 - 124
Chloromethane	25.0	24.5		ug/L		98	68 - 124
Ethylbenzene	25.0	23.9		ug/L		96	77 - 123
Methyl tert-butyl ether	25.0	19.8		ug/L		79	77 - 120
m-Xylene & p-Xylene	25.0	23.5		ug/L		94	76 - 122
Naphthalene	25.0	20.1		ug/L		80	66 - 125
n-Butylbenzene	25.0	23.4		ug/L		94	71 - 128
N-Propylbenzene	25.0	23.3		ug/L		93	75 - 127
o-Xylene	25.0	22.2		ug/L		89	76 - 122
Styrene	25.0	23.8		ug/L		95	80 - 120
Toluene	25.0	25.2		ug/L		101	80 - 122
Xylenes, Total	50.0	45.7		ug/L		91	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	95		73 - 120
Dibromofluoromethane (Surr)	89		75 - 123
Toluene-d8 (Surr)	102		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-472194/7
Matrix: Water
Analysis Batch: 472194

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/10/19 10:58	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/10/19 10:58	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/10/19 10:58	1
Benzene	ND		1.0	0.41	ug/L			05/10/19 10:58	1
Chloromethane	ND		1.0	0.35	ug/L			05/10/19 10:58	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/10/19 10:58	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/10/19 10:58	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/10/19 10:58	1
Naphthalene	ND		1.0	0.43	ug/L			05/10/19 10:58	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/10/19 10:58	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/10/19 10:58	1
o-Xylene	ND		1.0	0.76	ug/L			05/10/19 10:58	1
Styrene	ND		1.0	0.73	ug/L			05/10/19 10:58	1
Toluene	ND		1.0	0.51	ug/L			05/10/19 10:58	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/10/19 10:58	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		05/10/19 10:58	1
4-Bromofluorobenzene (Surr)	100		73 - 120		05/10/19 10:58	1
Dibromofluoromethane (Surr)	107		75 - 123		05/10/19 10:58	1
Toluene-d8 (Surr)	93		80 - 120		05/10/19 10:58	1

Lab Sample ID: LCS 480-472194/5
Matrix: Water
Analysis Batch: 472194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	25.0	24.8		ug/L		99	73 - 126
1,2,4-Trimethylbenzene	25.0	24.5		ug/L		98	76 - 121
1,3,5-Trimethylbenzene	25.0	24.2		ug/L		97	77 - 121
Benzene	25.0	23.6		ug/L		95	71 - 124
Chloromethane	25.0	29.5		ug/L		118	68 - 124
Ethylbenzene	25.0	24.2		ug/L		97	77 - 123
Methyl tert-butyl ether	25.0	24.6		ug/L		99	77 - 120
m-Xylene & p-Xylene	25.0	25.8		ug/L		103	76 - 122
Naphthalene	25.0	26.6		ug/L		106	66 - 125
n-Butylbenzene	25.0	23.8		ug/L		95	71 - 128
N-Propylbenzene	25.0	23.0		ug/L		92	75 - 127
o-Xylene	25.0	25.5		ug/L		102	76 - 122
Styrene	25.0	25.8		ug/L		103	80 - 120
Toluene	25.0	24.1		ug/L		96	80 - 122
Xylenes, Total	50.0	51.3		ug/L		103	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		77 - 120
4-Bromofluorobenzene (Surr)	107		73 - 120
Dibromofluoromethane (Surr)	105		75 - 123
Toluene-d8 (Surr)	103		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-483721/1-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483721

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 13:59	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 13:59	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/06/19 07:24	05/09/19 13:59	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 13:59	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		05/06/19 07:24	05/09/19 13:59	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		05/06/19 07:24	05/09/19 13:59	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 13:59	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 13:59	1
2-Chlorophenol	ND		5.0	0.80	ug/L		05/06/19 07:24	05/09/19 13:59	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/06/19 07:24	05/09/19 13:59	1
2-Methylphenol	ND		2.0	0.31	ug/L		05/06/19 07:24	05/09/19 13:59	1
2-Nitroaniline	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 13:59	1
2-Nitrophenol	ND		10	2.1	ug/L		05/06/19 07:24	05/09/19 13:59	1
3-Nitroaniline	ND		10	2.3	ug/L		05/06/19 07:24	05/09/19 13:59	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		05/06/19 07:24	05/09/19 13:59	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		05/06/19 07:24	05/09/19 13:59	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		05/06/19 07:24	05/09/19 13:59	1
4-Chloroaniline	ND		10	2.1	ug/L		05/06/19 07:24	05/09/19 13:59	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		05/06/19 07:24	05/09/19 13:59	1
4-Nitroaniline	ND		10	3.9	ug/L		05/06/19 07:24	05/09/19 13:59	1
4-Nitrophenol	ND		20	2.3	ug/L		05/06/19 07:24	05/09/19 13:59	1
Acenaphthene	ND		1.0	0.36	ug/L		05/06/19 07:24	05/09/19 13:59	1
Acenaphthylene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 13:59	1
Anthracene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzoic acid	ND		20	4.6	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzyl alcohol	ND		20	3.1	ug/L		05/06/19 07:24	05/09/19 13:59	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/06/19 07:24	05/09/19 13:59	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 13:59	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		05/06/19 07:24	05/09/19 13:59	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/06/19 07:24	05/09/19 13:59	1
Chrysene	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 13:59	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		05/06/19 07:24	05/09/19 13:59	1
Dibenzofuran	ND		2.0	0.35	ug/L		05/06/19 07:24	05/09/19 13:59	1
Diethyl phthalate	ND		2.0	0.44	ug/L		05/06/19 07:24	05/09/19 13:59	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		05/06/19 07:24	05/09/19 13:59	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		05/06/19 07:24	05/09/19 13:59	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		05/06/19 07:24	05/09/19 13:59	1

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-483721/1-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 483721

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		05/06/19 07:24	05/09/19 13:59	1
Fluoranthene	ND		1.0	0.32	ug/L		05/06/19 07:24	05/09/19 13:59	1
Fluorene	ND		1.0	0.38	ug/L		05/06/19 07:24	05/09/19 13:59	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 13:59	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		05/06/19 07:24	05/09/19 13:59	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		05/06/19 07:24	05/09/19 13:59	1
Hexachloroethane	ND		5.0	0.97	ug/L		05/06/19 07:24	05/09/19 13:59	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		05/06/19 07:24	05/09/19 13:59	1
Isophorone	ND		2.0	0.29	ug/L		05/06/19 07:24	05/09/19 13:59	1
Nitrobenzene	ND		1.0	0.45	ug/L		05/06/19 07:24	05/09/19 13:59	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		05/06/19 07:24	05/09/19 13:59	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		05/06/19 07:24	05/09/19 13:59	1
Pentachlorophenol	ND		20	5.6	ug/L		05/06/19 07:24	05/09/19 13:59	1
Phenol	ND		5.0	0.36	ug/L		05/06/19 07:24	05/09/19 13:59	1
Pyrene	ND		1.0	0.48	ug/L		05/06/19 07:24	05/09/19 13:59	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		05/06/19 07:24	05/09/19 13:59	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		05/06/19 07:24	05/09/19 13:59	1
Phenanthrene	ND		1.0	0.35	ug/L		05/06/19 07:24	05/09/19 13:59	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		05/06/19 07:24	05/09/19 13:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		40 - 145	05/06/19 07:24	05/09/19 13:59	1
2-Fluorobiphenyl	80		34 - 110	05/06/19 07:24	05/09/19 13:59	1
2-Fluorophenol (Surr)	53		27 - 110	05/06/19 07:24	05/09/19 13:59	1
Nitrobenzene-d5 (Surr)	92		36 - 120	05/06/19 07:24	05/09/19 13:59	1
Phenol-d5 (Surr)	41		20 - 100	05/06/19 07:24	05/09/19 13:59	1
Terphenyl-d14 (Surr)	109		40 - 145	05/06/19 07:24	05/09/19 13:59	1

Lab Sample ID: LCS 500-483721/2-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	40.0	30.6		ug/L		77	26 - 110
1,2-Dichlorobenzene	40.0	30.5		ug/L		76	26 - 110
1,3-Dichlorobenzene	40.0	29.4		ug/L		74	22 - 110
1,4-Dichlorobenzene	40.0	30.0		ug/L		75	23 - 110
1-Methylnaphthalene	40.0	36.7		ug/L		92	38 - 110
bis(chloroisopropyl) ether	40.0	29.0		ug/L		73	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	35.8		ug/L		89	44 - 118
2,4,5-Trichlorophenol	40.0	37.6		ug/L		94	63 - 120
2,4,6-Trichlorophenol	40.0	38.1		ug/L		95	62 - 110
2,4-Dichlorophenol	40.0	39.1		ug/L		98	62 - 110
2,4-Dinitrophenol	80.0	64.6		ug/L		81	37 - 130
2,4-Dinitrotoluene	40.0	37.7		ug/L		94	63 - 122
2,6-Dinitrotoluene	40.0	40.1		ug/L		100	63 - 119
3 & 4 Methylphenol	40.0	32.4		ug/L		81	53 - 110
2-Chloronaphthalene	40.0	33.8		ug/L		84	39 - 110

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-483721/2-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorophenol	40.0	36.8		ug/L		92	59 - 110
2-Methylnaphthalene	40.0	37.0		ug/L		93	34 - 110
2-Methylphenol	40.0	31.8		ug/L		80	53 - 110
2-Nitroaniline	40.0	35.3		ug/L		88	59 - 122
2-Nitrophenol	40.0	37.5		ug/L		94	58 - 110
3-Nitroaniline	40.0	31.7		ug/L		79	47 - 123
4,6-Dinitro-2-methylphenol	80.0	96.4	*	ug/L		121	50 - 117
4-Bromophenyl phenyl ether	40.0	38.8		ug/L		97	58 - 120
4-Chloro-3-methylphenol	40.0	38.6		ug/L		96	64 - 120
4-Chloroaniline	40.0	40.3		ug/L		101	35 - 128
4-Chlorophenyl phenyl ether	40.0	35.3		ug/L		88	47 - 112
4-Nitroaniline	40.0	27.4		ug/L		68	52 - 147
4-Nitrophenol	80.0	21.0		ug/L		26	20 - 110
Acenaphthene	40.0	36.1		ug/L		90	46 - 110
Acenaphthylene	40.0	36.5		ug/L		91	47 - 110
Anthracene	40.0	42.1		ug/L		105	67 - 110
Benzo[a]pyrene	40.0	46.7		ug/L		117	70 - 120
Benzo[b]fluoranthene	40.0	39.9		ug/L		100	69 - 123
Benzo[g,h,i]perylene	40.0	45.1		ug/L		113	70 - 120
Benzo[k]fluoranthene	40.0	53.5	*	ug/L		134	70 - 120
Benzoic acid	80.0	32.9		ug/L		41	10 - 100
Benzyl alcohol	40.0	40.6		ug/L		102	33 - 127
Bis(2-chloroethoxy)methane	40.0	39.8		ug/L		99	60 - 110
Bis(2-chloroethyl)ether	40.0	36.2		ug/L		91	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	39.5		ug/L		99	69 - 120
Butyl benzyl phthalate	40.0	38.2		ug/L		96	68 - 120
Chrysene	40.0	45.4		ug/L		114	68 - 120
Dibenz(a,h)anthracene	40.0	46.3		ug/L		116	70 - 127
Dibenzofuran	40.0	36.6		ug/L		91	51 - 110
Diethyl phthalate	40.0	37.1		ug/L		93	62 - 120
Dimethyl phthalate	40.0	37.9		ug/L		95	63 - 120
Di-n-butyl phthalate	40.0	39.8		ug/L		99	70 - 120
Di-n-octyl phthalate	40.0	39.5		ug/L		99	70 - 122
Fluoranthene	40.0	41.7		ug/L		104	68 - 120
Fluorene	40.0	38.1		ug/L		95	53 - 120
Hexachlorobenzene	40.0	43.3		ug/L		108	61 - 120
Hexachlorobutadiene	40.0	26.3		ug/L		66	20 - 100
Hexachlorocyclopentadiene	40.0	25.4		ug/L		63	10 - 100
Hexachloroethane	40.0	26.0		ug/L		65	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	46.2		ug/L		115	65 - 133
Isophorone	40.0	37.8		ug/L		95	57 - 110
Naphthalene	40.0	35.3		ug/L		88	36 - 110
Nitrobenzene	40.0	36.8		ug/L		92	53 - 110
N-Nitrosodi-n-propylamine	40.0	37.0		ug/L		93	58 - 110
N-Nitrosodiphenylamine	40.0	43.6		ug/L		109	66 - 110
Pentachlorophenol	80.0	72.4		ug/L		90	23 - 129
Phenol	40.0	17.8		ug/L		44	33 - 100
Pyrene	40.0	41.0		ug/L		102	70 - 110
2,4-Dimethylphenol	40.0	39.5		ug/L		99	51 - 110

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-483721/2-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 483721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	40.0	38.6		ug/L		97	70 - 120
Phenanthrene	40.0	41.0		ug/L		103	65 - 120
3,3'-Dichlorobenzidine	40.0	35.4		ug/L		88	60 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	112		40 - 145
2-Fluorobiphenyl	92		34 - 110
2-Fluorophenol (Surr)	60		27 - 110
Nitrobenzene-d5 (Surr)	95		36 - 120
Phenol-d5 (Surr)	38		20 - 100
Terphenyl-d14 (Surr)	106		40 - 145

Lab Sample ID: LCSD 500-483721/3-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 483721

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	40.0	26.8		ug/L		67	26 - 110	13	20
1,2-Dichlorobenzene	40.0	27.2		ug/L		68	26 - 110	11	20
1,3-Dichlorobenzene	40.0	27.0		ug/L		67	22 - 110	9	20
1,4-Dichlorobenzene	40.0	27.0		ug/L		68	23 - 110	10	20
1-Methylnaphthalene	40.0	32.6		ug/L		82	38 - 110	12	20
bis(chloroisopropyl) ether	40.0	27.7		ug/L		69	38 - 110	5	20
2,3,4,6-Tetrachlorophenol	40.0	33.5		ug/L		84	44 - 118	7	20
2,4,5-Trichlorophenol	40.0	32.5		ug/L		81	63 - 120	15	20
2,4,6-Trichlorophenol	40.0	35.7		ug/L		89	62 - 110	7	20
2,4-Dichlorophenol	40.0	35.6		ug/L		89	62 - 110	9	20
2,4-Dinitrophenol	80.0	64.7		ug/L		81	37 - 130	0	20
2,4-Dinitrotoluene	40.0	35.7		ug/L		89	63 - 122	5	20
2,6-Dinitrotoluene	40.0	37.0		ug/L		93	63 - 119	8	20
3 & 4 Methylphenol	40.0	31.7		ug/L		79	53 - 110	2	20
2-Chloronaphthalene	40.0	30.0		ug/L		75	39 - 110	12	20
2-Chlorophenol	40.0	35.0		ug/L		88	59 - 110	5	20
2-Methylnaphthalene	40.0	32.3		ug/L		81	34 - 110	14	20
2-Methylphenol	40.0	32.0		ug/L		80	53 - 110	1	20
2-Nitroaniline	40.0	32.8		ug/L		82	59 - 122	7	20
2-Nitrophenol	40.0	34.5		ug/L		86	58 - 110	9	20
3-Nitroaniline	40.0	33.4		ug/L		84	47 - 123	5	20
4,6-Dinitro-2-methylphenol	80.0	91.1		ug/L		114	50 - 117	6	20
4-Bromophenyl phenyl ether	40.0	35.2		ug/L		88	58 - 120	10	20
4-Chloro-3-methylphenol	40.0	35.9		ug/L		90	64 - 120	7	20
4-Chloroaniline	40.0	39.9		ug/L		100	35 - 128	1	20
4-Chlorophenyl phenyl ether	40.0	31.1		ug/L		78	47 - 112	13	20
4-Nitroaniline	40.0	26.5		ug/L		66	52 - 147	3	20
4-Nitrophenol	80.0	19.8	J	ug/L		25	20 - 110	6	20
Acenaphthene	40.0	32.0		ug/L		80	46 - 110	12	20
Acenaphthylene	40.0	33.1		ug/L		83	47 - 110	10	20
Anthracene	40.0	38.6		ug/L		96	67 - 110	9	20

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-483721/3-A
Matrix: Water
Analysis Batch: 484422

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 483721

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]pyrene	40.0	43.9		ug/L		110	70 - 120	6	20
Benzo[b]fluoranthene	40.0	38.4		ug/L		96	69 - 123	4	20
Benzo[g,h,i]perylene	40.0	42.8		ug/L		107	70 - 120	5	20
Benzo[k]fluoranthene	40.0	45.6		ug/L		114	70 - 120	16	20
Benzoic acid	80.0	26.7	*	ug/L		33	10 - 100	21	20
Benzyl alcohol	40.0	40.8		ug/L		102	33 - 127	1	20
Bis(2-chloroethoxy)methane	40.0	36.7		ug/L		92	60 - 110	8	20
Bis(2-chloroethyl)ether	40.0	35.0		ug/L		88	49 - 110	3	20
Bis(2-ethylhexyl) phthalate	40.0	36.9		ug/L		92	69 - 120	7	20
Butyl benzyl phthalate	40.0	36.1		ug/L		90	68 - 120	6	20
Chrysene	40.0	41.4		ug/L		104	68 - 120	9	20
Dibenz(a,h)anthracene	40.0	44.6		ug/L		111	70 - 127	4	20
Dibenzofuran	40.0	32.9		ug/L		82	51 - 110	10	20
Diethyl phthalate	40.0	34.3		ug/L		86	62 - 120	8	20
Dimethyl phthalate	40.0	35.0		ug/L		88	63 - 120	8	20
Di-n-butyl phthalate	40.0	37.0		ug/L		93	70 - 120	7	20
Di-n-octyl phthalate	40.0	37.2		ug/L		93	70 - 122	6	20
Fluoranthene	40.0	38.8		ug/L		97	68 - 120	7	20
Fluorene	40.0	34.4		ug/L		86	53 - 120	10	20
Hexachlorobenzene	40.0	39.1		ug/L		98	61 - 120	10	20
Hexachlorobutadiene	40.0	23.8		ug/L		60	20 - 100	10	20
Hexachlorocyclopentadiene	40.0	23.2		ug/L		58	10 - 100	9	20
Hexachloroethane	40.0	23.8		ug/L		60	20 - 100	9	20
Indeno[1,2,3-cd]pyrene	40.0	44.6		ug/L		112	65 - 133	3	20
Isophorone	40.0	35.4		ug/L		89	57 - 110	7	20
Naphthalene	40.0	31.4		ug/L		78	36 - 110	12	20
Nitrobenzene	40.0	33.9		ug/L		85	53 - 110	8	20
N-Nitrosodi-n-propylamine	40.0	35.9		ug/L		90	58 - 110	3	20
N-Nitrosodiphenylamine	40.0	40.0		ug/L		100	66 - 110	9	20
Pentachlorophenol	80.0	64.4		ug/L		80	23 - 129	12	20
Phenol	40.0	17.4		ug/L		44	33 - 100	2	20
Pyrene	40.0	38.4		ug/L		96	70 - 110	7	20
2,4-Dimethylphenol	40.0	37.0		ug/L		93	51 - 110	7	20
Benzo[a]anthracene	40.0	36.9		ug/L		92	70 - 120	5	20
Phenanthrene	40.0	37.7		ug/L		94	65 - 120	8	20
3,3'-Dichlorobenzidine	40.0	32.5		ug/L		81	60 - 132	9	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	104		40 - 145
2-Fluorobiphenyl	82		34 - 110
2-Fluorophenol (Surr)	54		27 - 110
Nitrobenzene-d5 (Surr)	86		36 - 120
Phenol-d5 (Surr)	35		20 - 100
Terphenyl-d14 (Surr)	101		40 - 145

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-471326/1-A
Matrix: Water
Analysis Batch: 471658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 471326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		05/06/19 08:07	05/08/19 02:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		24 - 146				05/06/19 08:07	05/08/19 02:57	1
2-Fluorobiphenyl	97		37 - 120				05/06/19 08:07	05/08/19 02:57	1
2-Fluorophenol (Surr)	52		10 - 120				05/06/19 08:07	05/08/19 02:57	1
Nitrobenzene-d5 (Surr)	100		26 - 120				05/06/19 08:07	05/08/19 02:57	1
Phenol-d5 (Surr)	36		11 - 120				05/06/19 08:07	05/08/19 02:57	1
p-Terphenyl-d14	111		64 - 127				05/06/19 08:07	05/08/19 02:57	1

Lab Sample ID: LCS 480-471326/2-A
Matrix: Water
Analysis Batch: 471658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	16.0	21.1	*	ug/L		132	10 - 131
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	107		24 - 146				
2-Fluorobiphenyl	93		37 - 120				
2-Fluorophenol (Surr)	45		10 - 120				
Nitrobenzene-d5 (Surr)	87		26 - 120				
Phenol-d5 (Surr)	34		11 - 120				
p-Terphenyl-d14	99		64 - 127				

QC Association Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

GC/MS VOA

Analysis Batch: 471956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-1	SUPE-TB-01-043019	Total/NA	Water	8260C	
480-152848-2	SUPE-W-12A-043019	Total/NA	Water	8260C	
480-152848-3	SUPE-W-12CR-043019	Total/NA	Water	8260C	
480-152848-5	SUPE-W-10AR2-043019	Total/NA	Water	8260C	
MB 480-471956/7	Method Blank	Total/NA	Water	8260C	
LCS 480-471956/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 472158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-4	SUPE-W-30A-043019	Total/NA	Water	8260C	
MB 480-472158/7	Method Blank	Total/NA	Water	8260C	
LCS 480-472158/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 472194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-6	SUPE-M-99A-043019	Total/NA	Water	8260C	
MB 480-472194/7	Method Blank	Total/NA	Water	8260C	
LCS 480-472194/5	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 471326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-2	SUPE-W-12A-043019	Total/NA	Water	3510C	
480-152848-3	SUPE-W-12CR-043019	Total/NA	Water	3510C	
480-152848-4	SUPE-W-30A-043019	Total/NA	Water	3510C	
480-152848-5	SUPE-W-10AR2-043019	Total/NA	Water	3510C	
480-152848-6	SUPE-M-99A-043019	Total/NA	Water	3510C	
MB 480-471326/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-471326/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 471658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-2	SUPE-W-12A-043019	Total/NA	Water	8270D LL	471326
480-152848-3	SUPE-W-12CR-043019	Total/NA	Water	8270D LL	471326
480-152848-4	SUPE-W-30A-043019	Total/NA	Water	8270D LL	471326
480-152848-5	SUPE-W-10AR2-043019	Total/NA	Water	8270D LL	471326
480-152848-6	SUPE-M-99A-043019	Total/NA	Water	8270D LL	471326
MB 480-471326/1-A	Method Blank	Total/NA	Water	8270D LL	471326
LCS 480-471326/2-A	Lab Control Sample	Total/NA	Water	8270D LL	471326

Prep Batch: 483721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-2	SUPE-W-12A-043019	Total/NA	Water	3510C	
480-152848-3	SUPE-W-12CR-043019	Total/NA	Water	3510C	
480-152848-4	SUPE-W-30A-043019	Total/NA	Water	3510C	
480-152848-5 - DL	SUPE-W-10AR2-043019	Total/NA	Water	3510C	
480-152848-5	SUPE-W-10AR2-043019	Total/NA	Water	3510C	
480-152848-6	SUPE-M-99A-043019	Total/NA	Water	3510C	
MB 500-483721/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-483721/2-A	Lab Control Sample	Total/NA	Water	3510C	

Eurofins TestAmerica, Buffalo

QC Association Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

GC/MS Semi VOA (Continued)

Prep Batch: 483721 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 500-483721/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 484422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-2	SUPE-W-12A-043019	Total/NA	Water	8270D	483721
480-152848-3	SUPE-W-12CR-043019	Total/NA	Water	8270D	483721
480-152848-4	SUPE-W-30A-043019	Total/NA	Water	8270D	483721
480-152848-5	SUPE-W-10AR2-043019	Total/NA	Water	8270D	483721
480-152848-6	SUPE-M-99A-043019	Total/NA	Water	8270D	483721
MB 500-483721/1-A	Method Blank	Total/NA	Water	8270D	483721
LCS 500-483721/2-A	Lab Control Sample	Total/NA	Water	8270D	483721
LCSD 500-483721/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	483721

Analysis Batch: 486475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-152848-5 - DL	SUPE-W-10AR2-043019	Total/NA	Water	8270D	483721



Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-TB-01-043019

Lab Sample ID: 480-152848-1

Date Collected: 04/30/19 00:00

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471956	05/09/19 16:00	AEM	TAL BUF

Client Sample ID: SUPE-W-12A-043019

Lab Sample ID: 480-152848-2

Date Collected: 04/30/19 09:48

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471956	05/09/19 16:24	AEM	TAL BUF
Total/NA	Prep	3510C			483721	05/06/19 07:24	JVD	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 17:10	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 07:13	PJQ	TAL BUF

Client Sample ID: SUPE-W-12CR-043019

Lab Sample ID: 480-152848-3

Date Collected: 04/30/19 11:09

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471956	05/09/19 16:47	AEM	TAL BUF
Total/NA	Prep	3510C			483721	05/06/19 07:24	JVD	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 17:33	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 07:42	PJQ	TAL BUF

Client Sample ID: SUPE-W-30A-043019

Lab Sample ID: 480-152848-4

Date Collected: 04/30/19 12:35

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	472158	05/10/19 01:57	S1V	TAL BUF
Total/NA	Prep	3510C			483721	05/06/19 07:24	JVD	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 17:57	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		10	471658	05/08/19 08:10	PJQ	TAL BUF

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	471956	05/09/19 17:33	AEM	TAL BUF
Total/NA	Prep	3510C	DL		483721	05/06/19 07:24	JVD	TAL CHI
Total/NA	Analysis	8270D	DL	5	486475	05/22/19 11:27	AJD	TAL CHI
Total/NA	Prep	3510C			483721	05/06/19 07:24	JVD	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 18:21	AJD	TAL CHI

Eurofins TestAmerica, Buffalo

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Client Sample ID: SUPE-W-10AR2-043019

Lab Sample ID: 480-152848-5

Date Collected: 04/30/19 15:14

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		5	471658	05/08/19 08:39	PJQ	TAL BUF

Client Sample ID: SUPE-M-99A-043019

Lab Sample ID: 480-152848-6

Date Collected: 04/30/19 22:00

Matrix: Water

Date Received: 05/01/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	472194	05/10/19 11:41	OMI	TAL BUF
Total/NA	Prep	3510C			483721	05/06/19 07:24	JVD	TAL CHI
Total/NA	Analysis	8270D		1	484422	05/09/19 18:45	AJD	TAL CHI
Total/NA	Prep	3510C			471326	05/06/19 08:07	JMP	TAL BUF
Total/NA	Analysis	8270D LL		1	471658	05/08/19 09:08	PJQ	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
 TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998310390	08-31-19

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19 *

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-152848-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Assest ID
480-152848-1	SUPE-TB-01-043019	Water	04/30/19 00:00	05/01/19 09:30	
480-152848-2	SUPE-W-12A-043019	Water	04/30/19 09:48	05/01/19 09:30	
480-152848-3	SUPE-W-12CR-043019	Water	04/30/19 11:09	05/01/19 09:30	
480-152848-4	SUPE-W-30A-043019	Water	04/30/19 12:35	05/01/19 09:30	
480-152848-5	SUPE-W-10AR2-043019	Water	04/30/19 15:14	05/01/19 09:30	
480-152848-6	SUPE-M-99A-043019	Water	04/30/19 22:00	05/01/19 09:30	

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**CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS
REQUEST FORM**

REF.# 501069


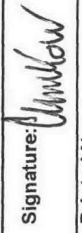

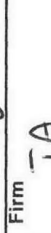
501069

Project Name: Superior 2019 1SA Sampling Company: Field & Technical Services Client: Beazer East, Inc.
 Project Number: OM-0556-19 Address: 200 Third Avenue Contact: (724) 858-5953
 Laboratory: TABUF Carnegie, PA 15106 btrask.2006@f-ts.com
 Shipment Method: FEDEX (412) 279-3363

Program: Superior 2019 1SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					HCL	None		
04/30/2019	0000	GW	SUPE-TB-01-043019	8260B_VOA+naphtha	8270C_SVOC (less naphtha)	2	0	 480-152848 Chain of Custody
04/30/2019	0948	GW	SUPE-W-12A-043019	6	3	6	3	
04/30/2019	1109	GW	SUPE-W-12CR-043019	6	3	6	3	
04/30/2019	1235	GW	SUPE-W-30A-043019	6	3	6	3	
04/30/2019	1514	GW	SUPE-W-10AR2-043019	6	3	6	3	
04/30/2019	2200	GW	SUPE-M-99A-043019	6	3	6	3	

Temp 2.7 3.2 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature:  Printed Name: Ben Trask Firm: FTS	Signature:  Printed Name: Umbrow Firm: TA	Signature:  Printed Name: Kolo Firm: Firm	Signature:  Printed Name: Firm Firm: Firm	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
Date/Time: 04/30/2019 1650	Date/Time: 05/01/19 0734	Date/Time: 05/01/19 0734	Date/Time: 05/01/19 0734	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 501069

501069

Project Name: Superior 2019 1SA Sampling Company: Field & Technical Services Client: Beazer East, Inc.
 Project Number: OM-0556-19 Address: 200 Third Avenue Contact: (724) 858-5953
 Laboratory: TABUF Carnegie, PA 15106 btrask.2006@f-ts.com
 Shipment Method FEDEX (412) 279-3363

Program: Superior 2019 1SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					HCL	None		
04/30/2019	0000	GW	SUPE-TB-01-043019	2	2	0		
04/30/2019	0948	GW	SUPE-W-12A-043019	6	3	3		
04/30/2019	1109	GW	SUPE-W-12CR-043019	6	3	3		
04/30/2019	1235	GW	SUPE-W-30A-043019	6	3	3		
04/30/2019	1514	GW	SUPE-W-10AR2-043019	6	3	3		
04/30/2019	2200	GW	SUPE-M-99A-043019	6	3	3		



480-152848 Chain of Custody


Temp 2.7 3.2 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Ben Trask	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 04/30/2019 1650	Date/Time: 05/01/19 07:34	Date/Time:	Date/Time:	



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Bortot, Veronica	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 480-49400.1				
Client Contact: Shipping/Receiving		Phone:	E-Mail: veronica.bortot@testamericainc.com	State of Origin: Wisconsin	Page: Page 1 of 1				
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin			Job #: 480-152848-1				
Address: 2417 Bond Street, City: University Park State, Zip: IL, 60484 Phone: 708-534-5200(Tel) 708-534-5211(Fax) Email:		Due Date Requested: 5/17/2019	Analysis Requested  480-152848 COC			Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)			
Project Name: Superior, WI Semiannual Groundwater		TAT Requested (days):				Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8270D/8510C (MOD) Semivolatiles, project list with n	Total Number of Containers	Special Instructions/Note:	
Site:		PO #:							Preservation Code:
		WO #:							
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D/8510C (MOD) Semivolatiles, project list with n	Total Number of Containers	Special Instructions/Note:
SUPE-W-12A-043019 (480-152848-2)	4/30/19	09:48 Central		Water			X	1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-12CR-043019 (480-152848-3)	4/30/19	11:09 Central		Water			X	1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-30A-043019 (480-152848-4)	4/30/19	12:35 Central		Water			X	1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-10AR2-043019 (480-152848-5)	4/30/19	15:14 Central		Water			X	1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-M-99A-043019 (480-152848-6)	4/30/19	22:00 Central		Water			X	1	Refer to PT-PM-WI-006 for Wisconsin Protocol
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:	Time:	Method of Shipment:				
Relinquished by: <i>[Signature]</i>		Date/Time: 5-3-19 1400	Company: TACMI	Received by: <i>Paula Buckley</i>		Date/Time: 5/4/19 0930	Company: TACMI		
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:	Company:		
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: -0.1 → -0.1					

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-152848-1

Login Number: 152848

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Harper, Marcus D

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	FTS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-152848-1

Login Number: 152848

List Source: Eurofins TestAmerica, Chicago

List Number: 3

List Creation: 05/04/19 01:55 PM

Creator: Buckley, Paula M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-0.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



FTS, LLC

DATE: June 3, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 480-153151-1

SAMPLES: SUPE-W-18D-050119, SUPE-W-04AR2, RB-02 050119

ANALYSES: Method 8260C (VOCs), 8270D/8270D LL (SVOCs)

LABORATORY: Eurofins TestAmerica Laboratories, Buffalo, Chicago

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: SVOCs were extracted outside of hold time for W-18D and W-04AR2 and results in these samples were qualified as estimated, "J".
- Laboratory Blank Contamination
Noncompliance: None
- Field Blank Contamination
Noncompliance: None
- Surrogate Recoveries
Noncompliance: The surrogate recovery of p-terphenyl-d14 fell below the recovery limits in sample W-04AR2. No action was taken on this basis.
- Laboratory Control Sample
Noncompliance: The LCSD recovery of 4,6-dinitro-2-methylphenol was above the recovery limits. No action was taken on this basis.

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-153151-1

Client Project/Site: Superior, WI Semiannual Groundwater

For:

Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
5/30/2019 4:00:15 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	11
QC Sample Results	12
QC Association Summary	19
Lab Chronicle	20
Certification Summary	21
Method Summary	22
Sample Summary	23
Chain of Custody	24
Receipt Checklists	27

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Job ID: 480-153151-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-153151-1

Comments

No additional comments.

Receipt

The samples were received on 5/8/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA (Chicago)

Method(s) 8270D LL: The continuing calibration verification (CCV) associated with batch 480-472972 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D, 8270D LL: The following sample was diluted due to the nature of the sample matrix: SUPE-W-04ARZ. Elevated reporting limits (RLs) are provided.

Method(s) 8270D LL: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SUPE-W-04ARZ. These results have been reported and qualified.

Method(s) 8270D: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCSD associated with batch 500-484525 had 1 analyte outside control limits: 4,6-Dinitro-2-methylphenol. These results have been reported and qualified.

Method(s) 8270D: The following samples were received past the hold time. The samples have been flagged accordingly. SUPE W-18D-050119 and SUPE-W-04ARZ

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C: The following samples were received outside of holding time: SUPE W-18D-050119 and SUPE-W-04ARZ.

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 480-472124.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE W-18D-050119

Lab Sample ID: 480-153151-1

No Detections.

Client Sample ID: SUPE-W-04ARZ

Lab Sample ID: 480-153151-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	5.6	H	0.97	0.31	ug/L	1		8270D	Total/NA
Benzo[a]pyrene	0.21	H	0.19	0.054	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	0.54	H	0.19	0.056	ug/L	1		8270D	Total/NA
Benzo[k]fluoranthene	0.34	H	0.19	0.071	ug/L	1		8270D	Total/NA
Chrysene	0.51	H	0.48	0.14	ug/L	1		8270D	Total/NA
Fluoranthene	0.72	J H	0.97	0.31	ug/L	1		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.22	H	0.19	0.081	ug/L	1		8270D	Total/NA
Pentachlorophenol	6.8	J H	19	5.4	ug/L	1		8270D	Total/NA
Pyrene	0.57	J H	0.97	0.46	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	0.37	H	0.19	0.042	ug/L	1		8270D	Total/NA

Client Sample ID: RB-02 050119

Lab Sample ID: 480-153151-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE W-18D-050119

Lab Sample ID: 480-153151-1

Date Collected: 05/01/19 09:22

Matrix: Water

Date Received: 05/08/19 09:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	H	1.0	0.34	ug/L		05/09/19 15:38	05/15/19 21:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	110		24 - 146				05/09/19 15:38	05/15/19 21:00	1
2-Fluorobiphenyl	83		37 - 120				05/09/19 15:38	05/15/19 21:00	1
2-Fluorophenol (Surr)	43		10 - 120				05/09/19 15:38	05/15/19 21:00	1
Nitrobenzene-d5 (Surr)	68		26 - 120				05/09/19 15:38	05/15/19 21:00	1
Phenol-d5 (Surr)	28		11 - 120				05/09/19 15:38	05/15/19 21:00	1
p-Terphenyl-d14	91		64 - 127				05/09/19 15:38	05/15/19 21:00	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	1.9	0.29	ug/L		05/09/19 13:11	05/10/19 17:00	1
1,2-Dichlorobenzene	ND	H	1.9	0.28	ug/L		05/09/19 13:11	05/10/19 17:00	1
1,3-Dichlorobenzene	ND	H	1.9	0.24	ug/L		05/09/19 13:11	05/10/19 17:00	1
1,4-Dichlorobenzene	ND	H	1.9	0.26	ug/L		05/09/19 13:11	05/10/19 17:00	1
1-Methylnaphthalene	ND	H	1.9	0.49	ug/L		05/09/19 13:11	05/10/19 17:00	1
bis(chloroisopropyl) ether	ND	H	1.9	0.29	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,3,4,6-Tetrachlorophenol	ND	H	4.9	1.5	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,4,5-Trichlorophenol	ND	H	9.7	2.2	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,4,6-Trichlorophenol	ND	H	4.9	1.1	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,4-Dichlorophenol	ND	H	9.7	2.2	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,4-Dinitrophenol	ND	H	19	7.2	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,4-Dinitrotoluene	ND	H	0.97	0.29	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,6-Dinitrotoluene	ND	H	0.97	0.12	ug/L		05/09/19 13:11	05/10/19 17:00	1
3 & 4 Methylphenol	ND	H	1.9	0.43	ug/L		05/09/19 13:11	05/10/19 17:00	1
2-Chloronaphthalene	ND	H	1.9	0.33	ug/L		05/09/19 13:11	05/10/19 17:00	1
2-Chlorophenol	ND	H	4.9	0.78	ug/L		05/09/19 13:11	05/10/19 17:00	1
2-Methylnaphthalene	ND	H	1.9	0.13	ug/L		05/09/19 13:11	05/10/19 17:00	1
2-Methylphenol	ND	H	1.9	0.30	ug/L		05/09/19 13:11	05/10/19 17:00	1
2-Nitroaniline	ND	H	4.9	1.0	ug/L		05/09/19 13:11	05/10/19 17:00	1
2-Nitrophenol	ND	H	9.7	2.1	ug/L		05/09/19 13:11	05/10/19 17:00	1
3-Nitroaniline	ND	H	9.7	2.2	ug/L		05/09/19 13:11	05/10/19 17:00	1
4,6-Dinitro-2-methylphenol	ND	H *	19	4.8	ug/L		05/09/19 13:11	05/10/19 17:00	1
4-Bromophenyl phenyl ether	ND	H	4.9	0.88	ug/L		05/09/19 13:11	05/10/19 17:00	1
4-Chloro-3-methylphenol	ND	H	9.7	2.1	ug/L		05/09/19 13:11	05/10/19 17:00	1
4-Chloroaniline	ND	H	9.7	2.0	ug/L		05/09/19 13:11	05/10/19 17:00	1
4-Chlorophenyl phenyl ether	ND	H	4.9	0.79	ug/L		05/09/19 13:11	05/10/19 17:00	1
4-Nitroaniline	ND	H	9.7	3.8	ug/L		05/09/19 13:11	05/10/19 17:00	1
4-Nitrophenol	ND	H	19	2.3	ug/L		05/09/19 13:11	05/10/19 17:00	1
Acenaphthene	ND	H	0.97	0.35	ug/L		05/09/19 13:11	05/10/19 17:00	1
Acenaphthylene	ND	H	0.97	0.31	ug/L		05/09/19 13:11	05/10/19 17:00	1
Anthracene	ND	H	0.97	0.31	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzo[a]pyrene	ND	H	0.19	0.054	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzo[b]fluoranthene	ND	H	0.19	0.056	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzo[g,h,i]perylene	ND	H	0.97	0.41	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzo[k]fluoranthene	ND	H	0.19	0.072	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzoic acid	ND	H	19	4.4	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzyl alcohol	ND	H	19	3.0	ug/L		05/09/19 13:11	05/10/19 17:00	1
Bis(2-chloroethoxy)methane	ND	H	1.9	0.29	ug/L		05/09/19 13:11	05/10/19 17:00	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE W-18D-050119

Lab Sample ID: 480-153151-1

Date Collected: 05/01/19 09:22

Matrix: Water

Date Received: 05/08/19 09:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND	H	1.9	0.34	ug/L		05/09/19 13:11	05/10/19 17:00	1
Bis(2-ethylhexyl) phthalate	ND	H	9.7	2.4	ug/L		05/09/19 13:11	05/10/19 17:00	1
Butyl benzyl phthalate	ND	H	1.9	0.26	ug/L		05/09/19 13:11	05/10/19 17:00	1
Chrysene	ND	H	0.49	0.14	ug/L		05/09/19 13:11	05/10/19 17:00	1
Dibenz(a,h)anthracene	ND	H	0.29	0.062	ug/L		05/09/19 13:11	05/10/19 17:00	1
Dibenzofuran	ND	H	1.9	0.34	ug/L		05/09/19 13:11	05/10/19 17:00	1
Diethyl phthalate	ND	H	1.9	0.43	ug/L		05/09/19 13:11	05/10/19 17:00	1
Dimethyl phthalate	ND	H	1.9	0.37	ug/L		05/09/19 13:11	05/10/19 17:00	1
Di-n-butyl phthalate	ND	H	4.9	0.78	ug/L		05/09/19 13:11	05/10/19 17:00	1
Di-n-octyl phthalate	ND	H	9.7	2.4	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,3,5,6-Tetrachlorophenol	ND	H	4.9	2.4	ug/L		05/09/19 13:11	05/10/19 17:00	1
Fluoranthene	ND	H	0.97	0.31	ug/L		05/09/19 13:11	05/10/19 17:00	1
Fluorene	ND	H	0.97	0.37	ug/L		05/09/19 13:11	05/10/19 17:00	1
Hexachlorobenzene	ND	H	0.49	0.14	ug/L		05/09/19 13:11	05/10/19 17:00	1
Hexachlorobutadiene	ND	H	4.9	1.1	ug/L		05/09/19 13:11	05/10/19 17:00	1
Hexachlorocyclopentadiene	ND	H	19	3.3	ug/L		05/09/19 13:11	05/10/19 17:00	1
Hexachloroethane	ND	H	4.9	0.94	ug/L		05/09/19 13:11	05/10/19 17:00	1
Indeno[1,2,3-cd]pyrene	ND	H	0.19	0.082	ug/L		05/09/19 13:11	05/10/19 17:00	1
Isophorone	ND	H	1.9	0.28	ug/L		05/09/19 13:11	05/10/19 17:00	1
Naphthalene	ND	H	0.97	0.29	ug/L		05/09/19 13:11	05/10/19 17:00	1
Nitrobenzene	ND	H	0.97	0.44	ug/L		05/09/19 13:11	05/10/19 17:00	1
N-Nitrosodi-n-propylamine	ND	H	0.49	0.14	ug/L		05/09/19 13:11	05/10/19 17:00	1
N-Nitrosodiphenylamine	ND	H	1.9	0.33	ug/L		05/09/19 13:11	05/10/19 17:00	1
Pentachlorophenol	ND	H	19	5.4	ug/L		05/09/19 13:11	05/10/19 17:00	1
Phenol	ND	H	4.9	0.35	ug/L		05/09/19 13:11	05/10/19 17:00	1
Pyrene	ND	H	0.97	0.47	ug/L		05/09/19 13:11	05/10/19 17:00	1
2,4-Dimethylphenol	ND	H	9.7	3.2	ug/L		05/09/19 13:11	05/10/19 17:00	1
Benzo[a]anthracene	ND	H	0.19	0.043	ug/L		05/09/19 13:11	05/10/19 17:00	1
Phenanthrene	ND	H	0.97	0.34	ug/L		05/09/19 13:11	05/10/19 17:00	1
3,3'-Dichlorobenzidine	ND	H	4.9	0.91	ug/L		05/09/19 13:11	05/10/19 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	103		40 - 145	05/09/19 13:11	05/10/19 17:00	1
2-Fluorobiphenyl	85		34 - 110	05/09/19 13:11	05/10/19 17:00	1
2-Fluorophenol (Surr)	47		27 - 110	05/09/19 13:11	05/10/19 17:00	1
Nitrobenzene-d5 (Surr)	83		36 - 120	05/09/19 13:11	05/10/19 17:00	1
Phenol-d5 (Surr)	29		20 - 100	05/09/19 13:11	05/10/19 17:00	1
Terphenyl-d14 (Surr)	101		40 - 145	05/09/19 13:11	05/10/19 17:00	1

Client Sample ID: SUPE-W-04ARZ

Lab Sample ID: 480-153151-2

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/08/19 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/11/19 04:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/11/19 04:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/11/19 04:26	1
Benzene	ND		1.0	0.41	ug/L			05/11/19 04:26	1
Chloromethane	ND		1.0	0.35	ug/L			05/11/19 04:26	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE-W-04ARZ

Lab Sample ID: 480-153151-2

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/08/19 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.74	ug/L			05/11/19 04:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/11/19 04:26	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/11/19 04:26	1
Naphthalene	ND		1.0	0.43	ug/L			05/11/19 04:26	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/11/19 04:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/11/19 04:26	1
o-Xylene	ND		1.0	0.76	ug/L			05/11/19 04:26	1
Styrene	ND		1.0	0.73	ug/L			05/11/19 04:26	1
Toluene	ND		1.0	0.51	ug/L			05/11/19 04:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/11/19 04:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120					05/11/19 04:26	1
4-Bromofluorobenzene (Surr)	100		73 - 120					05/11/19 04:26	1
Dibromofluoromethane (Surr)	111		75 - 123					05/11/19 04:26	1
Toluene-d8 (Surr)	96		80 - 120					05/11/19 04:26	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	H	5.0	1.7	ug/L		05/09/19 15:38	05/16/19 19:57	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		24 - 146				05/09/19 15:38	05/16/19 19:57	5
2-Fluorobiphenyl	63		37 - 120				05/09/19 15:38	05/16/19 19:57	5
2-Fluorophenol (Surr)	36		10 - 120				05/09/19 15:38	05/16/19 19:57	5
Nitrobenzene-d5 (Surr)	57		26 - 120				05/09/19 15:38	05/16/19 19:57	5
Phenol-d5 (Surr)	23		11 - 120				05/09/19 15:38	05/16/19 19:57	5
p-Terphenyl-d14	59	X	64 - 127				05/09/19 15:38	05/16/19 19:57	5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	1.9	0.29	ug/L		05/09/19 13:11	05/10/19 17:24	1
1,2-Dichlorobenzene	ND	H	1.9	0.28	ug/L		05/09/19 13:11	05/10/19 17:24	1
1,3-Dichlorobenzene	ND	H	1.9	0.24	ug/L		05/09/19 13:11	05/10/19 17:24	1
1,4-Dichlorobenzene	ND	H	1.9	0.26	ug/L		05/09/19 13:11	05/10/19 17:24	1
1-Methylnaphthalene	ND	H	1.9	0.48	ug/L		05/09/19 13:11	05/10/19 17:24	1
bis(chloroisopropyl) ether	ND	H	1.9	0.29	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,3,4,6-Tetrachlorophenol	ND	H	4.8	1.5	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,4,5-Trichlorophenol	ND	H	9.7	2.2	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,4,6-Trichlorophenol	ND	H	4.8	1.1	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,4-Dichlorophenol	ND	H	9.7	2.2	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,4-Dinitrophenol	ND	H	19	7.2	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,4-Dinitrotoluene	ND	H	0.97	0.29	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,6-Dinitrotoluene	ND	H	0.97	0.12	ug/L		05/09/19 13:11	05/10/19 17:24	1
3 & 4 Methylphenol	ND	H	1.9	0.42	ug/L		05/09/19 13:11	05/10/19 17:24	1
2-Chloronaphthalene	ND	H	1.9	0.33	ug/L		05/09/19 13:11	05/10/19 17:24	1
2-Chlorophenol	ND	H	4.8	0.77	ug/L		05/09/19 13:11	05/10/19 17:24	1
2-Methylnaphthalene	ND	H	1.9	0.13	ug/L		05/09/19 13:11	05/10/19 17:24	1
2-Methylphenol	ND	H	1.9	0.30	ug/L		05/09/19 13:11	05/10/19 17:24	1
2-Nitroaniline	ND	H	4.8	1.0	ug/L		05/09/19 13:11	05/10/19 17:24	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE-W-04ARZ

Lab Sample ID: 480-153151-2

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/08/19 09:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND	H	9.7	2.1	ug/L		05/09/19 13:11	05/10/19 17:24	1
3-Nitroaniline	ND	H	9.7	2.2	ug/L		05/09/19 13:11	05/10/19 17:24	1
4,6-Dinitro-2-methylphenol	ND	H *	19	4.7	ug/L		05/09/19 13:11	05/10/19 17:24	1
4-Bromophenyl phenyl ether	ND	H	4.8	0.88	ug/L		05/09/19 13:11	05/10/19 17:24	1
4-Chloro-3-methylphenol	ND	H	9.7	2.1	ug/L		05/09/19 13:11	05/10/19 17:24	1
4-Chloroaniline	ND	H	9.7	2.0	ug/L		05/09/19 13:11	05/10/19 17:24	1
4-Chlorophenyl phenyl ether	ND	H	4.8	0.78	ug/L		05/09/19 13:11	05/10/19 17:24	1
4-Nitroaniline	ND	H	9.7	3.8	ug/L		05/09/19 13:11	05/10/19 17:24	1
4-Nitrophenol	ND	H	19	2.3	ug/L		05/09/19 13:11	05/10/19 17:24	1
Acenaphthene	ND	H	0.97	0.35	ug/L		05/09/19 13:11	05/10/19 17:24	1
Acenaphthylene	ND	H	0.97	0.31	ug/L		05/09/19 13:11	05/10/19 17:24	1
Anthracene	5.6	H	0.97	0.31	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzo[a]pyrene	0.21	H	0.19	0.054	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzo[b]fluoranthene	0.54	H	0.19	0.056	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzo[g,h,i]perylene	ND	H	0.97	0.41	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzo[k]fluoranthene	0.34	H	0.19	0.071	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzoic acid	ND	H	19	4.4	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzyl alcohol	ND	H	19	2.9	ug/L		05/09/19 13:11	05/10/19 17:24	1
Bis(2-chloroethoxy)methane	ND	H	1.9	0.29	ug/L		05/09/19 13:11	05/10/19 17:24	1
Bis(2-chloroethyl)ether	ND	H	1.9	0.34	ug/L		05/09/19 13:11	05/10/19 17:24	1
Bis(2-ethylhexyl) phthalate	ND	H	9.7	2.3	ug/L		05/09/19 13:11	05/10/19 17:24	1
Butyl benzyl phthalate	ND	H	1.9	0.26	ug/L		05/09/19 13:11	05/10/19 17:24	1
Chrysene	0.51	H	0.48	0.14	ug/L		05/09/19 13:11	05/10/19 17:24	1
Dibenz(a,h)anthracene	ND	H	0.29	0.062	ug/L		05/09/19 13:11	05/10/19 17:24	1
Dibenzofuran	ND	H	1.9	0.34	ug/L		05/09/19 13:11	05/10/19 17:24	1
Diethyl phthalate	ND	H	1.9	0.42	ug/L		05/09/19 13:11	05/10/19 17:24	1
Dimethyl phthalate	ND	H	1.9	0.37	ug/L		05/09/19 13:11	05/10/19 17:24	1
Di-n-butyl phthalate	ND	H	4.8	0.77	ug/L		05/09/19 13:11	05/10/19 17:24	1
Di-n-octyl phthalate	ND	H	9.7	2.4	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,3,5,6-Tetrachlorophenol	ND	H	4.8	2.4	ug/L		05/09/19 13:11	05/10/19 17:24	1
Fluoranthene	0.72	J H	0.97	0.31	ug/L		05/09/19 13:11	05/10/19 17:24	1
Fluorene	ND	H	0.97	0.37	ug/L		05/09/19 13:11	05/10/19 17:24	1
Hexachlorobenzene	ND	H	0.48	0.14	ug/L		05/09/19 13:11	05/10/19 17:24	1
Hexachlorobutadiene	ND	H	4.8	1.1	ug/L		05/09/19 13:11	05/10/19 17:24	1
Hexachlorocyclopentadiene	ND	H	19	3.3	ug/L		05/09/19 13:11	05/10/19 17:24	1
Hexachloroethane	ND	H	4.8	0.94	ug/L		05/09/19 13:11	05/10/19 17:24	1
Indeno[1,2,3-cd]pyrene	0.22	H	0.19	0.081	ug/L		05/09/19 13:11	05/10/19 17:24	1
Isophorone	ND	H	1.9	0.28	ug/L		05/09/19 13:11	05/10/19 17:24	1
Naphthalene	ND	H	0.97	0.29	ug/L		05/09/19 13:11	05/10/19 17:24	1
Nitrobenzene	ND	H	0.97	0.43	ug/L		05/09/19 13:11	05/10/19 17:24	1
N-Nitrosodi-n-propylamine	ND	H	0.48	0.14	ug/L		05/09/19 13:11	05/10/19 17:24	1
N-Nitrosodiphenylamine	ND	H	1.9	0.33	ug/L		05/09/19 13:11	05/10/19 17:24	1
Pentachlorophenol	6.8	J H	19	5.4	ug/L		05/09/19 13:11	05/10/19 17:24	1
Phenol	ND	H	4.8	0.35	ug/L		05/09/19 13:11	05/10/19 17:24	1
Pyrene	0.57	J H	0.97	0.46	ug/L		05/09/19 13:11	05/10/19 17:24	1
2,4-Dimethylphenol	ND	H	9.7	3.2	ug/L		05/09/19 13:11	05/10/19 17:24	1
Benzo[a]anthracene	0.37	H	0.19	0.042	ug/L		05/09/19 13:11	05/10/19 17:24	1
Phenanthrene	ND	H	0.97	0.34	ug/L		05/09/19 13:11	05/10/19 17:24	1
3,3'-Dichlorobenzidine	ND	H	4.8	0.91	ug/L		05/09/19 13:11	05/10/19 17:24	1

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE-W-04ARZ

Lab Sample ID: 480-153151-2

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/08/19 09:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	114		40 - 145	05/09/19 13:11	05/10/19 17:24	1
2-Fluorobiphenyl	89		34 - 110	05/09/19 13:11	05/10/19 17:24	1
2-Fluorophenol (Surr)	49		27 - 110	05/09/19 13:11	05/10/19 17:24	1
Nitrobenzene-d5 (Surr)	84		36 - 120	05/09/19 13:11	05/10/19 17:24	1
Phenol-d5 (Surr)	30		20 - 100	05/09/19 13:11	05/10/19 17:24	1
Terphenyl-d14 (Surr)	88		40 - 145	05/09/19 13:11	05/10/19 17:24	1

Client Sample ID: RB-02 050119

Lab Sample ID: 480-153151-3

Date Collected: 05/01/19 08:00

Matrix: Water

Date Received: 05/08/19 09:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/11/19 04:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/11/19 04:50	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/11/19 04:50	1
Benzene	ND		1.0	0.41	ug/L			05/11/19 04:50	1
Chloromethane	ND		1.0	0.35	ug/L			05/11/19 04:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/11/19 04:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/11/19 04:50	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/11/19 04:50	1
Naphthalene	ND		1.0	0.43	ug/L			05/11/19 04:50	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/11/19 04:50	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/11/19 04:50	1
o-Xylene	ND		1.0	0.76	ug/L			05/11/19 04:50	1
Styrene	ND		1.0	0.73	ug/L			05/11/19 04:50	1
Toluene	ND		1.0	0.51	ug/L			05/11/19 04:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/11/19 04:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		77 - 120		05/11/19 04:50	1
4-Bromofluorobenzene (Surr)	100		73 - 120		05/11/19 04:50	1
Dibromofluoromethane (Surr)	113		75 - 123		05/11/19 04:50	1
Toluene-d8 (Surr)	94		80 - 120		05/11/19 04:50	1

Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-153151-2	SUPE-W-04ARZ	109	100	111	96
480-153151-3	RB-02 050119	105	100	113	94
LCS 480-472323/5	Lab Control Sample	96	108	103	103
MB 480-472323/7	Method Blank	98	102	108	95

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-153151-1	SUPE W-18D-050119	103	85	47	83	29	101
480-153151-2	SUPE-W-04ARZ	114	89	49	84	30	88
LCS 500-484525/2-A	Lab Control Sample	107	88	56	82	33	94
LCSD 500-484525/3-A	Lab Control Sample Dup	106	88	56	83	34	94
MB 500-484525/1-A	Method Blank	81	73	49	77	35	99

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-153151-1	SUPE W-18D-050119	110	83	43	68	28	91
480-153151-2	SUPE-W-04ARZ	81	63	36	57	23	59 X
LCS 480-472124/2-A	Lab Control Sample	112	100	60	99	41	104
LCSD 480-472124/3-A	Lab Control Sample Dup	110	100	59	96	38	102
MB 480-472124/1-A	Method Blank	105	106	59	92	39	111

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHd14 = p-Terphenyl-d14

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-472323/7

Matrix: Water

Analysis Batch: 472323

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			05/10/19 22:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/10/19 22:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/10/19 22:05	1
Benzene	ND		1.0	0.41	ug/L			05/10/19 22:05	1
Chloromethane	ND		1.0	0.35	ug/L			05/10/19 22:05	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/10/19 22:05	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/10/19 22:05	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/10/19 22:05	1
Naphthalene	ND		1.0	0.43	ug/L			05/10/19 22:05	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/10/19 22:05	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/10/19 22:05	1
o-Xylene	ND		1.0	0.76	ug/L			05/10/19 22:05	1
Styrene	ND		1.0	0.73	ug/L			05/10/19 22:05	1
Toluene	ND		1.0	0.51	ug/L			05/10/19 22:05	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/10/19 22:05	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/10/19 22:05	1
4-Bromofluorobenzene (Surr)	102		73 - 120		05/10/19 22:05	1
Dibromofluoromethane (Surr)	108		75 - 123		05/10/19 22:05	1
Toluene-d8 (Surr)	95		80 - 120		05/10/19 22:05	1

Lab Sample ID: LCS 480-472323/5

Matrix: Water

Analysis Batch: 472323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	73 - 126
1,2,4-Trimethylbenzene	25.0	24.9		ug/L		100	76 - 121
1,3,5-Trimethylbenzene	25.0	25.0		ug/L		100	77 - 121
Benzene	25.0	24.4		ug/L		98	71 - 124
Chloromethane	25.0	30.2		ug/L		121	68 - 124
Ethylbenzene	25.0	25.2		ug/L		101	77 - 123
Methyl tert-butyl ether	25.0	23.5		ug/L		94	77 - 120
m-Xylene & p-Xylene	25.0	27.5		ug/L		110	76 - 122
Naphthalene	25.0	25.4		ug/L		102	66 - 125
n-Butylbenzene	25.0	24.7		ug/L		99	71 - 128
N-Propylbenzene	25.0	24.2		ug/L		97	75 - 127
o-Xylene	25.0	26.6		ug/L		107	76 - 122
Styrene	25.0	27.2		ug/L		109	80 - 120
Toluene	25.0	25.2		ug/L		101	80 - 122
Xylenes, Total	50.0	54.1		ug/L		108	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		77 - 120
4-Bromofluorobenzene (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	103		75 - 123
Toluene-d8 (Surr)	103		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-484525/1-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 484525

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		05/09/19 13:11	05/10/19 12:40	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		05/09/19 13:11	05/10/19 12:40	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		05/09/19 13:11	05/10/19 12:40	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		05/09/19 13:11	05/10/19 12:40	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		05/09/19 13:11	05/10/19 12:40	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		05/09/19 13:11	05/10/19 12:40	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		05/09/19 13:11	05/10/19 12:40	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		05/09/19 13:11	05/10/19 12:40	1
2-Chlorophenol	ND		5.0	0.80	ug/L		05/09/19 13:11	05/10/19 12:40	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		05/09/19 13:11	05/10/19 12:40	1
2-Methylphenol	ND		2.0	0.31	ug/L		05/09/19 13:11	05/10/19 12:40	1
2-Nitroaniline	ND		5.0	1.1	ug/L		05/09/19 13:11	05/10/19 12:40	1
2-Nitrophenol	ND		10	2.1	ug/L		05/09/19 13:11	05/10/19 12:40	1
3-Nitroaniline	ND		10	2.3	ug/L		05/09/19 13:11	05/10/19 12:40	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		05/09/19 13:11	05/10/19 12:40	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		05/09/19 13:11	05/10/19 12:40	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		05/09/19 13:11	05/10/19 12:40	1
4-Chloroaniline	ND		10	2.1	ug/L		05/09/19 13:11	05/10/19 12:40	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		05/09/19 13:11	05/10/19 12:40	1
4-Nitroaniline	ND		10	3.9	ug/L		05/09/19 13:11	05/10/19 12:40	1
4-Nitrophenol	ND		20	2.3	ug/L		05/09/19 13:11	05/10/19 12:40	1
Acenaphthene	ND		1.0	0.36	ug/L		05/09/19 13:11	05/10/19 12:40	1
Acenaphthylene	ND		1.0	0.32	ug/L		05/09/19 13:11	05/10/19 12:40	1
Anthracene	ND		1.0	0.32	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzoic acid	ND		20	4.6	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzyl alcohol	ND		20	3.1	ug/L		05/09/19 13:11	05/10/19 12:40	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		05/09/19 13:11	05/10/19 12:40	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		05/09/19 13:11	05/10/19 12:40	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		05/09/19 13:11	05/10/19 12:40	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		05/09/19 13:11	05/10/19 12:40	1
Chrysene	ND		0.50	0.14	ug/L		05/09/19 13:11	05/10/19 12:40	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		05/09/19 13:11	05/10/19 12:40	1
Dibenzofuran	ND		2.0	0.35	ug/L		05/09/19 13:11	05/10/19 12:40	1
Diethyl phthalate	ND		2.0	0.44	ug/L		05/09/19 13:11	05/10/19 12:40	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		05/09/19 13:11	05/10/19 12:40	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		05/09/19 13:11	05/10/19 12:40	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		05/09/19 13:11	05/10/19 12:40	1

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-484525/1-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 484525

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		05/09/19 13:11	05/10/19 12:40	1
Fluoranthene	ND		1.0	0.32	ug/L		05/09/19 13:11	05/10/19 12:40	1
Fluorene	ND		1.0	0.38	ug/L		05/09/19 13:11	05/10/19 12:40	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		05/09/19 13:11	05/10/19 12:40	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		05/09/19 13:11	05/10/19 12:40	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		05/09/19 13:11	05/10/19 12:40	1
Hexachloroethane	ND		5.0	0.97	ug/L		05/09/19 13:11	05/10/19 12:40	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		05/09/19 13:11	05/10/19 12:40	1
Isophorone	ND		2.0	0.29	ug/L		05/09/19 13:11	05/10/19 12:40	1
Naphthalene	ND		1.0	0.30	ug/L		05/09/19 13:11	05/10/19 12:40	1
Nitrobenzene	ND		1.0	0.45	ug/L		05/09/19 13:11	05/10/19 12:40	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		05/09/19 13:11	05/10/19 12:40	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		05/09/19 13:11	05/10/19 12:40	1
Pentachlorophenol	ND		20	5.6	ug/L		05/09/19 13:11	05/10/19 12:40	1
Phenol	ND		5.0	0.36	ug/L		05/09/19 13:11	05/10/19 12:40	1
Pyrene	ND		1.0	0.48	ug/L		05/09/19 13:11	05/10/19 12:40	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		05/09/19 13:11	05/10/19 12:40	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		05/09/19 13:11	05/10/19 12:40	1
Phenanthrene	ND		1.0	0.35	ug/L		05/09/19 13:11	05/10/19 12:40	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		05/09/19 13:11	05/10/19 12:40	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	81		40 - 145	05/09/19 13:11	05/10/19 12:40	1
2-Fluorobiphenyl	73		34 - 110	05/09/19 13:11	05/10/19 12:40	1
2-Fluorophenol (Surr)	49		27 - 110	05/09/19 13:11	05/10/19 12:40	1
Nitrobenzene-d5 (Surr)	77		36 - 120	05/09/19 13:11	05/10/19 12:40	1
Phenol-d5 (Surr)	35		20 - 100	05/09/19 13:11	05/10/19 12:40	1
Terphenyl-d14 (Surr)	99		40 - 145	05/09/19 13:11	05/10/19 12:40	1

Lab Sample ID: LCS 500-484525/2-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 484525

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
1,2,4-Trichlorobenzene	40.0	32.0		ug/L		80	26 - 110
1,2-Dichlorobenzene	40.0	32.4		ug/L		81	26 - 110
1,3-Dichlorobenzene	40.0	32.0		ug/L		80	22 - 110
1,4-Dichlorobenzene	40.0	32.3		ug/L		81	23 - 110
1-Methylnaphthalene	40.0	35.1		ug/L		88	38 - 110
bis(chloroisopropyl) ether	40.0	25.2		ug/L		63	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	34.0		ug/L		85	44 - 118
2,4,5-Trichlorophenol	40.0	36.0		ug/L		90	63 - 120
2,4,6-Trichlorophenol	40.0	36.8		ug/L		92	62 - 110
2,4-Dichlorophenol	40.0	36.6		ug/L		92	62 - 110
2,4-Dinitrophenol	80.0	66.7		ug/L		83	37 - 130
2,4-Dinitrotoluene	40.0	34.5		ug/L		86	63 - 122
2,6-Dinitrotoluene	40.0	37.0		ug/L		92	63 - 119
3 & 4 Methylphenol	40.0	30.6		ug/L		77	53 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-484525/2-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 484525

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	40.0	32.7		ug/L		82	39 - 110
2-Chlorophenol	40.0	35.1		ug/L		88	59 - 110
2-Methylnaphthalene	40.0	35.0		ug/L		88	34 - 110
2-Methylphenol	40.0	30.4		ug/L		76	53 - 110
2-Nitroaniline	40.0	31.0		ug/L		78	59 - 122
2-Nitrophenol	40.0	35.3		ug/L		88	58 - 110
3-Nitroaniline	40.0	28.9		ug/L		72	47 - 123
4,6-Dinitro-2-methylphenol	80.0	91.9		ug/L		115	50 - 117
4-Bromophenyl phenyl ether	40.0	38.3		ug/L		96	58 - 120
4-Chloro-3-methylphenol	40.0	34.0		ug/L		85	64 - 120
4-Chloroaniline	40.0	37.9		ug/L		95	35 - 128
4-Chlorophenyl phenyl ether	40.0	34.7		ug/L		87	47 - 112
4-Nitroaniline	40.0	28.6		ug/L		72	52 - 147
4-Nitrophenol	80.0	18.3	J	ug/L		23	20 - 110
Acenaphthene	40.0	35.2		ug/L		88	46 - 110
Acenaphthylene	40.0	34.7		ug/L		87	47 - 110
Anthracene	40.0	40.0		ug/L		100	67 - 110
Benzo[a]pyrene	40.0	44.2		ug/L		110	70 - 120
Benzo[b]fluoranthene	40.0	44.8		ug/L		112	69 - 123
Benzo[g,h,i]perylene	40.0	43.0		ug/L		108	70 - 120
Benzo[k]fluoranthene	40.0	44.9		ug/L		112	70 - 120
Benzoic acid	80.0	23.0		ug/L		29	10 - 100
Benzyl alcohol	40.0	38.7		ug/L		97	33 - 127
Bis(2-chloroethoxy)methane	40.0	35.9		ug/L		90	60 - 110
Bis(2-chloroethyl)ether	40.0	33.6		ug/L		84	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	35.3		ug/L		88	69 - 120
Butyl benzyl phthalate	40.0	34.4		ug/L		86	68 - 120
Chrysene	40.0	43.1		ug/L		108	68 - 120
Dibenz(a,h)anthracene	40.0	44.7		ug/L		112	70 - 127
Dibenzofuran	40.0	35.0		ug/L		88	51 - 110
Diethyl phthalate	40.0	33.8		ug/L		85	62 - 120
Dimethyl phthalate	40.0	35.1		ug/L		88	63 - 120
Di-n-butyl phthalate	40.0	36.0		ug/L		90	70 - 120
Di-n-octyl phthalate	40.0	34.9		ug/L		87	70 - 122
Fluoranthene	40.0	38.2		ug/L		96	68 - 120
Fluorene	40.0	36.7		ug/L		92	53 - 120
Hexachlorobenzene	40.0	42.2		ug/L		106	61 - 120
Hexachlorobutadiene	40.0	29.6		ug/L		74	20 - 100
Hexachlorocyclopentadiene	40.0	32.0		ug/L		80	10 - 100
Hexachloroethane	40.0	28.8		ug/L		72	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	44.5		ug/L		111	65 - 133
Isophorone	40.0	33.1		ug/L		83	57 - 110
Naphthalene	40.0	33.6		ug/L		84	36 - 110
Nitrobenzene	40.0	33.4		ug/L		84	53 - 110
N-Nitrosodi-n-propylamine	40.0	35.0		ug/L		88	58 - 110
N-Nitrosodiphenylamine	40.0	41.0		ug/L		103	66 - 110
Pentachlorophenol	80.0	72.0		ug/L		90	23 - 129
Phenol	40.0	14.9		ug/L		37	33 - 100
Pyrene	40.0	38.1		ug/L		95	70 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-484525/2-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 484525

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dimethylphenol	40.0	34.6		ug/L		87	51 - 110
Benzo[a]anthracene	40.0	33.5		ug/L		84	70 - 120
Phenanthrene	40.0	39.0		ug/L		97	65 - 120
3,3'-Dichlorobenzidine	40.0	29.5		ug/L		74	60 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	107		40 - 145
2-Fluorobiphenyl	88		34 - 110
2-Fluorophenol (Surr)	56		27 - 110
Nitrobenzene-d5 (Surr)	82		36 - 120
Phenol-d5 (Surr)	33		20 - 100
Terphenyl-d14 (Surr)	94		40 - 145

Lab Sample ID: LCSD 500-484525/3-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 484525

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	40.0	31.5		ug/L		79	26 - 110	2	20
1,2-Dichlorobenzene	40.0	31.5		ug/L		79	26 - 110	3	20
1,3-Dichlorobenzene	40.0	30.7		ug/L		77	22 - 110	4	20
1,4-Dichlorobenzene	40.0	31.0		ug/L		78	23 - 110	4	20
1-Methylnaphthalene	40.0	34.8		ug/L		87	38 - 110	1	20
bis(chloroisopropyl) ether	40.0	24.7		ug/L		62	38 - 110	2	20
2,3,4,6-Tetrachlorophenol	40.0	35.5		ug/L		89	44 - 118	4	20
2,4,5-Trichlorophenol	40.0	34.1		ug/L		85	63 - 120	6	20
2,4,6-Trichlorophenol	40.0	36.4		ug/L		91	62 - 110	1	20
2,4-Dichlorophenol	40.0	36.6		ug/L		92	62 - 110	0	20
2,4-Dinitrophenol	80.0	68.9		ug/L		86	37 - 130	3	20
2,4-Dinitrotoluene	40.0	34.7		ug/L		87	63 - 122	1	20
2,6-Dinitrotoluene	40.0	36.9		ug/L		92	63 - 119	0	20
3 & 4 Methylphenol	40.0	30.4		ug/L		76	53 - 110	1	20
2-Chloronaphthalene	40.0	32.7		ug/L		82	39 - 110	0	20
2-Chlorophenol	40.0	34.4		ug/L		86	59 - 110	2	20
2-Methylnaphthalene	40.0	36.9		ug/L		92	34 - 110	5	20
2-Methylphenol	40.0	29.6		ug/L		74	53 - 110	3	20
2-Nitroaniline	40.0	31.5		ug/L		79	59 - 122	1	20
2-Nitrophenol	40.0	34.6		ug/L		87	58 - 110	2	20
3-Nitroaniline	40.0	30.8		ug/L		77	47 - 123	7	20
4,6-Dinitro-2-methylphenol	80.0	94.2	*	ug/L		118	50 - 117	2	20
4-Bromophenyl phenyl ether	40.0	37.7		ug/L		94	58 - 120	2	20
4-Chloro-3-methylphenol	40.0	34.5		ug/L		86	64 - 120	1	20
4-Chloroaniline	40.0	38.1		ug/L		95	35 - 128	1	20
4-Chlorophenyl phenyl ether	40.0	34.3		ug/L		86	47 - 112	1	20
4-Nitroaniline	40.0	29.2		ug/L		73	52 - 147	2	20
4-Nitrophenol	80.0	17.8	J	ug/L		22	20 - 110	3	20
Acenaphthene	40.0	34.4		ug/L		86	46 - 110	2	20
Acenaphthylene	40.0	34.1		ug/L		85	47 - 110	2	20

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-484525/3-A

Matrix: Water

Analysis Batch: 484632

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 484525

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
		Result	Qualifier				Limits		Limit
Anthracene	40.0	40.3		ug/L		101	67 - 110	1	20
Benzo[a]pyrene	40.0	44.9		ug/L		112	70 - 120	2	20
Benzo[b]fluoranthene	40.0	46.1		ug/L		115	69 - 123	3	20
Benzo[g,h,i]perylene	40.0	43.5		ug/L		109	70 - 120	1	20
Benzo[k]fluoranthene	40.0	48.0		ug/L		120	70 - 120	7	20
Benzoic acid	80.0	20.7		ug/L		26	10 - 100	11	20
Benzyl alcohol	40.0	38.4		ug/L		96	33 - 127	1	20
Bis(2-chloroethoxy)methane	40.0	35.5		ug/L		89	60 - 110	1	20
Bis(2-chloroethyl)ether	40.0	33.6		ug/L		84	49 - 110	0	20
Bis(2-ethylhexyl) phthalate	40.0	36.1		ug/L		90	69 - 120	2	20
Butyl benzyl phthalate	40.0	34.9		ug/L		87	68 - 120	2	20
Chrysene	40.0	43.5		ug/L		109	68 - 120	1	20
Dibenz(a,h)anthracene	40.0	45.2		ug/L		113	70 - 127	1	20
Dibenzofuran	40.0	34.9		ug/L		87	51 - 110	0	20
Diethyl phthalate	40.0	34.1		ug/L		85	62 - 120	1	20
Dimethyl phthalate	40.0	35.0		ug/L		87	63 - 120	0	20
Di-n-butyl phthalate	40.0	36.9		ug/L		92	70 - 120	3	20
Di-n-octyl phthalate	40.0	35.7		ug/L		89	70 - 122	2	20
Fluoranthene	40.0	38.7		ug/L		97	68 - 120	1	20
Fluorene	40.0	36.2		ug/L		90	53 - 120	1	20
Hexachlorobenzene	40.0	42.1		ug/L		105	61 - 120	0	20
Hexachlorobutadiene	40.0	28.5		ug/L		71	20 - 100	4	20
Hexachlorocyclopentadiene	40.0	30.7		ug/L		77	10 - 100	4	20
Hexachloroethane	40.0	27.3		ug/L		68	20 - 100	5	20
Indeno[1,2,3-cd]pyrene	40.0	45.1		ug/L		113	65 - 133	1	20
Isophorone	40.0	33.1		ug/L		83	57 - 110	0	20
Naphthalene	40.0	33.1		ug/L		83	36 - 110	1	20
Nitrobenzene	40.0	33.4		ug/L		83	53 - 110	0	20
N-Nitrosodi-n-propylamine	40.0	34.9		ug/L		87	58 - 110	0	20
N-Nitrosodiphenylamine	40.0	40.9		ug/L		102	66 - 110	0	20
Pentachlorophenol	80.0	73.1		ug/L		91	23 - 129	2	20
Phenol	40.0	15.0		ug/L		38	33 - 100	1	20
Pyrene	40.0	38.8		ug/L		97	70 - 110	2	20
2,4-Dimethylphenol	40.0	35.6		ug/L		89	51 - 110	3	20
Benzo[a]anthracene	40.0	34.8		ug/L		87	70 - 120	4	20
Phenanthrene	40.0	38.9		ug/L		97	65 - 120	0	20
3,3'-Dichlorobenzidine	40.0	34.6		ug/L		86	60 - 132	16	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	106		40 - 145
2-Fluorobiphenyl	88		34 - 110
2-Fluorophenol (Surr)	56		27 - 110
Nitrobenzene-d5 (Surr)	83		36 - 120
Phenol-d5 (Surr)	34		20 - 100
Terphenyl-d14 (Surr)	94		40 - 145

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-472124/1-A
Matrix: Water
Analysis Batch: 472972

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 472124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		05/09/19 15:38	05/15/19 15:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	105		24 - 146	05/09/19 15:38	05/15/19 15:40	1
2-Fluorobiphenyl	106		37 - 120	05/09/19 15:38	05/15/19 15:40	1
2-Fluorophenol (Surr)	59		10 - 120	05/09/19 15:38	05/15/19 15:40	1
Nitrobenzene-d5 (Surr)	92		26 - 120	05/09/19 15:38	05/15/19 15:40	1
Phenol-d5 (Surr)	39		11 - 120	05/09/19 15:38	05/15/19 15:40	1
p-Terphenyl-d14	111		64 - 127	05/09/19 15:38	05/15/19 15:40	1

Lab Sample ID: LCS 480-472124/2-A
Matrix: Water
Analysis Batch: 472972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 472124

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	16.0	16.4		ug/L		102	10 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	112		24 - 146
2-Fluorobiphenyl	100		37 - 120
2-Fluorophenol (Surr)	60		10 - 120
Nitrobenzene-d5 (Surr)	99		26 - 120
Phenol-d5 (Surr)	41		11 - 120
p-Terphenyl-d14	104		64 - 127

Lab Sample ID: LCSD 480-472124/3-A
Matrix: Water
Analysis Batch: 472972

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 472124

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	16.0	15.7		ug/L		98	10 - 131	4	171

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	110		24 - 146
2-Fluorobiphenyl	100		37 - 120
2-Fluorophenol (Surr)	59		10 - 120
Nitrobenzene-d5 (Surr)	96		26 - 120
Phenol-d5 (Surr)	38		11 - 120
p-Terphenyl-d14	102		64 - 127

QC Association Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

GC/MS VOA

Analysis Batch: 472323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-153151-2	SUPE-W-04ARZ	Total/NA	Water	8260C	
480-153151-3	RB-02 050119	Total/NA	Water	8260C	
MB 480-472323/7	Method Blank	Total/NA	Water	8260C	
LCS 480-472323/5	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 472124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-153151-1	SUPE W-18D-050119	Total/NA	Water	3510C	
480-153151-2	SUPE-W-04ARZ	Total/NA	Water	3510C	
MB 480-472124/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-472124/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-472124/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 472972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-153151-1	SUPE W-18D-050119	Total/NA	Water	8270D LL	472124
MB 480-472124/1-A	Method Blank	Total/NA	Water	8270D LL	472124
LCS 480-472124/2-A	Lab Control Sample	Total/NA	Water	8270D LL	472124
LCSD 480-472124/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	472124

Analysis Batch: 473256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-153151-2	SUPE-W-04ARZ	Total/NA	Water	8270D LL	472124

Prep Batch: 484525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-153151-1	SUPE W-18D-050119	Total/NA	Water	3510C	
480-153151-2	SUPE-W-04ARZ	Total/NA	Water	3510C	
MB 500-484525/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-484525/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-484525/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 484632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-153151-1	SUPE W-18D-050119	Total/NA	Water	8270D	484525
480-153151-2	SUPE-W-04ARZ	Total/NA	Water	8270D	484525
MB 500-484525/1-A	Method Blank	Total/NA	Water	8270D	484525
LCS 500-484525/2-A	Lab Control Sample	Total/NA	Water	8270D	484525
LCSD 500-484525/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	484525

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Client Sample ID: SUPE W-18D-050119

Lab Sample ID: 480-153151-1

Date Collected: 05/01/19 09:22

Matrix: Water

Date Received: 05/08/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			484525	05/09/19 13:11	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484632	05/10/19 17:00	AJD	TAL CHI
Total/NA	Prep	3510C			472124	05/09/19 15:38	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	472972	05/15/19 21:00	RJS	TAL BUF

Client Sample ID: SUPE-W-04ARZ

Lab Sample ID: 480-153151-2

Date Collected: 05/01/19 08:30

Matrix: Water

Date Received: 05/08/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	472323	05/11/19 04:26	OMI	TAL BUF
Total/NA	Prep	3510C			484525	05/09/19 13:11	DAK	TAL CHI
Total/NA	Analysis	8270D		1	484632	05/10/19 17:24	AJD	TAL CHI
Total/NA	Prep	3510C			472124	05/09/19 15:38	ATG	TAL BUF
Total/NA	Analysis	8270D LL		5	473256	05/16/19 19:57	RJS	TAL BUF

Client Sample ID: RB-02 050119

Lab Sample ID: 480-153151-3

Date Collected: 05/01/19 08:00

Matrix: Water

Date Received: 05/08/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	472323	05/11/19 04:50	OMI	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998310390	08-31-19

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19 *

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-153151-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-153151-1	SUPE W-18D-050119	Water	05/01/19 09:22	05/08/19 09:00	
480-153151-2	SUPE-W-04ARZ	Water	05/01/19 08:30	05/08/19 09:00	
480-153151-3	RB-02 050119	Water	05/01/19 08:00	05/08/19 09:00	

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Part # 159469-434 RIT EXP 0120

ORIGIN ID:DKKA (716) 691-2600
CHAR BRONSON
TEST AMERICA
10 HAZELWOOD

SHIP DATE: 07MAY19
ACTWT: 38.05 LB
CAD: 846654/CAFE3211
DIMS: 19x19x11 IN

AMHERST, NY 14228
UNITED STATES US

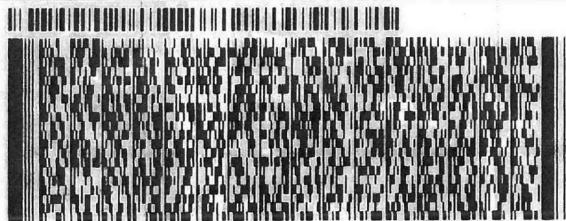
BILL RECIPIENT

TO **SAMPLE MGT.**
TA PITTSBURGH
301 ALPHA DRIVE
RIDC PARK
PITTSBURGH PA 15238

(412) 963-7068
DEPT: SAMPLE CONTROL

REF: PITTSBURGH

551/NEC/1041



FedEx
Express



AN 1050908111317

WED - 08 MAY 10:30A
PRIORITY OVERNIGHT

TRK# 4276 0719 6795
0201

EV AGCA

15238
PA-US **PIT**

Uncorrected temp 25 °C
Thermometer ID 10

CF 0 Initials TS

PT-WI-SR-001 effective 11/8/18



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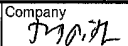

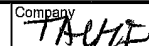
Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park
 Pittsburgh, PA 15238
 Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record



Environment Testing
 TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact: Shipping/Receiving		Phone:	Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com	State of Origin: Wisconsin	180-362298.1						
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin			Page: Page 1 of 1						
Address: 2417 Bond Street, City: University Park State, Zip: IL, 60484 Phone: 708-534-5200(Tel) 708-534-5211(Fax) Email:		Due Date Requested: 5/24/2019 TAT Requested (days):  PO #: WO #: Project #: 18015916 SSOW#:	Analysis Requested		Job #: 480-153151-1						
Project Name: Superior, WI Semiannual Groundwater Site:		Field Filtered Sample (Yes or No) Performs/Uses Seals or No 8270D/8510C (MOD) Semivolatiles, project list with n			Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:						
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Performs/Uses Seals or No	8270D/8510C (MOD) Semivolatiles, project list with n	Total Number of Containers	Special Instructions/Note:	
SUPE W-18D-050119 (480-153151-1)		5/1/19	09:22 Central		Water	X			2	Refer to PT-PM-WI-006 for Wisconsin Protocol	
SUPE-W-04ARZ (480-153151-2)		5/1/19	08:30 Central		Water	X			2	Refer to PT-PM-WI-006 for Wisconsin Protocol	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.											
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:	Time:			Method of Shipment:					
Relinquished by: 		Date/Time: 5/8/19 1700	Company: 			Received by: 			Date/Time: 05/09/19 0910		Company: 
Relinquished by:		Date/Time:	Company:			Received by:			Date/Time:		Company:
Relinquished by:		Date/Time:	Company:			Received by:			Date/Time:		Company:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.7								



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-153151-1

Login Number: 153151

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Bortot, Veronica

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-153151-1

Login Number: 153151

List Number: 3

Creator: Fioravanti, Ariel M

List Source: Eurofins TestAmerica, Chicago

List Creation: 05/09/19 11:04 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



FTS, LLC

DATE: November 19, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 480-161133-1

SAMPLES: SUPE-TB-03-101719, SUPE-W-30A-101719, SUPE-EB-03-101719, SUPE-W-10AR2-101719, SUPE-W-04AR2-101719

ANALYSES: Method 8260C (VOCs), 8270D/8270D LL (SVOCs)

LABORATORY: Eurofins TestAmerica Laboratories, Buffalo, Chicago

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: SVOCs were extracted outside of hold time for W-30A, W-10AR2, and W-04AR2 and results in these samples were qualified as estimated, "J".
- Laboratory Blank Contamination
Noncompliance: None
- Field Blank Contamination
Noncompliance: Naphthalene was detected in the equipment blank. See attached page for details.
- Surrogate Recoveries
Noncompliance: None
- Laboratory Control Sample
Noncompliance: The LCS recovery of pyrene was above the recovery limits. The RPD of benzoic acid was above the recovery limits. No action was taken on this basis.

Field Blank Contamination:

The following analyte was detected in the aqueous equipment blank, SUPE-EB-03-101719, at the following concentration:

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Blank Action Level</u>
Naphthalene	0.83 J ug/l	4.15 ug/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for field blank contamination.

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-161133-1

Client Project/Site: Superior, WI Semiannual Groundwater
Revision: 3

For:

Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
11/22/2019 11:23:25 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	7
Surrogate Summary	18
QC Sample Results	20
QC Association Summary	28
Lab Chronicle	30
Certification Summary	32
Method Summary	33
Sample Summary	34
Chain of Custody	35
Receipt Checklists	38

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Job ID: 480-161133-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-161133-1

Revised : to remove PCP from full list

Revised: to correct formatter

Comments

No additional comments.

Receipt

The samples were received on 10/18/2019 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C

GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-500429 recovered above the upper control limit for 1,1,1-Trichloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SUPE-TB-03-101719, SUPE-W-30A-101719, SUPE-EB-03-101719, SUPE-W-10AR2-101719 and SUPE-W-04AR2-101719.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Buffalo

Method 8270D LL: The continuing calibration verification (CCV) associated with batch 480-500349 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: SUPE-W-30A-101719, SUPE-EB-03-101719, SUPE-W-10AR2-101719 and SUPE-W-04AR2-101719.

Methods 8270D LL, : The following samples were diluted due to the nature of the sample matrix: SUPE-W-30A-101719, SUPE-W-10AR2-101719 and SUPE-W-04AR2-101719. Elevated reporting limits (RLs) are provided.

GC/MS Semi VOA Chicago

Method 8270D: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCS associated with batch 500-511959 had 1 analyte outside control limits: Pyrene. The associated LCSD was in control for this analyte. These results have been reported and qualified.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 500-511959 and analytical batch 500-512017 recovered outside control limits for Benzoic acid. The % recoveries were within limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep Chicago

Method 3510C: (full list)

Heavy sample receipts in the Buffalo lab caused delays in login and shipping, as a result the SVOC full list samples, SUPE-W-30A-101719, SUPE-EB-03-101719, SUPE-W-10AR2-101719 and SUPE-W-04AR2-101719 were extracted one day outside of the recommended holding time;

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-TB-03-101719

Lab Sample ID: 480-161133-1

No Detections.

Client Sample ID: SUPE-W-30A-101719

Lab Sample ID: 480-161133-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	3.2		1.0	0.75	ug/L	1		8260C	Total/NA
Benzene	2.4		1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	10		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	4.1		2.0	0.66	ug/L	1		8260C	Total/NA
o-Xylene	3.2		1.0	0.76	ug/L	1		8260C	Total/NA
Toluene	1.1		1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	7.3		2.0	0.66	ug/L	1		8260C	Total/NA
Naphthalene - DL	91		2.0	0.86	ug/L	2		8260C	Total/NA
Acenaphthene	14	H	1.0	0.37	ug/L	1		8270D	Total/NA
Anthracene	0.61	J H	1.0	0.32	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	0.069	J H	0.20	0.059	ug/L	1		8270D	Total/NA
Dibenzofuran	2.9	H	2.0	0.36	ug/L	1		8270D	Total/NA
Fluoranthene	0.99	J H	1.0	0.32	ug/L	1		8270D	Total/NA
Fluorene	1.5	H	1.0	0.39	ug/L	1		8270D	Total/NA
Pyrene	0.65	J H *	1.0	0.49	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	0.11	J H	0.20	0.045	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-EB-03-101719

Lab Sample ID: 480-161133-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.83	J	1.0	0.43	ug/L	1		8260C	Total/NA

Client Sample ID: SUPE-W-10AR2-101719

Lab Sample ID: 480-161133-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	9.4		1.0	0.75	ug/L	1		8260C	Total/NA
Benzene	22		1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	46		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	3.3		2.0	0.66	ug/L	1		8260C	Total/NA
Naphthalene	2.3		1.0	0.43	ug/L	1		8260C	Total/NA
o-Xylene	19		1.0	0.76	ug/L	1		8260C	Total/NA
Toluene	2.7		1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	22		2.0	0.66	ug/L	1		8260C	Total/NA
1-Methylnaphthalene	28	H	2.0	0.51	ug/L	1		8270D	Total/NA
Acenaphthylene	1.9	H	1.0	0.33	ug/L	1		8270D	Total/NA
Anthracene	0.73	J H	1.0	0.33	ug/L	1		8270D	Total/NA
Dibenzofuran	12	H	2.0	0.36	ug/L	1		8270D	Total/NA
Fluoranthene	2.0	H	1.0	0.33	ug/L	1		8270D	Total/NA
Fluorene	19	H	1.0	0.39	ug/L	1		8270D	Total/NA
Pyrene	1.2	H *	1.0	0.49	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	0.13	J H	0.20	0.045	ug/L	1		8270D	Total/NA
Phenanthrene	0.36	J H	1.0	0.36	ug/L	1		8270D	Total/NA
Acenaphthene - DL	91	H	2.0	0.73	ug/L	2		8270D	Total/NA

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.76	J	1.0	0.43	ug/L	1		8260C	Total/NA
Anthracene	2.4	H	1.0	0.33	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-04AR2-101719 (Continued)

Lab Sample ID: 480-161133-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.25	H	0.20	0.057	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	0.50	H	0.20	0.059	ug/L	1		8270D	Total/NA
Benzo[k]fluoranthene	0.19	J H	0.20	0.076	ug/L	1		8270D	Total/NA
Chrysene	0.77	H	0.51	0.14	ug/L	1		8270D	Total/NA
Fluoranthene	2.2	H	1.0	0.33	ug/L	1		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.10	J H	0.20	0.086	ug/L	1		8270D	Total/NA
Pyrene	1.4	H *	1.0	0.49	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	0.59	H	0.20	0.045	ug/L	1		8270D	Total/NA
Phenanthrene	0.85	J H	1.0	0.36	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-TB-03-101719

Lab Sample ID: 480-161133-1

Date Collected: 10/17/19 00:00

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 01:19	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 01:19	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 01:19	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 01:19	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 01:19	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 01:19	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 01:19	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 01:19	1
Naphthalene	ND		1.0	0.43	ug/L			10/27/19 01:19	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 01:19	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 01:19	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 01:19	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 01:19	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 01:19	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 01:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		77 - 120					10/27/19 01:19	1
4-Bromofluorobenzene (Surr)	105		73 - 120					10/27/19 01:19	1
Dibromofluoromethane (Surr)	119		75 - 123					10/27/19 01:19	1
Toluene-d8 (Surr)	104		80 - 120					10/27/19 01:19	1

Client Sample ID: SUPE-W-30A-101719

Lab Sample ID: 480-161133-2

Date Collected: 10/17/19 11:02

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 01:44	1
1,2,4-Trimethylbenzene	3.2		1.0	0.75	ug/L			10/27/19 01:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 01:44	1
Benzene	2.4		1.0	0.41	ug/L			10/27/19 01:44	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 01:44	1
Ethylbenzene	10		1.0	0.74	ug/L			10/27/19 01:44	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 01:44	1
m-Xylene & p-Xylene	4.1		2.0	0.66	ug/L			10/27/19 01:44	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 01:44	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 01:44	1
o-Xylene	3.2		1.0	0.76	ug/L			10/27/19 01:44	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 01:44	1
Toluene	1.1		1.0	0.51	ug/L			10/27/19 01:44	1
Xylenes, Total	7.3		2.0	0.66	ug/L			10/27/19 01:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		77 - 120					10/27/19 01:44	1
4-Bromofluorobenzene (Surr)	105		73 - 120					10/27/19 01:44	1
Dibromofluoromethane (Surr)	114		75 - 123					10/27/19 01:44	1
Toluene-d8 (Surr)	104		80 - 120					10/27/19 01:44	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-30A-101719

Lab Sample ID: 480-161133-2

Date Collected: 10/17/19 11:02

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	91		2.0	0.86	ug/L			10/27/19 11:08	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		77 - 120					10/27/19 11:08	2
4-Bromofluorobenzene (Surr)	103		73 - 120					10/27/19 11:08	2
Dibromofluoromethane (Surr)	108		75 - 123					10/27/19 11:08	2
Toluene-d8 (Surr)	101		80 - 120					10/27/19 11:08	2

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		10	3.4	ug/L		10/21/19 15:27	10/26/19 02:24	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		24 - 146				10/21/19 15:27	10/26/19 02:24	10
2-Fluorobiphenyl	105		37 - 120				10/21/19 15:27	10/26/19 02:24	10
2-Fluorophenol (Surr)	52		10 - 120				10/21/19 15:27	10/26/19 02:24	10
Nitrobenzene-d5 (Surr)	85		26 - 120				10/21/19 15:27	10/26/19 02:24	10
Phenol-d5 (Surr)	35		11 - 120				10/21/19 15:27	10/26/19 02:24	10
p-Terphenyl-d14	116		64 - 127				10/21/19 15:27	10/26/19 02:24	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 19:30	1
1,2-Dichlorobenzene	ND	H	2.0	0.29	ug/L		10/25/19 10:20	10/25/19 19:30	1
1,3-Dichlorobenzene	ND	H	2.0	0.25	ug/L		10/25/19 10:20	10/25/19 19:30	1
1,4-Dichlorobenzene	ND	H	2.0	0.27	ug/L		10/25/19 10:20	10/25/19 19:30	1
1-Methylnaphthalene	ND	H	2.0	0.51	ug/L		10/25/19 10:20	10/25/19 19:30	1
bis(chloroisopropyl) ether	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,3,4,6-Tetrachlorophenol	ND	H	5.1	1.5	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,4,5-Trichlorophenol	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,4,6-Trichlorophenol	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,4-Dichlorophenol	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,4-Dinitrophenol	ND	H	20	7.5	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,4-Dinitrotoluene	ND	H	1.0	0.30	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,6-Dinitrotoluene	ND	H	1.0	0.12	ug/L		10/25/19 10:20	10/25/19 19:30	1
3 & 4 Methylphenol	ND	H	2.0	0.45	ug/L		10/25/19 10:20	10/25/19 19:30	1
2-Chloronaphthalene	ND	H	2.0	0.34	ug/L		10/25/19 10:20	10/25/19 19:30	1
2-Chlorophenol	ND	H	5.1	0.81	ug/L		10/25/19 10:20	10/25/19 19:30	1
2-Methylnaphthalene	ND	H	2.0	0.13	ug/L		10/25/19 10:20	10/25/19 19:30	1
2-Methylphenol	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 19:30	1
2-Nitroaniline	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 19:30	1
2-Nitrophenol	ND	H	10	2.2	ug/L		10/25/19 10:20	10/25/19 19:30	1
3-Nitroaniline	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 19:30	1
4,6-Dinitro-2-methylphenol	ND	H	20	5.0	ug/L		10/25/19 10:20	10/25/19 19:30	1
4-Bromophenyl phenyl ether	ND	H	5.1	0.92	ug/L		10/25/19 10:20	10/25/19 19:30	1
4-Chloro-3-methylphenol	ND	H	10	2.2	ug/L		10/25/19 10:20	10/25/19 19:30	1
4-Chloroaniline	ND	H	10	2.1	ug/L		10/25/19 10:20	10/25/19 19:30	1
4-Chlorophenyl phenyl ether	ND	H	5.1	0.82	ug/L		10/25/19 10:20	10/25/19 19:30	1
4-Nitroaniline	ND	H	10	4.0	ug/L		10/25/19 10:20	10/25/19 19:30	1
4-Nitrophenol	ND	H	20	2.4	ug/L		10/25/19 10:20	10/25/19 19:30	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-30A-101719

Lab Sample ID: 480-161133-2

Date Collected: 10/17/19 11:02

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	14	H	1.0	0.37	ug/L		10/25/19 10:20	10/25/19 19:30	1
Acenaphthylene	ND	H	1.0	0.32	ug/L		10/25/19 10:20	10/25/19 19:30	1
Anthracene	0.61	J H	1.0	0.32	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzo[a]pyrene	ND	H	0.20	0.057	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzo[b]fluoranthene	0.069	J H	0.20	0.059	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzo[g,h,i]perylene	ND	H	1.0	0.43	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzo[k]fluoranthene	ND	H	0.20	0.075	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzoic acid	ND	H *	20	4.6	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzyl alcohol	ND	H	20	3.1	ug/L		10/25/19 10:20	10/25/19 19:30	1
Bis(2-chloroethoxy)methane	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 19:30	1
Bis(2-chloroethyl)ether	ND	H	2.0	0.36	ug/L		10/25/19 10:20	10/25/19 19:30	1
Bis(2-ethylhexyl) phthalate	ND	H	10	2.5	ug/L		10/25/19 10:20	10/25/19 19:30	1
Butyl benzyl phthalate	ND	H	2.0	0.27	ug/L		10/25/19 10:20	10/25/19 19:30	1
Chrysene	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 19:30	1
Dibenz(a,h)anthracene	ND	H	0.30	0.065	ug/L		10/25/19 10:20	10/25/19 19:30	1
Dibenzofuran	2.9	H	2.0	0.36	ug/L		10/25/19 10:20	10/25/19 19:30	1
Diethyl phthalate	ND	H	2.0	0.45	ug/L		10/25/19 10:20	10/25/19 19:30	1
Dimethyl phthalate	ND	H	2.0	0.39	ug/L		10/25/19 10:20	10/25/19 19:30	1
Di-n-butyl phthalate	ND	H	5.1	0.81	ug/L		10/25/19 10:20	10/25/19 19:30	1
Di-n-octyl phthalate	ND	H	10	2.5	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,3,5,6-Tetrachlorophenol	ND	H	5.1	2.5	ug/L		10/25/19 10:20	10/25/19 19:30	1
Fluoranthene	0.99	J H	1.0	0.32	ug/L		10/25/19 10:20	10/25/19 19:30	1
Fluorene	1.5	H	1.0	0.39	ug/L		10/25/19 10:20	10/25/19 19:30	1
Hexachlorobenzene	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 19:30	1
Hexachlorobutadiene	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 19:30	1
Hexachlorocyclopentadiene	ND	H	20	3.5	ug/L		10/25/19 10:20	10/25/19 19:30	1
Hexachloroethane	ND	H	5.1	0.98	ug/L		10/25/19 10:20	10/25/19 19:30	1
Indeno[1,2,3-cd]pyrene	ND	H	0.20	0.085	ug/L		10/25/19 10:20	10/25/19 19:30	1
Isophorone	ND	H	2.0	0.29	ug/L		10/25/19 10:20	10/25/19 19:30	1
Nitrobenzene	ND	H	1.0	0.46	ug/L		10/25/19 10:20	10/25/19 19:30	1
N-Nitrosodi-n-propylamine	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 19:30	1
N-Nitrosodiphenylamine	ND	H	2.0	0.34	ug/L		10/25/19 10:20	10/25/19 19:30	1
Phenol	ND	H	5.1	0.37	ug/L		10/25/19 10:20	10/25/19 19:30	1
Pyrene	0.65	J H *	1.0	0.49	ug/L		10/25/19 10:20	10/25/19 19:30	1
2,4-Dimethylphenol	ND	H	10	3.4	ug/L		10/25/19 10:20	10/25/19 19:30	1
Benzo[a]anthracene	0.11	J H	0.20	0.045	ug/L		10/25/19 10:20	10/25/19 19:30	1
Phenanthrene	ND	H	1.0	0.36	ug/L		10/25/19 10:20	10/25/19 19:30	1
3,3'-Dichlorobenzidine	ND	H	5.1	0.95	ug/L		10/25/19 10:20	10/25/19 19:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	102		40 - 145	10/25/19 10:20	10/25/19 19:30	1
2-Fluorobiphenyl	100		34 - 110	10/25/19 10:20	10/25/19 19:30	1
2-Fluorophenol (Surr)	45		27 - 110	10/25/19 10:20	10/25/19 19:30	1
Nitrobenzene-d5 (Surr)	94		36 - 120	10/25/19 10:20	10/25/19 19:30	1
Phenol-d5 (Surr)	35		20 - 100	10/25/19 10:20	10/25/19 19:30	1
Terphenyl-d14 (Surr)	86		40 - 145	10/25/19 10:20	10/25/19 19:30	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-EB-03-101719

Lab Sample ID: 480-161133-3

Date Collected: 10/17/19 12:02

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 02:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 02:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 02:08	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 02:08	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 02:08	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 02:08	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 02:08	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 02:08	1
Naphthalene	0.83	J	1.0	0.43	ug/L			10/27/19 02:08	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 02:08	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 02:08	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 02:08	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 02:08	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 02:08	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 02:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120		10/27/19 02:08	1
4-Bromofluorobenzene (Surr)	102		73 - 120		10/27/19 02:08	1
Dibromofluoromethane (Surr)	109		75 - 123		10/27/19 02:08	1
Toluene-d8 (Surr)	100		80 - 120		10/27/19 02:08	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/21/19 15:27	10/26/19 02:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	91		24 - 146	10/21/19 15:27	10/26/19 02:53	1
2-Fluorobiphenyl	105		37 - 120	10/21/19 15:27	10/26/19 02:53	1
2-Fluorophenol (Surr)	57		10 - 120	10/21/19 15:27	10/26/19 02:53	1
Nitrobenzene-d5 (Surr)	100		26 - 120	10/21/19 15:27	10/26/19 02:53	1
Phenol-d5 (Surr)	38		11 - 120	10/21/19 15:27	10/26/19 02:53	1
p-Terphenyl-d14	119		64 - 127	10/21/19 15:27	10/26/19 02:53	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	1.9	0.29	ug/L		10/25/19 10:20	10/25/19 19:54	1
1,2-Dichlorobenzene	ND	H	1.9	0.28	ug/L		10/25/19 10:20	10/25/19 19:54	1
1,3-Dichlorobenzene	ND	H	1.9	0.24	ug/L		10/25/19 10:20	10/25/19 19:54	1
1,4-Dichlorobenzene	ND	H	1.9	0.26	ug/L		10/25/19 10:20	10/25/19 19:54	1
1-Methylnaphthalene	ND	H	1.9	0.49	ug/L		10/25/19 10:20	10/25/19 19:54	1
bis(chloroisopropyl) ether	ND	H	1.9	0.29	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,3,4,6-Tetrachlorophenol	ND	H	4.9	1.5	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,4,5-Trichlorophenol	ND	H	9.7	2.2	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,4,6-Trichlorophenol	ND	H	4.9	1.1	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,4-Dichlorophenol	ND	H	9.7	2.2	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,4-Dinitrophenol	ND	H	19	7.2	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,4-Dinitrotoluene	ND	H	0.97	0.29	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,6-Dinitrotoluene	ND	H	0.97	0.12	ug/L		10/25/19 10:20	10/25/19 19:54	1
3 & 4 Methylphenol	ND	H	1.9	0.43	ug/L		10/25/19 10:20	10/25/19 19:54	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-EB-03-101719

Lab Sample ID: 480-161133-3

Date Collected: 10/17/19 12:02

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND	H	1.9	0.33	ug/L		10/25/19 10:20	10/25/19 19:54	1
2-Chlorophenol	ND	H	4.9	0.78	ug/L		10/25/19 10:20	10/25/19 19:54	1
2-Methylnaphthalene	ND	H	1.9	0.13	ug/L		10/25/19 10:20	10/25/19 19:54	1
2-Methylphenol	ND	H	1.9	0.30	ug/L		10/25/19 10:20	10/25/19 19:54	1
2-Nitroaniline	ND	H	4.9	1.0	ug/L		10/25/19 10:20	10/25/19 19:54	1
2-Nitrophenol	ND	H	9.7	2.1	ug/L		10/25/19 10:20	10/25/19 19:54	1
3-Nitroaniline	ND	H	9.7	2.2	ug/L		10/25/19 10:20	10/25/19 19:54	1
4,6-Dinitro-2-methylphenol	ND	H	19	4.8	ug/L		10/25/19 10:20	10/25/19 19:54	1
4-Bromophenyl phenyl ether	ND	H	4.9	0.88	ug/L		10/25/19 10:20	10/25/19 19:54	1
4-Chloro-3-methylphenol	ND	H	9.7	2.1	ug/L		10/25/19 10:20	10/25/19 19:54	1
4-Chloroaniline	ND	H	9.7	2.0	ug/L		10/25/19 10:20	10/25/19 19:54	1
4-Chlorophenyl phenyl ether	ND	H	4.9	0.79	ug/L		10/25/19 10:20	10/25/19 19:54	1
4-Nitroaniline	ND	H	9.7	3.8	ug/L		10/25/19 10:20	10/25/19 19:54	1
4-Nitrophenol	ND	H	19	2.3	ug/L		10/25/19 10:20	10/25/19 19:54	1
Acenaphthene	ND	H	0.97	0.35	ug/L		10/25/19 10:20	10/25/19 19:54	1
Acenaphthylene	ND	H	0.97	0.31	ug/L		10/25/19 10:20	10/25/19 19:54	1
Anthracene	ND	H	0.97	0.31	ug/L		10/25/19 10:20	10/25/19 19:54	1
Benzo[a]pyrene	ND	H	0.19	0.054	ug/L		10/25/19 10:20	10/25/19 19:54	1
Benzo[b]fluoranthene	ND	H	0.19	0.056	ug/L		10/25/19 10:20	10/25/19 19:54	1
Benzo[g,h,i]perylene	ND	H	0.97	0.41	ug/L		10/25/19 10:20	10/25/19 19:54	1
Benzo[k]fluoranthene	ND	H	0.19	0.072	ug/L		10/25/19 10:20	10/25/19 19:54	1
Benzoic acid	ND	H *	19	4.4	ug/L		10/25/19 10:20	10/25/19 19:54	1
Benzyl alcohol	ND	H	19	3.0	ug/L		10/25/19 10:20	10/25/19 19:54	1
Bis(2-chloroethoxy)methane	ND	H	1.9	0.29	ug/L		10/25/19 10:20	10/25/19 19:54	1
Bis(2-chloroethyl)ether	ND	H	1.9	0.34	ug/L		10/25/19 10:20	10/25/19 19:54	1
Bis(2-ethylhexyl) phthalate	ND	H	9.7	2.4	ug/L		10/25/19 10:20	10/25/19 19:54	1
Butyl benzyl phthalate	ND	H	1.9	0.26	ug/L		10/25/19 10:20	10/25/19 19:54	1
Chrysene	ND	H	0.49	0.14	ug/L		10/25/19 10:20	10/25/19 19:54	1
Dibenz(a,h)anthracene	ND	H	0.29	0.062	ug/L		10/25/19 10:20	10/25/19 19:54	1
Dibenzofuran	ND	H	1.9	0.34	ug/L		10/25/19 10:20	10/25/19 19:54	1
Diethyl phthalate	ND	H	1.9	0.43	ug/L		10/25/19 10:20	10/25/19 19:54	1
Dimethyl phthalate	ND	H	1.9	0.37	ug/L		10/25/19 10:20	10/25/19 19:54	1
Di-n-butyl phthalate	ND	H	4.9	0.78	ug/L		10/25/19 10:20	10/25/19 19:54	1
Di-n-octyl phthalate	ND	H	9.7	2.4	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,3,5,6-Tetrachlorophenol	ND	H	4.9	2.4	ug/L		10/25/19 10:20	10/25/19 19:54	1
Fluoranthene	ND	H	0.97	0.31	ug/L		10/25/19 10:20	10/25/19 19:54	1
Fluorene	ND	H	0.97	0.37	ug/L		10/25/19 10:20	10/25/19 19:54	1
Hexachlorobenzene	ND	H	0.49	0.14	ug/L		10/25/19 10:20	10/25/19 19:54	1
Hexachlorobutadiene	ND	H	4.9	1.1	ug/L		10/25/19 10:20	10/25/19 19:54	1
Hexachlorocyclopentadiene	ND	H	19	3.3	ug/L		10/25/19 10:20	10/25/19 19:54	1
Hexachloroethane	ND	H	4.9	0.94	ug/L		10/25/19 10:20	10/25/19 19:54	1
Indeno[1,2,3-cd]pyrene	ND	H	0.19	0.081	ug/L		10/25/19 10:20	10/25/19 19:54	1
Isophorone	ND	H	1.9	0.28	ug/L		10/25/19 10:20	10/25/19 19:54	1
Nitrobenzene	ND	H	0.97	0.44	ug/L		10/25/19 10:20	10/25/19 19:54	1
N-Nitrosodi-n-propylamine	ND	H	0.49	0.14	ug/L		10/25/19 10:20	10/25/19 19:54	1
N-Nitrosodiphenylamine	ND	H	1.9	0.33	ug/L		10/25/19 10:20	10/25/19 19:54	1
Phenol	ND	H	4.9	0.35	ug/L		10/25/19 10:20	10/25/19 19:54	1
Pyrene	ND	H *	0.97	0.47	ug/L		10/25/19 10:20	10/25/19 19:54	1
2,4-Dimethylphenol	ND	H	9.7	3.2	ug/L		10/25/19 10:20	10/25/19 19:54	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-EB-03-101719

Lab Sample ID: 480-161133-3

Date Collected: 10/17/19 12:02

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H	0.19	0.043	ug/L		10/25/19 10:20	10/25/19 19:54	1
Phenanthrene	ND	H	0.97	0.34	ug/L		10/25/19 10:20	10/25/19 19:54	1
3,3'-Dichlorobenzidine	ND	H	4.9	0.91	ug/L		10/25/19 10:20	10/25/19 19:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		40 - 145				10/25/19 10:20	10/25/19 19:54	1
2-Fluorobiphenyl	99		34 - 110				10/25/19 10:20	10/25/19 19:54	1
2-Fluorophenol (Surr)	43		27 - 110				10/25/19 10:20	10/25/19 19:54	1
Nitrobenzene-d5 (Surr)	92		36 - 120				10/25/19 10:20	10/25/19 19:54	1
Phenol-d5 (Surr)	29		20 - 100				10/25/19 10:20	10/25/19 19:54	1
Terphenyl-d14 (Surr)	104		40 - 145				10/25/19 10:20	10/25/19 19:54	1

Client Sample ID: SUPE-W-10AR2-101719

Lab Sample ID: 480-161133-4

Date Collected: 10/17/19 13:11

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 02:32	1
1,2,4-Trimethylbenzene	9.4		1.0	0.75	ug/L			10/27/19 02:32	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 02:32	1
Benzene	22		1.0	0.41	ug/L			10/27/19 02:32	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 02:32	1
Ethylbenzene	46		1.0	0.74	ug/L			10/27/19 02:32	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 02:32	1
m-Xylene & p-Xylene	3.3		2.0	0.66	ug/L			10/27/19 02:32	1
Naphthalene	2.3		1.0	0.43	ug/L			10/27/19 02:32	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 02:32	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 02:32	1
o-Xylene	19		1.0	0.76	ug/L			10/27/19 02:32	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 02:32	1
Toluene	2.7		1.0	0.51	ug/L			10/27/19 02:32	1
Xylenes, Total	22		2.0	0.66	ug/L			10/27/19 02:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		77 - 120					10/27/19 02:32	1
4-Bromofluorobenzene (Surr)	105		73 - 120					10/27/19 02:32	1
Dibromofluoromethane (Surr)	116		75 - 123					10/27/19 02:32	1
Toluene-d8 (Surr)	103		80 - 120					10/27/19 02:32	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	1.7	ug/L		10/21/19 15:27	10/26/19 03:21	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	128		24 - 146				10/21/19 15:27	10/26/19 03:21	5
2-Fluorobiphenyl	113		37 - 120				10/21/19 15:27	10/26/19 03:21	5
2-Fluorophenol (Surr)	60		10 - 120				10/21/19 15:27	10/26/19 03:21	5
Nitrobenzene-d5 (Surr)	100		26 - 120				10/21/19 15:27	10/26/19 03:21	5
Phenol-d5 (Surr)	40		11 - 120				10/21/19 15:27	10/26/19 03:21	5
p-Terphenyl-d14	122		64 - 127				10/21/19 15:27	10/26/19 03:21	5

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-10AR2-101719

Lab Sample ID: 480-161133-4

Date Collected: 10/17/19 13:11

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:18	1
1,2-Dichlorobenzene	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 20:18	1
1,3-Dichlorobenzene	ND	H	2.0	0.25	ug/L		10/25/19 10:20	10/25/19 20:18	1
1,4-Dichlorobenzene	ND	H	2.0	0.27	ug/L		10/25/19 10:20	10/25/19 20:18	1
1-Methylnaphthalene	28	H	2.0	0.51	ug/L		10/25/19 10:20	10/25/19 20:18	1
bis(chloroisopropyl) ether	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,3,4,6-Tetrachlorophenol	ND	H	5.1	1.5	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,4,5-Trichlorophenol	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,4,6-Trichlorophenol	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,4-Dichlorophenol	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,4-Dinitrophenol	ND	H	20	7.6	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,4-Dinitrotoluene	ND	H	1.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,6-Dinitrotoluene	ND	H	1.0	0.12	ug/L		10/25/19 10:20	10/25/19 20:18	1
3 & 4 Methylphenol	ND	H	2.0	0.45	ug/L		10/25/19 10:20	10/25/19 20:18	1
2-Chloronaphthalene	ND	H	2.0	0.35	ug/L		10/25/19 10:20	10/25/19 20:18	1
2-Chlorophenol	ND	H	5.1	0.81	ug/L		10/25/19 10:20	10/25/19 20:18	1
2-Methylnaphthalene	ND	H	2.0	0.13	ug/L		10/25/19 10:20	10/25/19 20:18	1
2-Methylphenol	ND	H	2.0	0.32	ug/L		10/25/19 10:20	10/25/19 20:18	1
2-Nitroaniline	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 20:18	1
2-Nitrophenol	ND	H	10	2.2	ug/L		10/25/19 10:20	10/25/19 20:18	1
3-Nitroaniline	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 20:18	1
4,6-Dinitro-2-methylphenol	ND	H	20	5.0	ug/L		10/25/19 10:20	10/25/19 20:18	1
4-Bromophenyl phenyl ether	ND	H	5.1	0.93	ug/L		10/25/19 10:20	10/25/19 20:18	1
4-Chloro-3-methylphenol	ND	H	10	2.2	ug/L		10/25/19 10:20	10/25/19 20:18	1
4-Chloroaniline	ND	H	10	2.1	ug/L		10/25/19 10:20	10/25/19 20:18	1
4-Chlorophenyl phenyl ether	ND	H	5.1	0.82	ug/L		10/25/19 10:20	10/25/19 20:18	1
4-Nitroaniline	ND	H	10	4.0	ug/L		10/25/19 10:20	10/25/19 20:18	1
4-Nitrophenol	ND	H	20	2.4	ug/L		10/25/19 10:20	10/25/19 20:18	1
Acenaphthylene	1.9	H	1.0	0.33	ug/L		10/25/19 10:20	10/25/19 20:18	1
Anthracene	0.73	J H	1.0	0.33	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzo[a]pyrene	ND	H	0.20	0.057	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzo[b]fluoranthene	ND	H	0.20	0.059	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzo[g,h,i]perylene	ND	H	1.0	0.43	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzo[k]fluoranthene	ND	H	0.20	0.075	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzoic acid	ND	H *	20	4.6	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzyl alcohol	ND	H	20	3.1	ug/L		10/25/19 10:20	10/25/19 20:18	1
Bis(2-chloroethoxy)methane	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:18	1
Bis(2-chloroethyl)ether	ND	H	2.0	0.36	ug/L		10/25/19 10:20	10/25/19 20:18	1
Bis(2-ethylhexyl) phthalate	ND	H	10	2.5	ug/L		10/25/19 10:20	10/25/19 20:18	1
Butyl benzyl phthalate	ND	H	2.0	0.27	ug/L		10/25/19 10:20	10/25/19 20:18	1
Chrysene	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 20:18	1
Dibenz(a,h)anthracene	ND	H	0.31	0.065	ug/L		10/25/19 10:20	10/25/19 20:18	1
Dibenzofuran	12	H	2.0	0.36	ug/L		10/25/19 10:20	10/25/19 20:18	1
Diethyl phthalate	ND	H	2.0	0.45	ug/L		10/25/19 10:20	10/25/19 20:18	1
Dimethyl phthalate	ND	H	2.0	0.39	ug/L		10/25/19 10:20	10/25/19 20:18	1
Di-n-butyl phthalate	ND	H	5.1	0.81	ug/L		10/25/19 10:20	10/25/19 20:18	1
Di-n-octyl phthalate	ND	H	10	2.5	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,3,5,6-Tetrachlorophenol	ND	H	5.1	2.5	ug/L		10/25/19 10:20	10/25/19 20:18	1
Fluoranthene	2.0	H	1.0	0.33	ug/L		10/25/19 10:20	10/25/19 20:18	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-10AR2-101719

Lab Sample ID: 480-161133-4

Date Collected: 10/17/19 13:11

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	19	H	1.0	0.39	ug/L		10/25/19 10:20	10/25/19 20:18	1
Hexachlorobenzene	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 20:18	1
Hexachlorobutadiene	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 20:18	1
Hexachlorocyclopentadiene	ND	H	20	3.5	ug/L		10/25/19 10:20	10/25/19 20:18	1
Hexachloroethane	ND	H	5.1	0.99	ug/L		10/25/19 10:20	10/25/19 20:18	1
Indeno[1,2,3-cd]pyrene	ND	H	0.20	0.085	ug/L		10/25/19 10:20	10/25/19 20:18	1
Isophorone	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 20:18	1
Nitrobenzene	ND	H	1.0	0.46	ug/L		10/25/19 10:20	10/25/19 20:18	1
N-Nitrosodi-n-propylamine	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 20:18	1
N-Nitrosodiphenylamine	ND	H	2.0	0.35	ug/L		10/25/19 10:20	10/25/19 20:18	1
Phenol	ND	H	5.1	0.37	ug/L		10/25/19 10:20	10/25/19 20:18	1
Pyrene	1.2	H *	1.0	0.49	ug/L		10/25/19 10:20	10/25/19 20:18	1
2,4-Dimethylphenol	ND	H	10	3.4	ug/L		10/25/19 10:20	10/25/19 20:18	1
Benzo[a]anthracene	0.13	J H	0.20	0.045	ug/L		10/25/19 10:20	10/25/19 20:18	1
Phenanthrene	0.36	J H	1.0	0.36	ug/L		10/25/19 10:20	10/25/19 20:18	1
3,3'-Dichlorobenzidine	ND	H	5.1	0.96	ug/L		10/25/19 10:20	10/25/19 20:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	110		40 - 145	10/25/19 10:20	10/25/19 20:18	1
2-Fluorobiphenyl	96		34 - 110	10/25/19 10:20	10/25/19 20:18	1
2-Fluorophenol (Surr)	46		27 - 110	10/25/19 10:20	10/25/19 20:18	1
Nitrobenzene-d5 (Surr)	92		36 - 120	10/25/19 10:20	10/25/19 20:18	1
Phenol-d5 (Surr)	33		20 - 100	10/25/19 10:20	10/25/19 20:18	1
Terphenyl-d14 (Surr)	79		40 - 145	10/25/19 10:20	10/25/19 20:18	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	91	H	2.0	0.73	ug/L		10/25/19 10:20	10/28/19 12:55	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	114		40 - 145	10/25/19 10:20	10/28/19 12:55	2
2-Fluorobiphenyl	95		34 - 110	10/25/19 10:20	10/28/19 12:55	2
2-Fluorophenol (Surr)	32		27 - 110	10/25/19 10:20	10/28/19 12:55	2
Nitrobenzene-d5 (Surr)	59		36 - 120	10/25/19 10:20	10/28/19 12:55	2
Phenol-d5 (Surr)	27		20 - 100	10/25/19 10:20	10/28/19 12:55	2
Terphenyl-d14 (Surr)	90		40 - 145	10/25/19 10:20	10/28/19 12:55	2

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Date Collected: 10/17/19 09:04

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 02:56	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 02:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 02:56	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 02:56	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 02:56	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 02:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 02:56	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 02:56	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Date Collected: 10/17/19 09:04

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.76	J	1.0	0.43	ug/L			10/27/19 02:56	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 02:56	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 02:56	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 02:56	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 02:56	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 02:56	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 02:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		77 - 120		10/27/19 02:56	1
4-Bromofluorobenzene (Surr)	114		73 - 120		10/27/19 02:56	1
Dibromofluoromethane (Surr)	119		75 - 123		10/27/19 02:56	1
Toluene-d8 (Surr)	108		80 - 120		10/27/19 02:56	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	1.7	ug/L		10/21/19 15:27	10/26/19 03:49	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	106		24 - 146	10/21/19 15:27	10/26/19 03:49	5
2-Fluorobiphenyl	102		37 - 120	10/21/19 15:27	10/26/19 03:49	5
2-Fluorophenol (Surr)	48		10 - 120	10/21/19 15:27	10/26/19 03:49	5
Nitrobenzene-d5 (Surr)	85		26 - 120	10/21/19 15:27	10/26/19 03:49	5
Phenol-d5 (Surr)	31		11 - 120	10/21/19 15:27	10/26/19 03:49	5
p-Terphenyl-d14	114		64 - 127	10/21/19 15:27	10/26/19 03:49	5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:42	1
1,2-Dichlorobenzene	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 20:42	1
1,3-Dichlorobenzene	ND	H	2.0	0.26	ug/L		10/25/19 10:20	10/25/19 20:42	1
1,4-Dichlorobenzene	ND	H	2.0	0.28	ug/L		10/25/19 10:20	10/25/19 20:42	1
1-Methylnaphthalene	ND	H	2.0	0.51	ug/L		10/25/19 10:20	10/25/19 20:42	1
bis(chloroisopropyl) ether	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,3,4,6-Tetrachlorophenol	ND	H	5.1	1.5	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,4,5-Trichlorophenol	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,4,6-Trichlorophenol	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,4-Dichlorophenol	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,4-Dinitrophenol	ND	H	20	7.6	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,4-Dinitrotoluene	ND	H	1.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,6-Dinitrotoluene	ND	H	1.0	0.12	ug/L		10/25/19 10:20	10/25/19 20:42	1
3 & 4 Methylphenol	ND	H	2.0	0.45	ug/L		10/25/19 10:20	10/25/19 20:42	1
2-Chloronaphthalene	ND	H	2.0	0.35	ug/L		10/25/19 10:20	10/25/19 20:42	1
2-Chlorophenol	ND	H	5.1	0.82	ug/L		10/25/19 10:20	10/25/19 20:42	1
2-Methylnaphthalene	ND	H	2.0	0.13	ug/L		10/25/19 10:20	10/25/19 20:42	1
2-Methylphenol	ND	H	2.0	0.32	ug/L		10/25/19 10:20	10/25/19 20:42	1
2-Nitroaniline	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 20:42	1
2-Nitrophenol	ND	H	10	2.2	ug/L		10/25/19 10:20	10/25/19 20:42	1
3-Nitroaniline	ND	H	10	2.3	ug/L		10/25/19 10:20	10/25/19 20:42	1
4,6-Dinitro-2-methylphenol	ND	H	20	5.0	ug/L		10/25/19 10:20	10/25/19 20:42	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Date Collected: 10/17/19 09:04

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND	H	5.1	0.93	ug/L		10/25/19 10:20	10/25/19 20:42	1
4-Chloro-3-methylphenol	ND	H	10	2.2	ug/L		10/25/19 10:20	10/25/19 20:42	1
4-Chloroaniline	ND	H	10	2.1	ug/L		10/25/19 10:20	10/25/19 20:42	1
4-Chlorophenyl phenyl ether	ND	H	5.1	0.83	ug/L		10/25/19 10:20	10/25/19 20:42	1
4-Nitroaniline	ND	H	10	4.0	ug/L		10/25/19 10:20	10/25/19 20:42	1
4-Nitrophenol	ND	H	20	2.4	ug/L		10/25/19 10:20	10/25/19 20:42	1
Acenaphthene	ND	H	1.0	0.37	ug/L		10/25/19 10:20	10/25/19 20:42	1
Acenaphthylene	ND	H	1.0	0.33	ug/L		10/25/19 10:20	10/25/19 20:42	1
Anthracene	2.4	H	1.0	0.33	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzo[a]pyrene	0.25	H	0.20	0.057	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzo[b]fluoranthene	0.50	H	0.20	0.059	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzo[g,h,i]perylene	ND	H	1.0	0.43	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzo[k]fluoranthene	0.19	J H	0.20	0.076	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzoic acid	ND	H *	20	4.7	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzyl alcohol	ND	H	20	3.1	ug/L		10/25/19 10:20	10/25/19 20:42	1
Bis(2-chloroethoxy)methane	ND	H	2.0	0.31	ug/L		10/25/19 10:20	10/25/19 20:42	1
Bis(2-chloroethyl)ether	ND	H	2.0	0.36	ug/L		10/25/19 10:20	10/25/19 20:42	1
Bis(2-ethylhexyl) phthalate	ND	H	10	2.5	ug/L		10/25/19 10:20	10/25/19 20:42	1
Butyl benzyl phthalate	ND	H	2.0	0.28	ug/L		10/25/19 10:20	10/25/19 20:42	1
Chrysene	0.77	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 20:42	1
Dibenz(a,h)anthracene	ND	H	0.31	0.065	ug/L		10/25/19 10:20	10/25/19 20:42	1
Dibenzofuran	ND	H	2.0	0.36	ug/L		10/25/19 10:20	10/25/19 20:42	1
Diethyl phthalate	ND	H	2.0	0.45	ug/L		10/25/19 10:20	10/25/19 20:42	1
Dimethyl phthalate	ND	H	2.0	0.39	ug/L		10/25/19 10:20	10/25/19 20:42	1
Di-n-butyl phthalate	ND	H	5.1	0.82	ug/L		10/25/19 10:20	10/25/19 20:42	1
Di-n-octyl phthalate	ND	H	10	2.5	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,3,5,6-Tetrachlorophenol	ND	H	5.1	2.6	ug/L		10/25/19 10:20	10/25/19 20:42	1
Fluoranthene	2.2	H	1.0	0.33	ug/L		10/25/19 10:20	10/25/19 20:42	1
Fluorene	ND	H	1.0	0.39	ug/L		10/25/19 10:20	10/25/19 20:42	1
Hexachlorobenzene	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 20:42	1
Hexachlorobutadiene	ND	H	5.1	1.1	ug/L		10/25/19 10:20	10/25/19 20:42	1
Hexachlorocyclopentadiene	ND	H	20	3.5	ug/L		10/25/19 10:20	10/25/19 20:42	1
Hexachloroethane	ND	H	5.1	0.99	ug/L		10/25/19 10:20	10/25/19 20:42	1
Indeno[1,2,3-cd]pyrene	0.10	J H	0.20	0.086	ug/L		10/25/19 10:20	10/25/19 20:42	1
Isophorone	ND	H	2.0	0.30	ug/L		10/25/19 10:20	10/25/19 20:42	1
Nitrobenzene	ND	H	1.0	0.46	ug/L		10/25/19 10:20	10/25/19 20:42	1
N-Nitrosodi-n-propylamine	ND	H	0.51	0.14	ug/L		10/25/19 10:20	10/25/19 20:42	1
N-Nitrosodiphenylamine	ND	H	2.0	0.35	ug/L		10/25/19 10:20	10/25/19 20:42	1
Phenol	ND	H	5.1	0.37	ug/L		10/25/19 10:20	10/25/19 20:42	1
Pyrene	1.4	H *	1.0	0.49	ug/L		10/25/19 10:20	10/25/19 20:42	1
2,4-Dimethylphenol	ND	H	10	3.4	ug/L		10/25/19 10:20	10/25/19 20:42	1
Benzo[a]anthracene	0.59	H	0.20	0.045	ug/L		10/25/19 10:20	10/25/19 20:42	1
Phenanthrene	0.85	J H	1.0	0.36	ug/L		10/25/19 10:20	10/25/19 20:42	1
3,3'-Dichlorobenzidine	ND	H	5.1	0.96	ug/L		10/25/19 10:20	10/25/19 20:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	110		40 - 145	10/25/19 10:20	10/25/19 20:42	1
2-Fluorobiphenyl	101		34 - 110	10/25/19 10:20	10/25/19 20:42	1
2-Fluorophenol (Surr)	45		27 - 110	10/25/19 10:20	10/25/19 20:42	1
Nitrobenzene-d5 (Surr)	96		36 - 120	10/25/19 10:20	10/25/19 20:42	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Date Collected: 10/17/19 09:04

Matrix: Water

Date Received: 10/18/19 09:45

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Phenol-d5 (Surr)</i>	35		20 - 100	10/25/19 10:20	10/25/19 20:42	1
<i>Terphenyl-d14 (Surr)</i>	106		40 - 145	10/25/19 10:20	10/25/19 20:42	1

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Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-161133-1	SUPE-TB-03-101719	117	105	119	104
480-161133-2	SUPE-W-30A-101719	114	105	114	104
480-161133-2 - DL	SUPE-W-30A-101719	111	103	108	101
480-161133-3	SUPE-EB-03-101719	109	102	109	100
480-161133-4	SUPE-W-10AR2-101719	114	105	116	103
480-161133-5	SUPE-W-04AR2-101719	116	114	119	108
LCS 480-500429/5	Lab Control Sample	111	103	110	101
LCS 480-500526/6	Lab Control Sample	108	101	112	102
MB 480-500429/7	Method Blank	112	103	113	104
MB 480-500526/8	Method Blank	109	102	108	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-161133-2	SUPE-W-30A-101719	102	100	45	94	35	86
480-161133-3	SUPE-EB-03-101719	101	99	43	92	29	104
480-161133-4	SUPE-W-10AR2-101719	110	96	46	92	33	79
480-161133-4 - DL	SUPE-W-10AR2-101719	114	95	32	59	27	90
480-161133-5	SUPE-W-04AR2-101719	110	101	45	96	35	106
MB 500-511959/1-A	Method Blank	102	99	49	96	39	107

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-161133-2	SUPE-W-30A-101719	90	105	52	85	35	116
480-161133-3	SUPE-EB-03-101719	91	105	57	100	38	119
480-161133-4	SUPE-W-10AR2-101719	128	113	60	100	40	122
480-161133-5	SUPE-W-04AR2-101719	106	102	48	85	31	114
LCS 480-499280/2-A	Lab Control Sample	107	96	55	98	39	111
LCSD 480-499280/3-A	Lab Control Sample Dup	119	102	59	105	43	117
MB 480-499280/1-A	Method Blank	57	84	50	77	35	97

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Surrogate Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHd14 = p-Terphenyl-d14

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-500429/7
Matrix: Water
Analysis Batch: 500429

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 22:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 22:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 22:04	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 22:04	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 22:04	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 22:04	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 22:04	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 22:04	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 22:04	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 22:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 22:04	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 22:04	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 22:04	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 22:04	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 22:04	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	112		77 - 120		10/26/19 22:04	1
4-Bromofluorobenzene (Surr)	103		73 - 120		10/26/19 22:04	1
Dibromofluoromethane (Surr)	113		75 - 123		10/26/19 22:04	1
Toluene-d8 (Surr)	104		80 - 120		10/26/19 22:04	1

Lab Sample ID: LCS 480-500429/5
Matrix: Water
Analysis Batch: 500429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	25.0	28.6		ug/L		114	73 - 126
1,2,4-Trimethylbenzene	25.0	25.9		ug/L		103	76 - 121
1,3,5-Trimethylbenzene	25.0	25.8		ug/L		103	77 - 121
Benzene	25.0	25.5		ug/L		102	71 - 124
Chloromethane	25.0	23.4		ug/L		94	68 - 124
Ethylbenzene	25.0	25.2		ug/L		101	77 - 123
Methyl tert-butyl ether	25.0	25.5		ug/L		102	77 - 120
m-Xylene & p-Xylene	25.0	25.4		ug/L		102	76 - 122
Naphthalene	25.0	25.6		ug/L		102	66 - 125
n-Butylbenzene	25.0	24.0		ug/L		96	71 - 128
N-Propylbenzene	25.0	24.6		ug/L		98	75 - 127
o-Xylene	25.0	25.1		ug/L		100	76 - 122
Styrene	25.0	24.9		ug/L		100	80 - 120
Toluene	25.0	25.0		ug/L		100	80 - 122
Xylenes, Total	50.0	50.5		ug/L		101	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	111		77 - 120
4-Bromofluorobenzene (Surr)	103		73 - 120
Dibromofluoromethane (Surr)	110		75 - 123
Toluene-d8 (Surr)	101		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-500526/8
Matrix: Water
Analysis Batch: 500526

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 10:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 10:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 10:34	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 10:34	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 10:34	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 10:34	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 10:34	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 10:34	1
Naphthalene	ND		1.0	0.43	ug/L			10/27/19 10:34	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 10:34	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 10:34	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 10:34	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 10:34	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 10:34	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 10:34	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	109		77 - 120		10/27/19 10:34	1
4-Bromofluorobenzene (Surr)	102		73 - 120		10/27/19 10:34	1
Dibromofluoromethane (Surr)	108		75 - 123		10/27/19 10:34	1
Toluene-d8 (Surr)	101		80 - 120		10/27/19 10:34	1

Lab Sample ID: LCS 480-500526/6
Matrix: Water
Analysis Batch: 500526

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	25.0	29.5		ug/L		118	73 - 126
1,2,4-Trimethylbenzene	25.0	27.9		ug/L		112	76 - 121
1,3,5-Trimethylbenzene	25.0	27.6		ug/L		111	77 - 121
Benzene	25.0	25.8		ug/L		103	71 - 124
Chloromethane	25.0	24.3		ug/L		97	68 - 124
Ethylbenzene	25.0	26.0		ug/L		104	77 - 123
Methyl tert-butyl ether	25.0	26.5		ug/L		106	77 - 120
m-Xylene & p-Xylene	25.0	26.1		ug/L		105	76 - 122
Naphthalene	25.0	27.9		ug/L		111	66 - 125
n-Butylbenzene	25.0	26.6		ug/L		107	71 - 128
N-Propylbenzene	25.0	26.2		ug/L		105	75 - 127
o-Xylene	25.0	26.4		ug/L		105	76 - 122
Styrene	25.0	25.6		ug/L		103	80 - 120
Toluene	25.0	25.6		ug/L		102	80 - 122
Xylenes, Total	50.0	52.5		ug/L		105	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	108		77 - 120
4-Bromofluorobenzene (Surr)	101		73 - 120
Dibromofluoromethane (Surr)	112		75 - 123
Toluene-d8 (Surr)	102		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-511959/1-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511959

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/25/19 10:20	10/25/19 18:42	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/25/19 10:20	10/25/19 18:42	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/25/19 10:20	10/25/19 18:42	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/25/19 10:20	10/25/19 18:42	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/25/19 10:20	10/25/19 18:42	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/25/19 10:20	10/25/19 18:42	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/25/19 10:20	10/25/19 18:42	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/25/19 10:20	10/25/19 18:42	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/25/19 10:20	10/25/19 18:42	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/25/19 10:20	10/25/19 18:42	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/25/19 10:20	10/25/19 18:42	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/25/19 10:20	10/25/19 18:42	1
2-Nitrophenol	ND		10	2.1	ug/L		10/25/19 10:20	10/25/19 18:42	1
3-Nitroaniline	ND		10	2.3	ug/L		10/25/19 10:20	10/25/19 18:42	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/25/19 10:20	10/25/19 18:42	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/25/19 10:20	10/25/19 18:42	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/25/19 10:20	10/25/19 18:42	1
4-Chloroaniline	ND		10	2.1	ug/L		10/25/19 10:20	10/25/19 18:42	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/25/19 10:20	10/25/19 18:42	1
4-Nitroaniline	ND		10	3.9	ug/L		10/25/19 10:20	10/25/19 18:42	1
4-Nitrophenol	ND		20	2.3	ug/L		10/25/19 10:20	10/25/19 18:42	1
Acenaphthene	ND		1.0	0.36	ug/L		10/25/19 10:20	10/25/19 18:42	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/25/19 10:20	10/25/19 18:42	1
Anthracene	ND		1.0	0.32	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzoic acid	ND		20	4.6	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzyl alcohol	ND		20	3.1	ug/L		10/25/19 10:20	10/25/19 18:42	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/25/19 10:20	10/25/19 18:42	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/25/19 10:20	10/25/19 18:42	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/25/19 10:20	10/25/19 18:42	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/25/19 10:20	10/25/19 18:42	1
Chrysene	ND		0.50	0.14	ug/L		10/25/19 10:20	10/25/19 18:42	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/25/19 10:20	10/25/19 18:42	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/25/19 10:20	10/25/19 18:42	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/25/19 10:20	10/25/19 18:42	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/25/19 10:20	10/25/19 18:42	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/25/19 10:20	10/25/19 18:42	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/25/19 10:20	10/25/19 18:42	1

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-511959/1-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511959

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/25/19 10:20	10/25/19 18:42	1
Fluoranthene	ND		1.0	0.32	ug/L		10/25/19 10:20	10/25/19 18:42	1
Fluorene	ND		1.0	0.38	ug/L		10/25/19 10:20	10/25/19 18:42	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/25/19 10:20	10/25/19 18:42	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/25/19 10:20	10/25/19 18:42	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/25/19 10:20	10/25/19 18:42	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/25/19 10:20	10/25/19 18:42	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/25/19 10:20	10/25/19 18:42	1
Isophorone	ND		2.0	0.29	ug/L		10/25/19 10:20	10/25/19 18:42	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/25/19 10:20	10/25/19 18:42	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/25/19 10:20	10/25/19 18:42	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/25/19 10:20	10/25/19 18:42	1
Phenol	ND		5.0	0.36	ug/L		10/25/19 10:20	10/25/19 18:42	1
Pyrene	ND		1.0	0.48	ug/L		10/25/19 10:20	10/25/19 18:42	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/25/19 10:20	10/25/19 18:42	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/25/19 10:20	10/25/19 18:42	1
Phenanthrene	ND		1.0	0.35	ug/L		10/25/19 10:20	10/25/19 18:42	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/25/19 10:20	10/25/19 18:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	102		40 - 145	10/25/19 10:20	10/25/19 18:42	1
2-Fluorobiphenyl	99		34 - 110	10/25/19 10:20	10/25/19 18:42	1
2-Fluorophenol (Surr)	49		27 - 110	10/25/19 10:20	10/25/19 18:42	1
Nitrobenzene-d5 (Surr)	96		36 - 120	10/25/19 10:20	10/25/19 18:42	1
Phenol-d5 (Surr)	39		20 - 100	10/25/19 10:20	10/25/19 18:42	1
Terphenyl-d14 (Surr)	107		40 - 145	10/25/19 10:20	10/25/19 18:42	1

Lab Sample ID: LCS 500-511959/2-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	40.0	36.3		ug/L		91	26 - 110
1,2-Dichlorobenzene	40.0	34.3		ug/L		86	26 - 110
1,3-Dichlorobenzene	40.0	34.9		ug/L		87	22 - 110
1,4-Dichlorobenzene	40.0	35.0		ug/L		87	23 - 110
1-Methylnaphthalene	40.0	36.8		ug/L		92	38 - 110
bis(chloroisopropyl) ether	40.0	44.0		ug/L		110	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	36.4		ug/L		91	44 - 118
2,4,5-Trichlorophenol	40.0	41.6		ug/L		104	63 - 120
2,4,6-Trichlorophenol	40.0	43.1		ug/L		108	62 - 110
2,4-Dichlorophenol	40.0	42.4		ug/L		106	62 - 110
2,4-Dinitrophenol	80.0	88.4		ug/L		110	37 - 130
2,4-Dinitrotoluene	40.0	45.3		ug/L		113	63 - 122
2,6-Dinitrotoluene	40.0	45.2		ug/L		113	63 - 119
3 & 4 Methylphenol	40.0	32.8		ug/L		82	53 - 110
2-Chloronaphthalene	40.0	39.4		ug/L		98	39 - 110
2-Chlorophenol	40.0	40.1		ug/L		100	59 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-511959/2-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	40.0	36.8		ug/L		92	34 - 110
2-Methylphenol	40.0	35.6		ug/L		89	53 - 110
2-Nitroaniline	40.0	43.2		ug/L		108	59 - 122
2-Nitrophenol	40.0	40.3		ug/L		101	58 - 110
3-Nitroaniline	40.0	41.0		ug/L		103	47 - 123
4,6-Dinitro-2-methylphenol	80.0	91.7		ug/L		115	50 - 117
4-Bromophenyl phenyl ether	40.0	43.8		ug/L		110	58 - 120
4-Chloro-3-methylphenol	40.0	42.1		ug/L		105	64 - 120
4-Chloroaniline	40.0	44.2		ug/L		111	35 - 128
4-Chlorophenyl phenyl ether	40.0	41.1		ug/L		103	47 - 112
4-Nitroaniline	40.0	33.5		ug/L		84	52 - 147
4-Nitrophenol	80.0	26.6		ug/L		33	20 - 110
Acenaphthene	40.0	41.2		ug/L		103	46 - 110
Acenaphthylene	40.0	41.2		ug/L		103	47 - 110
Anthracene	40.0	43.0		ug/L		107	67 - 110
Benzo[a]pyrene	40.0	44.8		ug/L		112	70 - 120
Benzo[b]fluoranthene	40.0	45.6		ug/L		114	69 - 123
Benzo[g,h,i]perylene	40.0	46.2		ug/L		115	70 - 120
Benzo[k]fluoranthene	40.0	45.7		ug/L		114	70 - 120
Benzoic acid	80.0	25.0		ug/L		31	10 - 100
Benzyl alcohol	40.0	38.0		ug/L		95	33 - 127
Bis(2-chloroethoxy)methane	40.0	39.2		ug/L		98	60 - 110
Bis(2-chloroethyl)ether	40.0	38.8		ug/L		97	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	44.4		ug/L		111	69 - 120
Butyl benzyl phthalate	40.0	44.2		ug/L		110	68 - 120
Chrysene	40.0	43.8		ug/L		110	68 - 120
Dibenz(a,h)anthracene	40.0	46.7		ug/L		117	70 - 127
Dibenzofuran	40.0	42.3		ug/L		106	51 - 110
Diethyl phthalate	40.0	43.3		ug/L		108	62 - 120
Dimethyl phthalate	40.0	43.5		ug/L		109	63 - 120
Di-n-butyl phthalate	40.0	42.9		ug/L		107	70 - 120
Di-n-octyl phthalate	40.0	43.8		ug/L		109	70 - 122
Fluoranthene	40.0	44.9		ug/L		112	68 - 120
Fluorene	40.0	42.0		ug/L		105	53 - 120
Hexachlorobenzene	40.0	42.3		ug/L		106	61 - 120
Hexachlorobutadiene	40.0	33.5		ug/L		84	20 - 100
Hexachlorocyclopentadiene	40.0	27.2		ug/L		68	10 - 100
Hexachloroethane	40.0	32.9		ug/L		82	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	46.8		ug/L		117	65 - 133
Isophorone	40.0	40.8		ug/L		102	57 - 110
Nitrobenzene	40.0	38.1		ug/L		95	53 - 110
N-Nitrosodi-n-propylamine	40.0	36.7		ug/L		92	58 - 110
N-Nitrosodiphenylamine	40.0	42.8		ug/L		107	66 - 110
Pentachlorophenol	80.0	59.8		ug/L		75	23 - 129
Phenol	40.0	20.4		ug/L		51	33 - 100
Pyrene	40.0	45.6	*	ug/L		114	70 - 110
2,4-Dimethylphenol	40.0	40.3		ug/L		101	51 - 110
Benzo[a]anthracene	40.0	43.5		ug/L		109	70 - 120
Phenanthrene	40.0	43.3		ug/L		108	65 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-511959/2-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	40.0	42.6		ug/L		107	60 - 132

Lab Sample ID: LCSD 500-511959/3-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 511959

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,2,4-Trichlorobenzene	40.0	33.4		ug/L		84	26 - 110	8	20
1,2-Dichlorobenzene	40.0	32.2		ug/L		81	26 - 110	6	20
1,3-Dichlorobenzene	40.0	32.3		ug/L		81	22 - 110	8	20
1,4-Dichlorobenzene	40.0	32.3		ug/L		81	23 - 110	8	20
1-Methylnaphthalene	40.0	34.3		ug/L		86	38 - 110	7	20
bis(chloroisopropyl) ether	40.0	42.0		ug/L		105	38 - 110	5	20
2,3,4,6-Tetrachlorophenol	40.0	34.6		ug/L		86	44 - 118	5	20
2,4,5-Trichlorophenol	40.0	38.9		ug/L		97	63 - 120	7	20
2,4,6-Trichlorophenol	40.0	40.2		ug/L		101	62 - 110	7	20
2,4-Dichlorophenol	40.0	39.5		ug/L		99	62 - 110	7	20
2,4-Dinitrophenol	80.0	83.3		ug/L		104	37 - 130	6	20
2,4-Dinitrotoluene	40.0	42.8		ug/L		107	63 - 122	6	20
2,6-Dinitrotoluene	40.0	42.8		ug/L		107	63 - 119	5	20
3 & 4 Methylphenol	40.0	30.8		ug/L		77	53 - 110	6	20
2-Chloronaphthalene	40.0	37.1		ug/L		93	39 - 110	6	20
2-Chlorophenol	40.0	37.8		ug/L		94	59 - 110	6	20
2-Methylnaphthalene	40.0	34.1		ug/L		85	34 - 110	8	20
2-Methylphenol	40.0	33.8		ug/L		84	53 - 110	5	20
2-Nitroaniline	40.0	41.5		ug/L		104	59 - 122	4	20
2-Nitrophenol	40.0	38.0		ug/L		95	58 - 110	6	20
3-Nitroaniline	40.0	40.3		ug/L		101	47 - 123	2	20
4,6-Dinitro-2-methylphenol	80.0	84.6		ug/L		106	50 - 117	8	20
4-Bromophenyl phenyl ether	40.0	40.3		ug/L		101	58 - 120	8	20
4-Chloro-3-methylphenol	40.0	39.8		ug/L		99	64 - 120	6	20
4-Chloroaniline	40.0	43.5		ug/L		109	35 - 128	2	20
4-Chlorophenyl phenyl ether	40.0	38.9		ug/L		97	47 - 112	6	20
4-Nitroaniline	40.0	33.0		ug/L		83	52 - 147	1	20
4-Nitrophenol	80.0	26.4		ug/L		33	20 - 110	1	20
Acenaphthene	40.0	39.0		ug/L		97	46 - 110	6	20
Acenaphthylene	40.0	38.5		ug/L		96	47 - 110	7	20
Anthracene	40.0	40.0		ug/L		100	67 - 110	7	20
Benzo[a]pyrene	40.0	42.0		ug/L		105	70 - 120	6	20
Benzo[b]fluoranthene	40.0	41.2		ug/L		103	69 - 123	10	20
Benzo[g,h,i]perylene	40.0	43.9		ug/L		110	70 - 120	5	20
Benzo[k]fluoranthene	40.0	41.8		ug/L		105	70 - 120	9	20
Benzoic acid	80.0	14.7	J *	ug/L		18	10 - 100	52	20
Benzyl alcohol	40.0	36.0		ug/L		90	33 - 127	5	20
Bis(2-chloroethoxy)methane	40.0	36.7		ug/L		92	60 - 110	6	20
Bis(2-chloroethyl)ether	40.0	36.0		ug/L		90	49 - 110	7	20
Bis(2-ethylhexyl) phthalate	40.0	42.1		ug/L		105	69 - 120	5	20
Butyl benzyl phthalate	40.0	41.7		ug/L		104	68 - 120	6	20
Chrysene	40.0	41.9		ug/L		105	68 - 120	5	20

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-511959/3-A
Matrix: Water
Analysis Batch: 512017

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 511959

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibenz(a,h)anthracene	40.0	44.6		ug/L		111	70 - 127	5	20
Dibenzofuran	40.0	40.0		ug/L		100	51 - 110	6	20
Diethyl phthalate	40.0	41.2		ug/L		103	62 - 120	5	20
Dimethyl phthalate	40.0	41.0		ug/L		102	63 - 120	6	20
Di-n-butyl phthalate	40.0	40.2		ug/L		101	70 - 120	6	20
Di-n-octyl phthalate	40.0	41.0		ug/L		102	70 - 122	7	20
Fluoranthene	40.0	41.0		ug/L		103	68 - 120	9	20
Fluorene	40.0	38.9		ug/L		97	53 - 120	8	20
Hexachlorobenzene	40.0	40.3		ug/L		101	61 - 120	5	20
Hexachlorobutadiene	40.0	31.2		ug/L		78	20 - 100	7	20
Hexachlorocyclopentadiene	40.0	25.3		ug/L		63	10 - 100	7	20
Hexachloroethane	40.0	30.5		ug/L		76	20 - 100	8	20
Indeno[1,2,3-cd]pyrene	40.0	44.6		ug/L		111	65 - 133	5	20
Isophorone	40.0	37.7		ug/L		94	57 - 110	8	20
Nitrobenzene	40.0	35.7		ug/L		89	53 - 110	6	20
N-Nitrosodi-n-propylamine	40.0	34.4		ug/L		86	58 - 110	6	20
N-Nitrosodiphenylamine	40.0	39.5		ug/L		99	66 - 110	8	20
Pentachlorophenol	80.0	53.5		ug/L		67	23 - 129	11	20
Phenol	40.0	18.5		ug/L		46	33 - 100	10	20
Pyrene	40.0	42.5		ug/L		106	70 - 110	7	20
2,4-Dimethylphenol	40.0	37.6		ug/L		94	51 - 110	7	20
Benzo[a]anthracene	40.0	41.7		ug/L		104	70 - 120	4	20
Phenanthrene	40.0	40.4		ug/L		101	65 - 120	7	20
3,3'-Dichlorobenzidine	40.0	41.3		ug/L		103	60 - 132	3	20

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-499280/1-A
Matrix: Water
Analysis Batch: 500349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499280

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/21/19 15:27	10/26/19 00:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	57		24 - 146				10/21/19 15:27	10/26/19 00:58	1
2-Fluorobiphenyl	84		37 - 120				10/21/19 15:27	10/26/19 00:58	1
2-Fluorophenol (Surr)	50		10 - 120				10/21/19 15:27	10/26/19 00:58	1
Nitrobenzene-d5 (Surr)	77		26 - 120				10/21/19 15:27	10/26/19 00:58	1
Phenol-d5 (Surr)	35		11 - 120				10/21/19 15:27	10/26/19 00:58	1
p-Terphenyl-d14	97		64 - 127				10/21/19 15:27	10/26/19 00:58	1

Lab Sample ID: LCS 480-499280/2-A
Matrix: Water
Analysis Batch: 500349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499280

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	16.0	12.8		ug/L		80	10 - 131

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 480-499280/2-A
Matrix: Water
Analysis Batch: 500349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499280

<u>Surrogate</u>	<u>LCS</u> <u>%Recovery</u>	<u>LCS</u> <u>Qualifier</u>	<u>Limits</u>
2,4,6-Tribromophenol (Surr)	107		24 - 146
2-Fluorobiphenyl	96		37 - 120
2-Fluorophenol (Surr)	55		10 - 120
Nitrobenzene-d5 (Surr)	98		26 - 120
Phenol-d5 (Surr)	39		11 - 120
p-Terphenyl-d14	111		64 - 127

Lab Sample ID: LCSD 480-499280/3-A
Matrix: Water
Analysis Batch: 500349

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499280

<u>Analyte</u>	<u>Spike</u> <u>Added</u>	<u>LCSD</u> <u>Result</u>	<u>LCSD</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec.</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>Limit</u>
Pentachlorophenol	16.0	14.3		ug/L		89	10 - 131	11	171

<u>Surrogate</u>	<u>LCSD</u> <u>%Recovery</u>	<u>LCSD</u> <u>Qualifier</u>	<u>Limits</u>
2,4,6-Tribromophenol (Surr)	119		24 - 146
2-Fluorobiphenyl	102		37 - 120
2-Fluorophenol (Surr)	59		10 - 120
Nitrobenzene-d5 (Surr)	105		26 - 120
Phenol-d5 (Surr)	43		11 - 120
p-Terphenyl-d14	117		64 - 127

QC Association Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

GC/MS VOA

Analysis Batch: 500429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-1	SUPE-TB-03-101719	Total/NA	Water	8260C	
480-161133-2	SUPE-W-30A-101719	Total/NA	Water	8260C	
480-161133-3	SUPE-EB-03-101719	Total/NA	Water	8260C	
480-161133-4	SUPE-W-10AR2-101719	Total/NA	Water	8260C	
480-161133-5	SUPE-W-04AR2-101719	Total/NA	Water	8260C	
MB 480-500429/7	Method Blank	Total/NA	Water	8260C	
LCS 480-500429/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 500526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-2 - DL	SUPE-W-30A-101719	Total/NA	Water	8260C	
MB 480-500526/8	Method Blank	Total/NA	Water	8260C	
LCS 480-500526/6	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 499280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-2	SUPE-W-30A-101719	Total/NA	Water	3510C	
480-161133-3	SUPE-EB-03-101719	Total/NA	Water	3510C	
480-161133-4	SUPE-W-10AR2-101719	Total/NA	Water	3510C	
480-161133-5	SUPE-W-04AR2-101719	Total/NA	Water	3510C	
MB 480-499280/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-499280/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-499280/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 500349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-2	SUPE-W-30A-101719	Total/NA	Water	8270D LL	499280
480-161133-3	SUPE-EB-03-101719	Total/NA	Water	8270D LL	499280
480-161133-4	SUPE-W-10AR2-101719	Total/NA	Water	8270D LL	499280
480-161133-5	SUPE-W-04AR2-101719	Total/NA	Water	8270D LL	499280
MB 480-499280/1-A	Method Blank	Total/NA	Water	8270D LL	499280
LCS 480-499280/2-A	Lab Control Sample	Total/NA	Water	8270D LL	499280
LCSD 480-499280/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	499280

Prep Batch: 511959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-2	SUPE-W-30A-101719	Total/NA	Water	3510C	
480-161133-3	SUPE-EB-03-101719	Total/NA	Water	3510C	
480-161133-4 - DL	SUPE-W-10AR2-101719	Total/NA	Water	3510C	
480-161133-4	SUPE-W-10AR2-101719	Total/NA	Water	3510C	
480-161133-5	SUPE-W-04AR2-101719	Total/NA	Water	3510C	
MB 500-511959/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-511959/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-511959/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 512017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-2	SUPE-W-30A-101719	Total/NA	Water	8270D	511959
480-161133-3	SUPE-EB-03-101719	Total/NA	Water	8270D	511959

Eurofins TestAmerica, Buffalo

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

GC/MS Semi VOA (Continued)

Analysis Batch: 512017 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-4	SUPE-W-10AR2-101719	Total/NA	Water	8270D	511959
480-161133-5	SUPE-W-04AR2-101719	Total/NA	Water	8270D	511959
MB 500-511959/1-A	Method Blank	Total/NA	Water	8270D	511959
LCS 500-511959/2-A	Lab Control Sample	Total/NA	Water	8270D	511959
LCSD 500-511959/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	511959

Analysis Batch: 512226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161133-4 - DL	SUPE-W-10AR2-101719	Total/NA	Water	8270D	511959

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-TB-03-101719

Lab Sample ID: 480-161133-1

Date Collected: 10/17/19 00:00

Matrix: Water

Date Received: 10/18/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500429	10/27/19 01:19	BTP	TAL BUF

Client Sample ID: SUPE-W-30A-101719

Lab Sample ID: 480-161133-2

Date Collected: 10/17/19 11:02

Matrix: Water

Date Received: 10/18/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500429	10/27/19 01:44	BTP	TAL BUF
Total/NA	Analysis	8260C	DL	2	500526	10/27/19 11:08	BTP	TAL BUF
Total/NA	Prep	3510C			511959	10/25/19 10:20	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512017	10/25/19 19:30	NRJ	TAL CHI
Total/NA	Prep	3510C			499280	10/21/19 15:27	ATG	TAL BUF
Total/NA	Analysis	8270D LL		10	500349	10/26/19 02:24	PJQ	TAL BUF

Client Sample ID: SUPE-EB-03-101719

Lab Sample ID: 480-161133-3

Date Collected: 10/17/19 12:02

Matrix: Water

Date Received: 10/18/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500429	10/27/19 02:08	BTP	TAL BUF
Total/NA	Prep	3510C			511959	10/25/19 10:20	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512017	10/25/19 19:54	NRJ	TAL CHI
Total/NA	Prep	3510C			499280	10/21/19 15:27	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500349	10/26/19 02:53	PJQ	TAL BUF

Client Sample ID: SUPE-W-10AR2-101719

Lab Sample ID: 480-161133-4

Date Collected: 10/17/19 13:11

Matrix: Water

Date Received: 10/18/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500429	10/27/19 02:32	BTP	TAL BUF
Total/NA	Prep	3510C	DL		511959	10/25/19 10:20	DAK	TAL CHI
Total/NA	Analysis	8270D	DL	2	512226	10/28/19 12:55	AJD	TAL CHI
Total/NA	Prep	3510C			511959	10/25/19 10:20	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512017	10/25/19 20:18	NRJ	TAL CHI
Total/NA	Prep	3510C			499280	10/21/19 15:27	ATG	TAL BUF
Total/NA	Analysis	8270D LL		5	500349	10/26/19 03:21	PJQ	TAL BUF

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Date Collected: 10/17/19 09:04

Matrix: Water

Date Received: 10/18/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500429	10/27/19 02:56	BTP	TAL BUF

Eurofins TestAmerica, Buffalo

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Client Sample ID: SUPE-W-04AR2-101719

Lab Sample ID: 480-161133-5

Date Collected: 10/17/19 09:04

Matrix: Water

Date Received: 10/18/19 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			511959	10/25/19 10:20	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512017	10/25/19 20:42	NRJ	TAL CHI
Total/NA	Prep	3510C			499280	10/21/19 15:27	ATG	TAL BUF
Total/NA	Analysis	8270D LL		5	500349	10/26/19 03:49	PJQ	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	998310390	08-31-20

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	999580010	08-31-20

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-19
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-19
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	12-31-19
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-30-19
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161133-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-161133-1	SUPE-TB-03-101719	Water	10/17/19 00:00	10/18/19 09:45	
480-161133-2	SUPE-W-30A-101719	Water	10/17/19 11:02	10/18/19 09:45	
480-161133-3	SUPE-EB-03-101719	Water	10/17/19 12:02	10/18/19 09:45	
480-161133-4	SUPE-W-10AR2-101719	Water	10/17/19 13:11	10/18/19 09:45	
480-161133-5	SUPE-W-04AR2-101719	Water	10/17/19 09:04	10/18/19 09:45	

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**CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS
REQUEST FORM**

REF.# 501198

501198

Project Name: Superior 2019 2SA Sampling
 Project Number: OM-0556-19
 Laboratory: TABUF
 Shipment Method: FEDEX
 Program: Superior 2019 2SA Sampling_001
 Company: Field & Technical Services
 Address: 200 Third Avenue
 Carnegie, PA 15106
 (412) 279-3363
 Client: Beazer East, Inc.
 Contact: (724) 858-5953
 btrask.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					HCL	None		
10/17/2019	0000	GW	SUPE-TB-03-101719	2	2	0		
10/17/2019	1102	GW	SUPE-W-30A-101719	5	2	3		
10/17/2019	1202	GW	SUPE-EB-03-101719	5	2	3		
10/17/2019	1311	GW	SUPE-W-10AR2-101719	5	2	3		
10/17/19	12904	GW	Supe-W-CHARZ-101719	5	2	3		



Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	<input type="checkbox"/> Rush
Printed Name: Ben Trask	Printed Name:	Printed Name: <i>[Signature]</i>	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm:	Firm: TA/EF	Firm:	
Date/Time: 10/17/2019 1432	Date/Time:	Date/Time: 10-18-19/945	Date/Time:	

3.4 IR# 1, ICE



Bottle Order Information

Bottle Order: Superior, WI Semiannual Groundwater
 Bottle Order #: 8716
 Request From Client: 9/19/2019
 Date Order Posted: 9/26/2017 12:27:54PM
 Order Status: Ready To Process
 Prepared By: Veronica Bortot
Deliver By Date: 10/9/2019 11:59:00PM
 Lab Project Number: 18015916

Order Completion Information

Creator: Veronica Bortot
 Filled by:
 Sent Date:
 Sent Via:
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
15	3	45	Amber Glass 1 liter - unpreserved	None	8270D_LL - Semivolatiles, project list	Water	Normal		✓
15	3	*45	Voa Vial 40ml - Hydrochloric Acid	Hydrochloric Acid	8260C - Volatiles, project list	Water	Normal		✓
2	2	4	Amber Glass 1 liter - unpreserved	None	8270D_LL - Semivolatiles	Water	Normal		✓
2	3	6	Voa Vial 40ml - Hydrochloric Acid	Hydrochloric Acid	8260C - (MOD) Volatiles, project list	Water	Trip Blank		✓
0		0	No Container - VOA	None		Water	Reagent Water		✓

Notes to Field Staff:



Scan QR code for field sampler instructions

Please send samples to TA Buffalo for analysis

TestAmerica Buffalo
 10 Hazelwood Drive
 Amherst NY 14228-2223
 716-691-2600

Health and Safety Notes:

Preservative: Comment

Hydrochloric Acid

CAUTION! CONTAINS 1:1 HYDROCHLORIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

Requisitioned By	Company	Date	Time	Received By	Company	Seal #
<i>[Signature]</i>						
Requisitioned By	Company	Date	Time	Received By	Company	Seal #

Please notify your PM immediately if an error is found in shipment.

Go to <http://www.testamericainc.com/customer-support/specialized-instructions-for-field-samplers/> for field sampler instructions.



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161133-1

Login Number: 161133

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Manhardt, Kara M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	FTS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161133-1

Login Number: 161133

List Number: 2

Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago

List Creation: 10/25/19 09:34 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

FTS, LLC

DATE: November 19, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 480-161258-1

SAMPLES: SUPE-TB-02-101619, SUPE-W-30C-101619, SUPE-W-06A-101619, SUPE-W-06C-101619, SUPE-W-12A-101619, SUPE-EB-02-101619, SUPE-W-12CR-101619, SUPE-W-18D-101619, SUPE-M-99A-101619(W-30C)

ANALYSES: Method 8260C (VOCs), 8270D/8270D LL (SVOCs)

LABORATORY: Eurofins TestAmerica Laboratories, Buffalo, Chicago

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: None
- Laboratory Blank Contamination
Noncompliance: None
- Field Blank Contamination
Noncompliance: Benzoic acid was detected in the equipment blank. See attached page for details.
- Field Duplicate Precision
Noncompliance: See attached page for details.
- Surrogate Recoveries
Noncompliance: The surrogate recoveries of p-terphenyl-d14 and 2,4,6-tribromophenol were above the recovery limits in sample W-12CR. No action was taken on this basis.
- Laboratory Control Sample
Noncompliance: The LCS recovery of pyrene was above the recovery limits. No action was taken on this basis.

Field Blank Contamination:

The following analyte was detected in the aqueous equipment blank, SUPE-EB-02-101619, at the following concentration:

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Blank Action Level</u>
Benzoic acid	12 J ug/l	60 ug/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-30C	QUAL	M-99A	QUAL	RPD
Benzoic acid	12	J	12	J	0.00

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-161258-1

Client Project/Site: Superior, WI Semiannual Groundwater
Revision: 3

For:

Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
11/22/2019 11:49:49 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	25
QC Sample Results	27
QC Association Summary	33
Lab Chronicle	35
Certification Summary	37
Method Summary	38
Sample Summary	39
Chain of Custody	40
Receipt Checklists	41

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Job ID: 480-161258-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-161258-1

Revised : to remove PCP from full list

Revised: to correct formatter

Comments

No additional comments.

Receipt

The samples were received on 10/17/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.8° C, 3.2° C, 3.4° C and 4.1° C.

GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-500393 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SUPE-TB -02-101619, SUPE-W-06C-101619, SUPE-W-12A-101619, SUPE-EB-02-101619, SUPE-W-12CR-101619 and SUPE-M-99A-101619.

Method 8260C: The following volatile samples were analyzed with significant headspace in the sample containers: SUPE-W-30C-101619 and SUPE-W-06A-101619. Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Buffalo

Method 8270D LL: The continuing calibration verification (CCV) associated with batch 480-500726 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: SUPE-W-30C-101619, SUPE-W-06A-101619, SUPE-W-06C-101619, SUPE-W-12A-101619, SUPE-EB-02-101619, SUPE-W-12CR-101619, SUPE-W-18D-101619 and SUPE-M-99A-101619

Method 8270D LL: Surrogate recovery for the following sample was outside the upper control limit: SUPE-W-12CR-101619. This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

GC/MS Semi VOA Chicago

Method 8270D: The laboratory control sample (LCS) for preparation batch 500-511565 and analytical batch 500-511690 recovered outside control limits for the following analyte: Pyrene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8270D: The following samples contained one acid surrogate outside acceptance limits: SUPE-W-12CR-101619. The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-TB -02-101619

Lab Sample ID: 480-161258-1

No Detections.

Client Sample ID: SUPE-W-30C-101619

Lab Sample ID: 480-161258-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	12	J	20	4.5	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-06A-101619

Lab Sample ID: 480-161258-3

No Detections.

Client Sample ID: SUPE-W-06C-101619

Lab Sample ID: 480-161258-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	12	J	19	4.4	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-12A-101619

Lab Sample ID: 480-161258-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	12	J	19	4.4	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-EB-02-101619

Lab Sample ID: 480-161258-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	12	J	20	4.6	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-12CR-101619

Lab Sample ID: 480-161258-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trichlorophenol	3.4	J	5.0	1.1	ug/L	1		8270D	Total/NA
2-Chloronaphthalene	9.9		2.0	0.34	ug/L	1		8270D	Total/NA
Benzoic acid	12	J	20	4.6	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-18D-101619

Lab Sample ID: 480-161258-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	12	J	20	4.5	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-M-99A-101619

Lab Sample ID: 480-161258-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	12	J	20	4.5	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-TB -02-101619

Lab Sample ID: 480-161258-1

Date Collected: 10/16/19 00:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 11:17	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 11:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 11:17	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 11:17	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 11:17	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 11:17	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 11:17	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 11:17	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 11:17	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 11:17	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 11:17	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 11:17	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 11:17	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 11:17	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 11:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		77 - 120					10/26/19 11:17	1
4-Bromofluorobenzene (Surr)	96		73 - 120					10/26/19 11:17	1
Dibromofluoromethane (Surr)	97		75 - 123					10/26/19 11:17	1
Toluene-d8 (Surr)	93		80 - 120					10/26/19 11:17	1

Client Sample ID: SUPE-W-30C-101619

Lab Sample ID: 480-161258-2

Date Collected: 10/16/19 09:42

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 13:54	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 13:54	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 13:54	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 13:54	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 13:54	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 13:54	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 13:54	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 13:54	1
Naphthalene	ND		1.0	0.43	ug/L			10/27/19 13:54	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 13:54	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 13:54	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 13:54	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 13:54	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 13:54	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		77 - 120					10/27/19 13:54	1
4-Bromofluorobenzene (Surr)	96		73 - 120					10/27/19 13:54	1
Dibromofluoromethane (Surr)	99		75 - 123					10/27/19 13:54	1
Toluene-d8 (Surr)	92		80 - 120					10/27/19 13:54	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-30C-101619

Lab Sample ID: 480-161258-2

Date Collected: 10/16/19 09:42

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 19:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	104		24 - 146				10/22/19 16:11	10/28/19 19:53	1
2-Fluorobiphenyl	99		37 - 120				10/22/19 16:11	10/28/19 19:53	1
2-Fluorophenol (Surr)	55		10 - 120				10/22/19 16:11	10/28/19 19:53	1
Nitrobenzene-d5 (Surr)	95		26 - 120				10/22/19 16:11	10/28/19 19:53	1
Phenol-d5 (Surr)	37		11 - 120				10/22/19 16:11	10/28/19 19:53	1
p-Terphenyl-d14	107		64 - 127				10/22/19 16:11	10/28/19 19:53	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/28/19 22:54	1
1,2-Dichlorobenzene	ND		2.0	0.28	ug/L		10/23/19 15:07	10/28/19 22:54	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/28/19 22:54	1
1,4-Dichlorobenzene	ND		2.0	0.26	ug/L		10/23/19 15:07	10/28/19 22:54	1
1-Methylnaphthalene	ND		2.0	0.49	ug/L		10/23/19 15:07	10/28/19 22:54	1
bis(chloroisopropyl) ether	ND		2.0	0.29	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,3,4,6-Tetrachlorophenol	ND		4.9	1.5	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,4,5-Trichlorophenol	ND		9.8	2.2	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,4,6-Trichlorophenol	ND		4.9	1.1	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,4-Dichlorophenol	ND		9.8	2.2	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,4-Dinitrophenol	ND		20	7.3	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,4-Dinitrotoluene	ND		0.98	0.29	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,6-Dinitrotoluene	ND		0.98	0.12	ug/L		10/23/19 15:07	10/28/19 22:54	1
3 & 4 Methylphenol	ND		2.0	0.43	ug/L		10/23/19 15:07	10/28/19 22:54	1
2-Chloronaphthalene	ND		2.0	0.33	ug/L		10/23/19 15:07	10/28/19 22:54	1
2-Chlorophenol	ND		4.9	0.79	ug/L		10/23/19 15:07	10/28/19 22:54	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/28/19 22:54	1
2-Methylphenol	ND		2.0	0.30	ug/L		10/23/19 15:07	10/28/19 22:54	1
2-Nitroaniline	ND		4.9	1.1	ug/L		10/23/19 15:07	10/28/19 22:54	1
2-Nitrophenol	ND		9.8	2.1	ug/L		10/23/19 15:07	10/28/19 22:54	1
3-Nitroaniline	ND		9.8	2.2	ug/L		10/23/19 15:07	10/28/19 22:54	1
4,6-Dinitro-2-methylphenol	ND		20	4.8	ug/L		10/23/19 15:07	10/28/19 22:54	1
4-Bromophenyl phenyl ether	ND		4.9	0.89	ug/L		10/23/19 15:07	10/28/19 22:54	1
4-Chloro-3-methylphenol	ND		9.8	2.2	ug/L		10/23/19 15:07	10/28/19 22:54	1
4-Chloroaniline	ND		9.8	2.1	ug/L		10/23/19 15:07	10/28/19 22:54	1
4-Chlorophenyl phenyl ether	ND		4.9	0.79	ug/L		10/23/19 15:07	10/28/19 22:54	1
4-Nitroaniline	ND		9.8	3.9	ug/L		10/23/19 15:07	10/28/19 22:54	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/28/19 22:54	1
Acenaphthene	ND		0.98	0.35	ug/L		10/23/19 15:07	10/28/19 22:54	1
Acenaphthylene	ND		0.98	0.31	ug/L		10/23/19 15:07	10/28/19 22:54	1
Anthracene	ND		0.98	0.31	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzo[a]pyrene	ND		0.20	0.055	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzo[b]fluoranthene	ND		0.20	0.057	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzo[g,h,i]perylene	ND		0.98	0.41	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzo[k]fluoranthene	ND		0.20	0.073	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzoic acid	12	J	20	4.5	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzyl alcohol	ND		20	3.0	ug/L		10/23/19 15:07	10/28/19 22:54	1
Bis(2-chloroethoxy)methane	ND		2.0	0.29	ug/L		10/23/19 15:07	10/28/19 22:54	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-30C-101619

Lab Sample ID: 480-161258-2

Date Collected: 10/16/19 09:42

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		2.0	0.34	ug/L		10/23/19 15:07	10/28/19 22:54	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.4	ug/L		10/23/19 15:07	10/28/19 22:54	1
Butyl benzyl phthalate	ND		2.0	0.26	ug/L		10/23/19 15:07	10/28/19 22:54	1
Chrysene	ND		0.49	0.14	ug/L		10/23/19 15:07	10/28/19 22:54	1
Dibenz(a,h)anthracene	ND		0.29	0.063	ug/L		10/23/19 15:07	10/28/19 22:54	1
Dibenzofuran	ND		2.0	0.34	ug/L		10/23/19 15:07	10/28/19 22:54	1
Diethyl phthalate	ND		2.0	0.43	ug/L		10/23/19 15:07	10/28/19 22:54	1
Dimethyl phthalate	ND		2.0	0.37	ug/L		10/23/19 15:07	10/28/19 22:54	1
Di-n-butyl phthalate	ND		4.9	0.79	ug/L		10/23/19 15:07	10/28/19 22:54	1
Di-n-octyl phthalate	ND		9.8	2.4	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,3,5,6-Tetrachlorophenol	ND		4.9	2.5	ug/L		10/23/19 15:07	10/28/19 22:54	1
Fluoranthene	ND		0.98	0.31	ug/L		10/23/19 15:07	10/28/19 22:54	1
Fluorene	ND		0.98	0.37	ug/L		10/23/19 15:07	10/28/19 22:54	1
Hexachlorobenzene	ND		0.49	0.14	ug/L		10/23/19 15:07	10/28/19 22:54	1
Hexachlorobutadiene	ND		4.9	1.1	ug/L		10/23/19 15:07	10/28/19 22:54	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/23/19 15:07	10/28/19 22:54	1
Hexachloroethane	ND		4.9	0.95	ug/L		10/23/19 15:07	10/28/19 22:54	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.082	ug/L		10/23/19 15:07	10/28/19 22:54	1
Isophorone	ND		2.0	0.28	ug/L		10/23/19 15:07	10/28/19 22:54	1
Nitrobenzene	ND		0.98	0.44	ug/L		10/23/19 15:07	10/28/19 22:54	1
N-Nitrosodi-n-propylamine	ND		0.49	0.14	ug/L		10/23/19 15:07	10/28/19 22:54	1
N-Nitrosodiphenylamine	ND		2.0	0.33	ug/L		10/23/19 15:07	10/28/19 22:54	1
Phenol	ND		4.9	0.35	ug/L		10/23/19 15:07	10/28/19 22:54	1
Pyrene	ND *		0.98	0.47	ug/L		10/23/19 15:07	10/28/19 22:54	1
2,4-Dimethylphenol	ND		9.8	3.3	ug/L		10/23/19 15:07	10/28/19 22:54	1
Benzo[a]anthracene	ND		0.20	0.043	ug/L		10/23/19 15:07	10/28/19 22:54	1
Phenanthrene	ND		0.98	0.34	ug/L		10/23/19 15:07	10/28/19 22:54	1
3,3'-Dichlorobenzidine	ND		4.9	0.92	ug/L		10/23/19 15:07	10/28/19 22:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	142		40 - 145	10/23/19 15:07	10/28/19 22:54	1
2-Fluorobiphenyl	101		34 - 110	10/23/19 15:07	10/28/19 22:54	1
2-Fluorophenol (Surr)	39		27 - 110	10/23/19 15:07	10/28/19 22:54	1
Nitrobenzene-d5 (Surr)	86		36 - 120	10/23/19 15:07	10/28/19 22:54	1
Phenol-d5 (Surr)	31		20 - 100	10/23/19 15:07	10/28/19 22:54	1
Terphenyl-d14 (Surr)	106		40 - 145	10/23/19 15:07	10/28/19 22:54	1

Client Sample ID: SUPE-W-06A-101619

Lab Sample ID: 480-161258-3

Date Collected: 10/16/19 11:11

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 14:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 14:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 14:18	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 14:18	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 14:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 14:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 14:18	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-06A-101619

Lab Sample ID: 480-161258-3

Date Collected: 10/16/19 11:11

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 14:18	1
Naphthalene	ND		1.0	0.43	ug/L			10/27/19 14:18	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 14:18	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 14:18	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 14:18	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 14:18	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 14:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		10/27/19 14:18	1
4-Bromofluorobenzene (Surr)	99		73 - 120		10/27/19 14:18	1
Dibromofluoromethane (Surr)	102		75 - 123		10/27/19 14:18	1
Toluene-d8 (Surr)	93		80 - 120		10/27/19 14:18	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	115		24 - 146	10/22/19 16:11	10/28/19 20:22	1
2-Fluorobiphenyl	97		37 - 120	10/22/19 16:11	10/28/19 20:22	1
2-Fluorophenol (Surr)	52		10 - 120	10/22/19 16:11	10/28/19 20:22	1
Nitrobenzene-d5 (Surr)	91		26 - 120	10/22/19 16:11	10/28/19 20:22	1
Phenol-d5 (Surr)	36		11 - 120	10/22/19 16:11	10/28/19 20:22	1
p-Terphenyl-d14	64		64 - 127	10/22/19 16:11	10/28/19 20:22	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/23/19 15:07	10/28/19 23:18	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/28/19 23:18	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/28/19 23:18	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/28/19 23:18	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/23/19 15:07	10/28/19 23:18	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/23/19 15:07	10/28/19 23:18	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/23/19 15:07	10/28/19 23:18	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/23/19 15:07	10/28/19 23:18	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/23/19 15:07	10/28/19 23:18	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/28/19 23:18	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/23/19 15:07	10/28/19 23:18	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/23/19 15:07	10/28/19 23:18	1
2-Nitrophenol	ND		10	2.1	ug/L		10/23/19 15:07	10/28/19 23:18	1
3-Nitroaniline	ND		10	2.3	ug/L		10/23/19 15:07	10/28/19 23:18	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-06A-101619

Lab Sample ID: 480-161258-3

Date Collected: 10/16/19 11:11

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/23/19 15:07	10/28/19 23:18	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/23/19 15:07	10/28/19 23:18	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/23/19 15:07	10/28/19 23:18	1
4-Chloroaniline	ND		10	2.1	ug/L		10/23/19 15:07	10/28/19 23:18	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/23/19 15:07	10/28/19 23:18	1
4-Nitroaniline	ND		10	3.9	ug/L		10/23/19 15:07	10/28/19 23:18	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/28/19 23:18	1
Acenaphthene	ND		1.0	0.36	ug/L		10/23/19 15:07	10/28/19 23:18	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/28/19 23:18	1
Anthracene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzoic acid	ND		20	4.5	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzyl alcohol	ND		20	3.0	ug/L		10/23/19 15:07	10/28/19 23:18	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/23/19 15:07	10/28/19 23:18	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/23/19 15:07	10/28/19 23:18	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/23/19 15:07	10/28/19 23:18	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/28/19 23:18	1
Chrysene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/28/19 23:18	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/23/19 15:07	10/28/19 23:18	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/23/19 15:07	10/28/19 23:18	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/23/19 15:07	10/28/19 23:18	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/23/19 15:07	10/28/19 23:18	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/23/19 15:07	10/28/19 23:18	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/23/19 15:07	10/28/19 23:18	1
Fluoranthene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/28/19 23:18	1
Fluorene	ND		1.0	0.38	ug/L		10/23/19 15:07	10/28/19 23:18	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/28/19 23:18	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/23/19 15:07	10/28/19 23:18	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/23/19 15:07	10/28/19 23:18	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/23/19 15:07	10/28/19 23:18	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/23/19 15:07	10/28/19 23:18	1
Isophorone	ND		2.0	0.29	ug/L		10/23/19 15:07	10/28/19 23:18	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/23/19 15:07	10/28/19 23:18	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/23/19 15:07	10/28/19 23:18	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/23/19 15:07	10/28/19 23:18	1
Phenol	ND		5.0	0.36	ug/L		10/23/19 15:07	10/28/19 23:18	1
Pyrene	ND *		1.0	0.48	ug/L		10/23/19 15:07	10/28/19 23:18	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/23/19 15:07	10/28/19 23:18	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/23/19 15:07	10/28/19 23:18	1
Phenanthrene	ND		1.0	0.35	ug/L		10/23/19 15:07	10/28/19 23:18	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/23/19 15:07	10/28/19 23:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	140		40 - 145	10/23/19 15:07	10/28/19 23:18	1
2-Fluorobiphenyl	98		34 - 110	10/23/19 15:07	10/28/19 23:18	1
2-Fluorophenol (Surr)	37		27 - 110	10/23/19 15:07	10/28/19 23:18	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-06A-101619

Lab Sample ID: 480-161258-3

Date Collected: 10/16/19 11:11

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	81		36 - 120	10/23/19 15:07	10/28/19 23:18	1
Phenol-d5 (Surr)	30		20 - 100	10/23/19 15:07	10/28/19 23:18	1
Terphenyl-d14 (Surr)	89		40 - 145	10/23/19 15:07	10/28/19 23:18	1

Client Sample ID: SUPE-W-06C-101619

Lab Sample ID: 480-161258-4

Date Collected: 10/16/19 12:13

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 12:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 12:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 12:29	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 12:29	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 12:29	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 12:29	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 12:29	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 12:29	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 12:29	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 12:29	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 12:29	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 12:29	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 12:29	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 12:29	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 12:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		77 - 120		10/26/19 12:29	1
4-Bromofluorobenzene (Surr)	107		73 - 120		10/26/19 12:29	1
Dibromofluoromethane (Surr)	106		75 - 123		10/26/19 12:29	1
Toluene-d8 (Surr)	102		80 - 120		10/26/19 12:29	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 20:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	104		24 - 146	10/22/19 16:11	10/28/19 20:50	1
2-Fluorobiphenyl	103		37 - 120	10/22/19 16:11	10/28/19 20:50	1
2-Fluorophenol (Surr)	55		10 - 120	10/22/19 16:11	10/28/19 20:50	1
Nitrobenzene-d5 (Surr)	97		26 - 120	10/22/19 16:11	10/28/19 20:50	1
Phenol-d5 (Surr)	36		11 - 120	10/22/19 16:11	10/28/19 20:50	1
p-Terphenyl-d14	103		64 - 127	10/22/19 16:11	10/28/19 20:50	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		10/23/19 15:07	10/28/19 23:42	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		10/23/19 15:07	10/28/19 23:42	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		10/23/19 15:07	10/28/19 23:42	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		10/23/19 15:07	10/28/19 23:42	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-06C-101619

Lab Sample ID: 480-161258-4

Date Collected: 10/16/19 12:13

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		1.9	0.48	ug/L		10/23/19 15:07	10/28/19 23:42	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.5	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,4,5-Trichlorophenol	ND		9.6	2.2	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,4,6-Trichlorophenol	ND		4.8	1.1	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,4-Dichlorophenol	ND		9.6	2.2	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,4-Dinitrotoluene	ND		0.96	0.29	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,6-Dinitrotoluene	ND		0.96	0.12	ug/L		10/23/19 15:07	10/28/19 23:42	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		10/23/19 15:07	10/28/19 23:42	1
2-Chloronaphthalene	ND		1.9	0.33	ug/L		10/23/19 15:07	10/28/19 23:42	1
2-Chlorophenol	ND		4.8	0.77	ug/L		10/23/19 15:07	10/28/19 23:42	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		10/23/19 15:07	10/28/19 23:42	1
2-Methylphenol	ND		1.9	0.30	ug/L		10/23/19 15:07	10/28/19 23:42	1
2-Nitroaniline	ND		4.8	1.0	ug/L		10/23/19 15:07	10/28/19 23:42	1
2-Nitrophenol	ND		9.6	2.1	ug/L		10/23/19 15:07	10/28/19 23:42	1
3-Nitroaniline	ND		9.6	2.2	ug/L		10/23/19 15:07	10/28/19 23:42	1
4,6-Dinitro-2-methylphenol	ND		19	4.7	ug/L		10/23/19 15:07	10/28/19 23:42	1
4-Bromophenyl phenyl ether	ND		4.8	0.87	ug/L		10/23/19 15:07	10/28/19 23:42	1
4-Chloro-3-methylphenol	ND		9.6	2.1	ug/L		10/23/19 15:07	10/28/19 23:42	1
4-Chloroaniline	ND		9.6	2.0	ug/L		10/23/19 15:07	10/28/19 23:42	1
4-Chlorophenyl phenyl ether	ND		4.8	0.78	ug/L		10/23/19 15:07	10/28/19 23:42	1
4-Nitroaniline	ND		9.6	3.8	ug/L		10/23/19 15:07	10/28/19 23:42	1
4-Nitrophenol	ND		19	2.2	ug/L		10/23/19 15:07	10/28/19 23:42	1
Acenaphthene	ND		0.96	0.35	ug/L		10/23/19 15:07	10/28/19 23:42	1
Acenaphthylene	ND		0.96	0.31	ug/L		10/23/19 15:07	10/28/19 23:42	1
Anthracene	ND		0.96	0.31	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzo[a]pyrene	ND		0.19	0.054	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzo[b]fluoranthene	ND		0.19	0.056	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzo[g,h,i]perylene	ND		0.96	0.40	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzo[k]fluoranthene	ND		0.19	0.071	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzoic acid	12 J		19	4.4	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzyl alcohol	ND		19	2.9	ug/L		10/23/19 15:07	10/28/19 23:42	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		10/23/19 15:07	10/28/19 23:42	1
Bis(2-chloroethyl)ether	ND		1.9	0.34	ug/L		10/23/19 15:07	10/28/19 23:42	1
Bis(2-ethylhexyl) phthalate	ND		9.6	2.3	ug/L		10/23/19 15:07	10/28/19 23:42	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		10/23/19 15:07	10/28/19 23:42	1
Chrysene	ND		0.48	0.13	ug/L		10/23/19 15:07	10/28/19 23:42	1
Dibenz(a,h)anthracene	ND		0.29	0.061	ug/L		10/23/19 15:07	10/28/19 23:42	1
Dibenzofuran	ND		1.9	0.34	ug/L		10/23/19 15:07	10/28/19 23:42	1
Diethyl phthalate	ND		1.9	0.42	ug/L		10/23/19 15:07	10/28/19 23:42	1
Dimethyl phthalate	ND		1.9	0.36	ug/L		10/23/19 15:07	10/28/19 23:42	1
Di-n-butyl phthalate	ND		4.8	0.77	ug/L		10/23/19 15:07	10/28/19 23:42	1
Di-n-octyl phthalate	ND		9.6	2.4	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		10/23/19 15:07	10/28/19 23:42	1
Fluoranthene	ND		0.96	0.31	ug/L		10/23/19 15:07	10/28/19 23:42	1
Fluorene	ND		0.96	0.36	ug/L		10/23/19 15:07	10/28/19 23:42	1
Hexachlorobenzene	ND		0.48	0.13	ug/L		10/23/19 15:07	10/28/19 23:42	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		10/23/19 15:07	10/28/19 23:42	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-06C-101619

Lab Sample ID: 480-161258-4

Date Collected: 10/16/19 12:13

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		10/23/19 15:07	10/28/19 23:42	1
Hexachloroethane	ND		4.8	0.93	ug/L		10/23/19 15:07	10/28/19 23:42	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.081	ug/L		10/23/19 15:07	10/28/19 23:42	1
Isophorone	ND		1.9	0.28	ug/L		10/23/19 15:07	10/28/19 23:42	1
Nitrobenzene	ND		0.96	0.43	ug/L		10/23/19 15:07	10/28/19 23:42	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		10/23/19 15:07	10/28/19 23:42	1
N-Nitrosodiphenylamine	ND		1.9	0.33	ug/L		10/23/19 15:07	10/28/19 23:42	1
Phenol	ND		4.8	0.35	ug/L		10/23/19 15:07	10/28/19 23:42	1
Pyrene	ND *		0.96	0.46	ug/L		10/23/19 15:07	10/28/19 23:42	1
2,4-Dimethylphenol	ND		9.6	3.2	ug/L		10/23/19 15:07	10/28/19 23:42	1
Benzo[a]anthracene	ND		0.19	0.042	ug/L		10/23/19 15:07	10/28/19 23:42	1
Phenanthrene	ND		0.96	0.34	ug/L		10/23/19 15:07	10/28/19 23:42	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		10/23/19 15:07	10/28/19 23:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	145		40 - 145	10/23/19 15:07	10/28/19 23:42	1
2-Fluorobiphenyl	105		34 - 110	10/23/19 15:07	10/28/19 23:42	1
2-Fluorophenol (Surr)	41		27 - 110	10/23/19 15:07	10/28/19 23:42	1
Nitrobenzene-d5 (Surr)	86		36 - 120	10/23/19 15:07	10/28/19 23:42	1
Phenol-d5 (Surr)	30		20 - 100	10/23/19 15:07	10/28/19 23:42	1
Terphenyl-d14 (Surr)	105		40 - 145	10/23/19 15:07	10/28/19 23:42	1

Client Sample ID: SUPE-W-12A-101619

Lab Sample ID: 480-161258-5

Date Collected: 10/16/19 13:22

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 12:54	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 12:54	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 12:54	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 12:54	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 12:54	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 12:54	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 12:54	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 12:54	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 12:54	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 12:54	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 12:54	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 12:54	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 12:54	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 12:54	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		77 - 120		10/26/19 12:54	1
4-Bromofluorobenzene (Surr)	99		73 - 120		10/26/19 12:54	1
Dibromofluoromethane (Surr)	105		75 - 123		10/26/19 12:54	1
Toluene-d8 (Surr)	95		80 - 120		10/26/19 12:54	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-12A-101619

Lab Sample ID: 480-161258-5

Date Collected: 10/16/19 13:22

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 21:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	122		24 - 146				10/22/19 16:11	10/28/19 21:18	1
2-Fluorobiphenyl	101		37 - 120				10/22/19 16:11	10/28/19 21:18	1
2-Fluorophenol (Surr)	54		10 - 120				10/22/19 16:11	10/28/19 21:18	1
Nitrobenzene-d5 (Surr)	95		26 - 120				10/22/19 16:11	10/28/19 21:18	1
Phenol-d5 (Surr)	37		11 - 120				10/22/19 16:11	10/28/19 21:18	1
p-Terphenyl-d14	66		64 - 127				10/22/19 16:11	10/28/19 21:18	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.9	0.29	ug/L		10/23/19 15:07	10/29/19 00:06	1
1,2-Dichlorobenzene	ND		1.9	0.28	ug/L		10/23/19 15:07	10/29/19 00:06	1
1,3-Dichlorobenzene	ND		1.9	0.24	ug/L		10/23/19 15:07	10/29/19 00:06	1
1,4-Dichlorobenzene	ND		1.9	0.26	ug/L		10/23/19 15:07	10/29/19 00:06	1
1-Methylnaphthalene	ND		1.9	0.48	ug/L		10/23/19 15:07	10/29/19 00:06	1
bis(chloroisopropyl) ether	ND		1.9	0.29	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,3,4,6-Tetrachlorophenol	ND		4.8	1.4	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,4,5-Trichlorophenol	ND		9.6	2.2	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,4,6-Trichlorophenol	ND		4.8	1.1	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,4-Dichlorophenol	ND		9.6	2.2	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,4-Dinitrophenol	ND		19	7.1	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,4-Dinitrotoluene	ND		0.96	0.29	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,6-Dinitrotoluene	ND		0.96	0.11	ug/L		10/23/19 15:07	10/29/19 00:06	1
3 & 4 Methylphenol	ND		1.9	0.42	ug/L		10/23/19 15:07	10/29/19 00:06	1
2-Chloronaphthalene	ND		1.9	0.33	ug/L		10/23/19 15:07	10/29/19 00:06	1
2-Chlorophenol	ND		4.8	0.77	ug/L		10/23/19 15:07	10/29/19 00:06	1
2-Methylnaphthalene	ND		1.9	0.12	ug/L		10/23/19 15:07	10/29/19 00:06	1
2-Methylphenol	ND		1.9	0.30	ug/L		10/23/19 15:07	10/29/19 00:06	1
2-Nitroaniline	ND		4.8	1.0	ug/L		10/23/19 15:07	10/29/19 00:06	1
2-Nitrophenol	ND		9.6	2.0	ug/L		10/23/19 15:07	10/29/19 00:06	1
3-Nitroaniline	ND		9.6	2.2	ug/L		10/23/19 15:07	10/29/19 00:06	1
4,6-Dinitro-2-methylphenol	ND		19	4.7	ug/L		10/23/19 15:07	10/29/19 00:06	1
4-Bromophenyl phenyl ether	ND		4.8	0.87	ug/L		10/23/19 15:07	10/29/19 00:06	1
4-Chloro-3-methylphenol	ND		9.6	2.1	ug/L		10/23/19 15:07	10/29/19 00:06	1
4-Chloroaniline	ND		9.6	2.0	ug/L		10/23/19 15:07	10/29/19 00:06	1
4-Chlorophenyl phenyl ether	ND		4.8	0.78	ug/L		10/23/19 15:07	10/29/19 00:06	1
4-Nitroaniline	ND		9.6	3.8	ug/L		10/23/19 15:07	10/29/19 00:06	1
4-Nitrophenol	ND		19	2.2	ug/L		10/23/19 15:07	10/29/19 00:06	1
Acenaphthene	ND		0.96	0.34	ug/L		10/23/19 15:07	10/29/19 00:06	1
Acenaphthylene	ND		0.96	0.31	ug/L		10/23/19 15:07	10/29/19 00:06	1
Anthracene	ND		0.96	0.31	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzo[a]pyrene	ND		0.19	0.054	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzo[b]fluoranthene	ND		0.19	0.056	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzo[g,h,i]perylene	ND		0.96	0.40	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzo[k]fluoranthene	ND		0.19	0.071	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzoic acid	12 J		19	4.4	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzyl alcohol	ND		19	2.9	ug/L		10/23/19 15:07	10/29/19 00:06	1
Bis(2-chloroethoxy)methane	ND		1.9	0.29	ug/L		10/23/19 15:07	10/29/19 00:06	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-12A-101619

Lab Sample ID: 480-161258-5

Date Collected: 10/16/19 13:22

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		1.9	0.34	ug/L		10/23/19 15:07	10/29/19 00:06	1
Bis(2-ethylhexyl) phthalate	ND		9.6	2.3	ug/L		10/23/19 15:07	10/29/19 00:06	1
Butyl benzyl phthalate	ND		1.9	0.26	ug/L		10/23/19 15:07	10/29/19 00:06	1
Chrysene	ND		0.48	0.13	ug/L		10/23/19 15:07	10/29/19 00:06	1
Dibenz(a,h)anthracene	ND		0.29	0.061	ug/L		10/23/19 15:07	10/29/19 00:06	1
Dibenzofuran	ND		1.9	0.34	ug/L		10/23/19 15:07	10/29/19 00:06	1
Diethyl phthalate	ND		1.9	0.42	ug/L		10/23/19 15:07	10/29/19 00:06	1
Dimethyl phthalate	ND		1.9	0.36	ug/L		10/23/19 15:07	10/29/19 00:06	1
Di-n-butyl phthalate	ND		4.8	0.77	ug/L		10/23/19 15:07	10/29/19 00:06	1
Di-n-octyl phthalate	ND		9.6	2.4	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,3,5,6-Tetrachlorophenol	ND		4.8	2.4	ug/L		10/23/19 15:07	10/29/19 00:06	1
Fluoranthene	ND		0.96	0.31	ug/L		10/23/19 15:07	10/29/19 00:06	1
Fluorene	ND		0.96	0.36	ug/L		10/23/19 15:07	10/29/19 00:06	1
Hexachlorobenzene	ND		0.48	0.13	ug/L		10/23/19 15:07	10/29/19 00:06	1
Hexachlorobutadiene	ND		4.8	1.1	ug/L		10/23/19 15:07	10/29/19 00:06	1
Hexachlorocyclopentadiene	ND		19	3.3	ug/L		10/23/19 15:07	10/29/19 00:06	1
Hexachloroethane	ND		4.8	0.93	ug/L		10/23/19 15:07	10/29/19 00:06	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.080	ug/L		10/23/19 15:07	10/29/19 00:06	1
Isophorone	ND		1.9	0.28	ug/L		10/23/19 15:07	10/29/19 00:06	1
Nitrobenzene	ND		0.96	0.43	ug/L		10/23/19 15:07	10/29/19 00:06	1
N-Nitrosodi-n-propylamine	ND		0.48	0.13	ug/L		10/23/19 15:07	10/29/19 00:06	1
N-Nitrosodiphenylamine	ND		1.9	0.33	ug/L		10/23/19 15:07	10/29/19 00:06	1
Phenol	ND		4.8	0.34	ug/L		10/23/19 15:07	10/29/19 00:06	1
Pyrene	ND *		0.96	0.46	ug/L		10/23/19 15:07	10/29/19 00:06	1
2,4-Dimethylphenol	ND		9.6	3.2	ug/L		10/23/19 15:07	10/29/19 00:06	1
Benzo[a]anthracene	ND		0.19	0.042	ug/L		10/23/19 15:07	10/29/19 00:06	1
Phenanthrene	ND		0.96	0.34	ug/L		10/23/19 15:07	10/29/19 00:06	1
3,3'-Dichlorobenzidine	ND		4.8	0.90	ug/L		10/23/19 15:07	10/29/19 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	134		40 - 145	10/23/19 15:07	10/29/19 00:06	1
2-Fluorobiphenyl	95		34 - 110	10/23/19 15:07	10/29/19 00:06	1
2-Fluorophenol (Surr)	37		27 - 110	10/23/19 15:07	10/29/19 00:06	1
Nitrobenzene-d5 (Surr)	78		36 - 120	10/23/19 15:07	10/29/19 00:06	1
Phenol-d5 (Surr)	30		20 - 100	10/23/19 15:07	10/29/19 00:06	1
Terphenyl-d14 (Surr)	78		40 - 145	10/23/19 15:07	10/29/19 00:06	1

Client Sample ID: SUPE-EB-02-101619

Lab Sample ID: 480-161258-6

Date Collected: 10/16/19 14:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 13:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 13:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 13:18	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 13:18	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 13:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 13:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 13:18	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-EB-02-101619

Lab Sample ID: 480-161258-6

Date Collected: 10/16/19 14:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 13:18	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 13:18	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 13:18	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 13:18	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 13:18	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 13:18	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 13:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		77 - 120		10/26/19 13:18	1
4-Bromofluorobenzene (Surr)	103		73 - 120		10/26/19 13:18	1
Dibromofluoromethane (Surr)	108		75 - 123		10/26/19 13:18	1
Toluene-d8 (Surr)	100		80 - 120		10/26/19 13:18	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 21:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		24 - 146	10/22/19 16:11	10/28/19 21:47	1
2-Fluorobiphenyl	107		37 - 120	10/22/19 16:11	10/28/19 21:47	1
2-Fluorophenol (Surr)	57		10 - 120	10/22/19 16:11	10/28/19 21:47	1
Nitrobenzene-d5 (Surr)	100		26 - 120	10/22/19 16:11	10/28/19 21:47	1
Phenol-d5 (Surr)	39		11 - 120	10/22/19 16:11	10/28/19 21:47	1
p-Terphenyl-d14	120		64 - 127	10/22/19 16:11	10/28/19 21:47	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:31	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 00:31	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/29/19 00:31	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 00:31	1
1-Methylnaphthalene	ND		2.0	0.51	ug/L		10/23/19 15:07	10/29/19 00:31	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,3,4,6-Tetrachlorophenol	ND		5.1	1.5	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,4,6-Trichlorophenol	ND		5.1	1.1	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/23/19 15:07	10/29/19 00:31	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/23/19 15:07	10/29/19 00:31	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 00:31	1
2-Chlorophenol	ND		5.1	0.81	ug/L		10/23/19 15:07	10/29/19 00:31	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/29/19 00:31	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/23/19 15:07	10/29/19 00:31	1
2-Nitroaniline	ND		5.1	1.1	ug/L		10/23/19 15:07	10/29/19 00:31	1
2-Nitrophenol	ND		10	2.2	ug/L		10/23/19 15:07	10/29/19 00:31	1
3-Nitroaniline	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 00:31	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-EB-02-101619

Lab Sample ID: 480-161258-6

Date Collected: 10/16/19 14:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		20	5.0	ug/L		10/23/19 15:07	10/29/19 00:31	1
4-Bromophenyl phenyl ether	ND		5.1	0.92	ug/L		10/23/19 15:07	10/29/19 00:31	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/23/19 15:07	10/29/19 00:31	1
4-Chloroaniline	ND		10	2.1	ug/L		10/23/19 15:07	10/29/19 00:31	1
4-Chlorophenyl phenyl ether	ND		5.1	0.82	ug/L		10/23/19 15:07	10/29/19 00:31	1
4-Nitroaniline	ND		10	4.0	ug/L		10/23/19 15:07	10/29/19 00:31	1
4-Nitrophenol	ND		20	2.4	ug/L		10/23/19 15:07	10/29/19 00:31	1
Acenaphthene	ND		1.0	0.36	ug/L		10/23/19 15:07	10/29/19 00:31	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 00:31	1
Anthracene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzo[a]pyrene	ND		0.20	0.057	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzo[b]fluoranthene	ND		0.20	0.059	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzo[k]fluoranthene	ND		0.20	0.075	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzoic acid	12	J	20	4.6	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzyl alcohol	ND		20	3.1	ug/L		10/23/19 15:07	10/29/19 00:31	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:31	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/23/19 15:07	10/29/19 00:31	1
Bis(2-ethylhexyl) phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/29/19 00:31	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 00:31	1
Chrysene	ND		0.51	0.14	ug/L		10/23/19 15:07	10/29/19 00:31	1
Dibenz(a,h)anthracene	ND		0.30	0.065	ug/L		10/23/19 15:07	10/29/19 00:31	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/23/19 15:07	10/29/19 00:31	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/23/19 15:07	10/29/19 00:31	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/23/19 15:07	10/29/19 00:31	1
Di-n-butyl phthalate	ND		5.1	0.81	ug/L		10/23/19 15:07	10/29/19 00:31	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,3,5,6-Tetrachlorophenol	ND		5.1	2.5	ug/L		10/23/19 15:07	10/29/19 00:31	1
Fluoranthene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 00:31	1
Fluorene	ND		1.0	0.38	ug/L		10/23/19 15:07	10/29/19 00:31	1
Hexachlorobenzene	ND		0.51	0.14	ug/L		10/23/19 15:07	10/29/19 00:31	1
Hexachlorobutadiene	ND		5.1	1.1	ug/L		10/23/19 15:07	10/29/19 00:31	1
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		10/23/19 15:07	10/29/19 00:31	1
Hexachloroethane	ND		5.1	0.98	ug/L		10/23/19 15:07	10/29/19 00:31	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.085	ug/L		10/23/19 15:07	10/29/19 00:31	1
Isophorone	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 00:31	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/23/19 15:07	10/29/19 00:31	1
N-Nitrosodi-n-propylamine	ND		0.51	0.14	ug/L		10/23/19 15:07	10/29/19 00:31	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 00:31	1
Phenol	ND		5.1	0.36	ug/L		10/23/19 15:07	10/29/19 00:31	1
Pyrene	ND	*	1.0	0.49	ug/L		10/23/19 15:07	10/29/19 00:31	1
2,4-Dimethylphenol	ND		10	3.4	ug/L		10/23/19 15:07	10/29/19 00:31	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/23/19 15:07	10/29/19 00:31	1
Phenanthrene	ND		1.0	0.35	ug/L		10/23/19 15:07	10/29/19 00:31	1
3,3'-Dichlorobenzidine	ND		5.1	0.95	ug/L		10/23/19 15:07	10/29/19 00:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	122		40 - 145	10/23/19 15:07	10/29/19 00:31	1
2-Fluorobiphenyl	94		34 - 110	10/23/19 15:07	10/29/19 00:31	1
2-Fluorophenol (Surr)	41		27 - 110	10/23/19 15:07	10/29/19 00:31	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-EB-02-101619

Lab Sample ID: 480-161258-6

Date Collected: 10/16/19 14:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	79		36 - 120	10/23/19 15:07	10/29/19 00:31	1
Phenol-d5 (Surr)	28		20 - 100	10/23/19 15:07	10/29/19 00:31	1
Terphenyl-d14 (Surr)	101		40 - 145	10/23/19 15:07	10/29/19 00:31	1

Client Sample ID: SUPE-W-12CR-101619

Lab Sample ID: 480-161258-7

Date Collected: 10/16/19 14:45

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 13:42	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 13:42	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 13:42	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 13:42	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 13:42	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 13:42	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 13:42	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 13:42	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 13:42	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 13:42	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 13:42	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 13:42	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 13:42	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 13:42	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		10/26/19 13:42	1
4-Bromofluorobenzene (Surr)	101		73 - 120		10/26/19 13:42	1
Dibromofluoromethane (Surr)	100		75 - 123		10/26/19 13:42	1
Toluene-d8 (Surr)	95		80 - 120		10/26/19 13:42	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 22:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	132		24 - 146	10/22/19 16:11	10/28/19 22:15	1
2-Fluorobiphenyl	112		37 - 120	10/22/19 16:11	10/28/19 22:15	1
2-Fluorophenol (Surr)	60		10 - 120	10/22/19 16:11	10/28/19 22:15	1
Nitrobenzene-d5 (Surr)	106		26 - 120	10/22/19 16:11	10/28/19 22:15	1
Phenol-d5 (Surr)	40		11 - 120	10/22/19 16:11	10/28/19 22:15	1
p-Terphenyl-d14	128	X	64 - 127	10/22/19 16:11	10/28/19 22:15	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:55	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 00:55	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/29/19 00:55	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 00:55	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-12CR-101619

Lab Sample ID: 480-161258-7

Date Collected: 10/16/19 14:45

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/23/19 15:07	10/29/19 00:55	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,4,6-Trichlorophenol	3.4	J	5.0	1.1	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/23/19 15:07	10/29/19 00:55	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/23/19 15:07	10/29/19 00:55	1
2-Chloronaphthalene	9.9		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 00:55	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/23/19 15:07	10/29/19 00:55	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/29/19 00:55	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/23/19 15:07	10/29/19 00:55	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/23/19 15:07	10/29/19 00:55	1
2-Nitrophenol	ND		10	2.1	ug/L		10/23/19 15:07	10/29/19 00:55	1
3-Nitroaniline	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 00:55	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/23/19 15:07	10/29/19 00:55	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/23/19 15:07	10/29/19 00:55	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/23/19 15:07	10/29/19 00:55	1
4-Chloroaniline	ND		10	2.1	ug/L		10/23/19 15:07	10/29/19 00:55	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/23/19 15:07	10/29/19 00:55	1
4-Nitroaniline	ND		10	3.9	ug/L		10/23/19 15:07	10/29/19 00:55	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/29/19 00:55	1
Acenaphthene	ND		1.0	0.36	ug/L		10/23/19 15:07	10/29/19 00:55	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 00:55	1
Anthracene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzoic acid	12	J	20	4.6	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzyl alcohol	ND		20	3.1	ug/L		10/23/19 15:07	10/29/19 00:55	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 00:55	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/23/19 15:07	10/29/19 00:55	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/23/19 15:07	10/29/19 00:55	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 00:55	1
Chrysene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/29/19 00:55	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/23/19 15:07	10/29/19 00:55	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/23/19 15:07	10/29/19 00:55	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/23/19 15:07	10/29/19 00:55	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/23/19 15:07	10/29/19 00:55	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/23/19 15:07	10/29/19 00:55	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/23/19 15:07	10/29/19 00:55	1
Fluoranthene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 00:55	1
Fluorene	ND		1.0	0.38	ug/L		10/23/19 15:07	10/29/19 00:55	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/29/19 00:55	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/23/19 15:07	10/29/19 00:55	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-12CR-101619

Lab Sample ID: 480-161258-7

Date Collected: 10/16/19 14:45

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		10/23/19 15:07	10/29/19 00:55	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/23/19 15:07	10/29/19 00:55	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/23/19 15:07	10/29/19 00:55	1
Isophorone	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 00:55	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/23/19 15:07	10/29/19 00:55	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/23/19 15:07	10/29/19 00:55	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 00:55	1
Phenol	ND		5.0	0.36	ug/L		10/23/19 15:07	10/29/19 00:55	1
Pyrene	ND *		1.0	0.48	ug/L		10/23/19 15:07	10/29/19 00:55	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/23/19 15:07	10/29/19 00:55	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/23/19 15:07	10/29/19 00:55	1
Phenanthrene	ND		1.0	0.35	ug/L		10/23/19 15:07	10/29/19 00:55	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/23/19 15:07	10/29/19 00:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	147	X	40 - 145	10/23/19 15:07	10/29/19 00:55	1
2-Fluorobiphenyl	105		34 - 110	10/23/19 15:07	10/29/19 00:55	1
2-Fluorophenol (Surr)	48		27 - 110	10/23/19 15:07	10/29/19 00:55	1
Nitrobenzene-d5 (Surr)	90		36 - 120	10/23/19 15:07	10/29/19 00:55	1
Phenol-d5 (Surr)	37		20 - 100	10/23/19 15:07	10/29/19 00:55	1
Terphenyl-d14 (Surr)	107		40 - 145	10/23/19 15:07	10/29/19 00:55	1

Client Sample ID: SUPE-W-18D-101619

Lab Sample ID: 480-161258-8

Date Collected: 10/16/19 16:10

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 22:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	124		24 - 146	10/22/19 16:11	10/28/19 22:43	1
2-Fluorobiphenyl	105		37 - 120	10/22/19 16:11	10/28/19 22:43	1
2-Fluorophenol (Surr)	54		10 - 120	10/22/19 16:11	10/28/19 22:43	1
Nitrobenzene-d5 (Surr)	96		26 - 120	10/22/19 16:11	10/28/19 22:43	1
Phenol-d5 (Surr)	36		11 - 120	10/22/19 16:11	10/28/19 22:43	1
p-Terphenyl-d14	114		64 - 127	10/22/19 16:11	10/28/19 22:43	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 01:19	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 01:19	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/29/19 01:19	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 01:19	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/23/19 15:07	10/29/19 01:19	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/23/19 15:07	10/29/19 01:19	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-18D-101619

Lab Sample ID: 480-161258-8

Date Collected: 10/16/19 16:10

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/23/19 15:07	10/29/19 01:19	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/23/19 15:07	10/29/19 01:19	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 01:19	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/23/19 15:07	10/29/19 01:19	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/29/19 01:19	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/23/19 15:07	10/29/19 01:19	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/23/19 15:07	10/29/19 01:19	1
2-Nitrophenol	ND		10	2.1	ug/L		10/23/19 15:07	10/29/19 01:19	1
3-Nitroaniline	ND		10	2.3	ug/L		10/23/19 15:07	10/29/19 01:19	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/23/19 15:07	10/29/19 01:19	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/23/19 15:07	10/29/19 01:19	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/23/19 15:07	10/29/19 01:19	1
4-Chloroaniline	ND		10	2.1	ug/L		10/23/19 15:07	10/29/19 01:19	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/23/19 15:07	10/29/19 01:19	1
4-Nitroaniline	ND		10	3.9	ug/L		10/23/19 15:07	10/29/19 01:19	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/29/19 01:19	1
Acenaphthene	ND		1.0	0.36	ug/L		10/23/19 15:07	10/29/19 01:19	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 01:19	1
Anthracene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzoic acid	12 J		20	4.5	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzyl alcohol	ND		20	3.0	ug/L		10/23/19 15:07	10/29/19 01:19	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 01:19	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/23/19 15:07	10/29/19 01:19	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/23/19 15:07	10/29/19 01:19	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 01:19	1
Chrysene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/29/19 01:19	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/23/19 15:07	10/29/19 01:19	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/23/19 15:07	10/29/19 01:19	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/23/19 15:07	10/29/19 01:19	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/23/19 15:07	10/29/19 01:19	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/23/19 15:07	10/29/19 01:19	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/23/19 15:07	10/29/19 01:19	1
Fluoranthene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/29/19 01:19	1
Fluorene	ND		1.0	0.38	ug/L		10/23/19 15:07	10/29/19 01:19	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/29/19 01:19	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/23/19 15:07	10/29/19 01:19	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/23/19 15:07	10/29/19 01:19	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/23/19 15:07	10/29/19 01:19	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/23/19 15:07	10/29/19 01:19	1
Isophorone	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 01:19	1
Naphthalene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/29/19 01:19	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/23/19 15:07	10/29/19 01:19	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/23/19 15:07	10/29/19 01:19	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-W-18D-101619

Lab Sample ID: 480-161258-8

Date Collected: 10/16/19 16:10

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 01:19	1
Pentachlorophenol	ND		20	5.6	ug/L		10/23/19 15:07	10/29/19 01:19	1
Phenol	ND		5.0	0.36	ug/L		10/23/19 15:07	10/29/19 01:19	1
Pyrene	ND	*	1.0	0.48	ug/L		10/23/19 15:07	10/29/19 01:19	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/23/19 15:07	10/29/19 01:19	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/23/19 15:07	10/29/19 01:19	1
Phenanthrene	ND		1.0	0.35	ug/L		10/23/19 15:07	10/29/19 01:19	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/23/19 15:07	10/29/19 01:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	141		40 - 145				10/23/19 15:07	10/29/19 01:19	1
2-Fluorobiphenyl	95		34 - 110				10/23/19 15:07	10/29/19 01:19	1
2-Fluorophenol (Surr)	43		27 - 110				10/23/19 15:07	10/29/19 01:19	1
Nitrobenzene-d5 (Surr)	81		36 - 120				10/23/19 15:07	10/29/19 01:19	1
Phenol-d5 (Surr)	34		20 - 100				10/23/19 15:07	10/29/19 01:19	1
Terphenyl-d14 (Surr)	94		40 - 145				10/23/19 15:07	10/29/19 01:19	1

Client Sample ID: SUPE-M-99A-101619

Lab Sample ID: 480-161258-9

Date Collected: 10/16/19 22:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 14:06	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 14:06	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 14:06	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 14:06	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 14:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 14:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 14:06	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 14:06	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 14:06	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 14:06	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 14:06	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 14:06	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 14:06	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 14:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 14:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120					10/26/19 14:06	1
4-Bromofluorobenzene (Surr)	102		73 - 120					10/26/19 14:06	1
Dibromofluoromethane (Surr)	102		75 - 123					10/26/19 14:06	1
Toluene-d8 (Surr)	96		80 - 120					10/26/19 14:06	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 23:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	113		24 - 146				10/22/19 16:11	10/28/19 23:12	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-M-99A-101619

Lab Sample ID: 480-161258-9

Date Collected: 10/16/19 22:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	105		37 - 120	10/22/19 16:11	10/28/19 23:12	1
2-Fluorophenol (Surr)	58		10 - 120	10/22/19 16:11	10/28/19 23:12	1
Nitrobenzene-d5 (Surr)	99		26 - 120	10/22/19 16:11	10/28/19 23:12	1
Phenol-d5 (Surr)	38		11 - 120	10/22/19 16:11	10/28/19 23:12	1
p-Terphenyl-d14	114		64 - 127	10/22/19 16:11	10/28/19 23:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 01:44	1
1,2-Dichlorobenzene	ND		2.0	0.28	ug/L		10/23/19 15:07	10/29/19 01:44	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/29/19 01:44	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 01:44	1
1-Methylnaphthalene	ND		2.0	0.49	ug/L		10/23/19 15:07	10/29/19 01:44	1
bis(chloroisopropyl) ether	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,3,4,6-Tetrachlorophenol	ND		4.9	1.5	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,4,5-Trichlorophenol	ND		9.8	2.2	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,4,6-Trichlorophenol	ND		4.9	1.1	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,4-Dichlorophenol	ND		9.8	2.2	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,4-Dinitrophenol	ND		20	7.3	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,4-Dinitrotoluene	ND		0.98	0.29	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,6-Dinitrotoluene	ND		0.98	0.12	ug/L		10/23/19 15:07	10/29/19 01:44	1
3 & 4 Methylphenol	ND		2.0	0.43	ug/L		10/23/19 15:07	10/29/19 01:44	1
2-Chloronaphthalene	ND		2.0	0.33	ug/L		10/23/19 15:07	10/29/19 01:44	1
2-Chlorophenol	ND		4.9	0.79	ug/L		10/23/19 15:07	10/29/19 01:44	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/29/19 01:44	1
2-Methylphenol	ND		2.0	0.30	ug/L		10/23/19 15:07	10/29/19 01:44	1
2-Nitroaniline	ND		4.9	1.1	ug/L		10/23/19 15:07	10/29/19 01:44	1
2-Nitrophenol	ND		9.8	2.1	ug/L		10/23/19 15:07	10/29/19 01:44	1
3-Nitroaniline	ND		9.8	2.2	ug/L		10/23/19 15:07	10/29/19 01:44	1
4,6-Dinitro-2-methylphenol	ND		20	4.8	ug/L		10/23/19 15:07	10/29/19 01:44	1
4-Bromophenyl phenyl ether	ND		4.9	0.89	ug/L		10/23/19 15:07	10/29/19 01:44	1
4-Chloro-3-methylphenol	ND		9.8	2.2	ug/L		10/23/19 15:07	10/29/19 01:44	1
4-Chloroaniline	ND		9.8	2.1	ug/L		10/23/19 15:07	10/29/19 01:44	1
4-Chlorophenyl phenyl ether	ND		4.9	0.80	ug/L		10/23/19 15:07	10/29/19 01:44	1
4-Nitroaniline	ND		9.8	3.9	ug/L		10/23/19 15:07	10/29/19 01:44	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/29/19 01:44	1
Acenaphthene	ND		0.98	0.35	ug/L		10/23/19 15:07	10/29/19 01:44	1
Acenaphthylene	ND		0.98	0.31	ug/L		10/23/19 15:07	10/29/19 01:44	1
Anthracene	ND		0.98	0.31	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzo[a]pyrene	ND		0.20	0.055	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzo[b]fluoranthene	ND		0.20	0.057	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzo[g,h,i]perylene	ND		0.98	0.41	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzo[k]fluoranthene	ND		0.20	0.073	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzoic acid	12 J		20	4.5	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzyl alcohol	ND		20	3.0	ug/L		10/23/19 15:07	10/29/19 01:44	1
Bis(2-chloroethoxy)methane	ND		2.0	0.29	ug/L		10/23/19 15:07	10/29/19 01:44	1
Bis(2-chloroethyl)ether	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 01:44	1
Bis(2-ethylhexyl) phthalate	ND		9.8	2.4	ug/L		10/23/19 15:07	10/29/19 01:44	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/29/19 01:44	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-M-99A-101619

Lab Sample ID: 480-161258-9

Date Collected: 10/16/19 22:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.49	0.14	ug/L		10/23/19 15:07	10/29/19 01:44	1
Dibenz(a,h)anthracene	ND		0.29	0.063	ug/L		10/23/19 15:07	10/29/19 01:44	1
Dibenzofuran	ND		2.0	0.34	ug/L		10/23/19 15:07	10/29/19 01:44	1
Diethyl phthalate	ND		2.0	0.43	ug/L		10/23/19 15:07	10/29/19 01:44	1
Dimethyl phthalate	ND		2.0	0.37	ug/L		10/23/19 15:07	10/29/19 01:44	1
Di-n-butyl phthalate	ND		4.9	0.79	ug/L		10/23/19 15:07	10/29/19 01:44	1
Di-n-octyl phthalate	ND		9.8	2.4	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,3,5,6-Tetrachlorophenol	ND		4.9	2.5	ug/L		10/23/19 15:07	10/29/19 01:44	1
Fluoranthene	ND		0.98	0.31	ug/L		10/23/19 15:07	10/29/19 01:44	1
Fluorene	ND		0.98	0.37	ug/L		10/23/19 15:07	10/29/19 01:44	1
Hexachlorobenzene	ND		0.49	0.14	ug/L		10/23/19 15:07	10/29/19 01:44	1
Hexachlorobutadiene	ND		4.9	1.1	ug/L		10/23/19 15:07	10/29/19 01:44	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/23/19 15:07	10/29/19 01:44	1
Hexachloroethane	ND		4.9	0.95	ug/L		10/23/19 15:07	10/29/19 01:44	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.083	ug/L		10/23/19 15:07	10/29/19 01:44	1
Isophorone	ND		2.0	0.28	ug/L		10/23/19 15:07	10/29/19 01:44	1
Nitrobenzene	ND		0.98	0.44	ug/L		10/23/19 15:07	10/29/19 01:44	1
N-Nitrosodi-n-propylamine	ND		0.49	0.14	ug/L		10/23/19 15:07	10/29/19 01:44	1
N-Nitrosodiphenylamine	ND		2.0	0.33	ug/L		10/23/19 15:07	10/29/19 01:44	1
Phenol	ND		4.9	0.35	ug/L		10/23/19 15:07	10/29/19 01:44	1
Pyrene	ND *		0.98	0.47	ug/L		10/23/19 15:07	10/29/19 01:44	1
2,4-Dimethylphenol	ND		9.8	3.3	ug/L		10/23/19 15:07	10/29/19 01:44	1
Benzo[a]anthracene	ND		0.20	0.043	ug/L		10/23/19 15:07	10/29/19 01:44	1
Phenanthrene	ND		0.98	0.34	ug/L		10/23/19 15:07	10/29/19 01:44	1
3,3'-Dichlorobenzidine	ND		4.9	0.92	ug/L		10/23/19 15:07	10/29/19 01:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	137		40 - 145	10/23/19 15:07	10/29/19 01:44	1
2-Fluorobiphenyl	96		34 - 110	10/23/19 15:07	10/29/19 01:44	1
2-Fluorophenol (Surr)	44		27 - 110	10/23/19 15:07	10/29/19 01:44	1
Nitrobenzene-d5 (Surr)	81		36 - 120	10/23/19 15:07	10/29/19 01:44	1
Phenol-d5 (Surr)	31		20 - 100	10/23/19 15:07	10/29/19 01:44	1
Terphenyl-d14 (Surr)	101		40 - 145	10/23/19 15:07	10/29/19 01:44	1

Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-161258-1	SUPE-TB -02-101619	94	96	97	93
480-161258-2	SUPE-W-30C-101619	101	96	99	92
480-161258-3	SUPE-W-06A-101619	102	99	102	93
480-161258-4	SUPE-W-06C-101619	107	107	106	102
480-161258-5	SUPE-W-12A-101619	105	99	105	95
480-161258-6	SUPE-EB-02-101619	108	103	108	100
480-161258-7	SUPE-W-12CR-101619	99	101	100	95
480-161258-9	SUPE-M-99A-101619	102	102	102	96
LCS 480-500393/5	Lab Control Sample	97	102	100	98
LCS 480-500533/6	Lab Control Sample	105	106	107	101
MB 480-500393/7	Method Blank	95	98	98	94
MB 480-500533/8	Method Blank	103	101	100	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-161258-2	SUPE-W-30C-101619	142	101	39	86	31	106
480-161258-3	SUPE-W-06A-101619	140	98	37	81	30	89
480-161258-4	SUPE-W-06C-101619	145	105	41	86	30	105
480-161258-5	SUPE-W-12A-101619	134	95	37	78	30	78
480-161258-6	SUPE-EB-02-101619	122	94	41	79	28	101
480-161258-7	SUPE-W-12CR-101619	147 X	105	48	90	37	107
480-161258-8	SUPE-W-18D-101619	141	95	43	81	34	94
480-161258-9	SUPE-M-99A-101619	137	96	44	81	31	101
LCS 500-511565/2-A	Lab Control Sample	113	98	62	94	43	117
MB 500-511565/1-A	Method Blank	50	86	32	87	31	104

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-161258-2	SUPE-W-30C-101619	104	99	55	95	37	107

Eurofins TestAmerica, Buffalo

Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-161258-3	SUPE-W-06A-101619	115	97	52	91	36	64
480-161258-4	SUPE-W-06C-101619	104	103	55	97	36	103
480-161258-5	SUPE-W-12A-101619	122	101	54	95	37	66
480-161258-6	SUPE-EB-02-101619	83	107	57	100	39	120
480-161258-7	SUPE-W-12CR-101619	132	112	60	106	40	128 X
480-161258-8	SUPE-W-18D-101619	124	105	54	96	36	114
480-161258-9	SUPE-M-99A-101619	113	105	58	99	38	114
LCS 480-499539/2-A	Lab Control Sample	116	101	56	102	40	117
MB 480-499539/1-A	Method Blank	56	87	47	80	34	100

Surrogate Legend

- TBP = 2,4,6-Tribromophenol (Surr)
- FBP = 2-Fluorobiphenyl
- 2FP = 2-Fluorophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPHd14 = p-Terphenyl-d14



QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-500393/7
Matrix: Water
Analysis Batch: 500393

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/26/19 10:45	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/26/19 10:45	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/26/19 10:45	1
Benzene	ND		1.0	0.41	ug/L			10/26/19 10:45	1
Chloromethane	ND		1.0	0.35	ug/L			10/26/19 10:45	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/26/19 10:45	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/26/19 10:45	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/26/19 10:45	1
Naphthalene	ND		1.0	0.43	ug/L			10/26/19 10:45	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/26/19 10:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/26/19 10:45	1
o-Xylene	ND		1.0	0.76	ug/L			10/26/19 10:45	1
Styrene	ND		1.0	0.73	ug/L			10/26/19 10:45	1
Toluene	ND		1.0	0.51	ug/L			10/26/19 10:45	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/26/19 10:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		77 - 120		10/26/19 10:45	1
4-Bromofluorobenzene (Surr)	98		73 - 120		10/26/19 10:45	1
Dibromofluoromethane (Surr)	98		75 - 123		10/26/19 10:45	1
Toluene-d8 (Surr)	94		80 - 120		10/26/19 10:45	1

Lab Sample ID: LCS 480-500393/5
Matrix: Water
Analysis Batch: 500393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	25.1		ug/L		100	73 - 126
1,2,4-Trimethylbenzene	25.0	24.5		ug/L		98	76 - 121
1,3,5-Trimethylbenzene	25.0	24.9		ug/L		100	77 - 121
Benzene	25.0	24.0		ug/L		96	71 - 124
Chloromethane	25.0	18.2		ug/L		73	68 - 124
Ethylbenzene	25.0	24.2		ug/L		97	77 - 123
Methyl tert-butyl ether	25.0	24.2		ug/L		97	77 - 120
m-Xylene & p-Xylene	25.0	24.5		ug/L		98	76 - 122
Naphthalene	25.0	23.3		ug/L		93	66 - 125
n-Butylbenzene	25.0	24.8		ug/L		99	71 - 128
N-Propylbenzene	25.0	24.6		ug/L		99	75 - 127
o-Xylene	25.0	24.3		ug/L		97	76 - 122
Styrene	25.0	25.1		ug/L		100	80 - 120
Toluene	25.0	23.2		ug/L		93	80 - 122
Xylenes, Total	50.0	48.8		ug/L		98	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		77 - 120
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	98		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-500533/8
Matrix: Water
Analysis Batch: 500533

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/27/19 13:15	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/27/19 13:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/27/19 13:15	1
Benzene	ND		1.0	0.41	ug/L			10/27/19 13:15	1
Chloromethane	ND		1.0	0.35	ug/L			10/27/19 13:15	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/27/19 13:15	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/27/19 13:15	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/27/19 13:15	1
Naphthalene	ND		1.0	0.43	ug/L			10/27/19 13:15	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/27/19 13:15	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/27/19 13:15	1
o-Xylene	ND		1.0	0.76	ug/L			10/27/19 13:15	1
Styrene	ND		1.0	0.73	ug/L			10/27/19 13:15	1
Toluene	ND		1.0	0.51	ug/L			10/27/19 13:15	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/27/19 13:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		77 - 120		10/27/19 13:15	1
4-Bromofluorobenzene (Surr)	101		73 - 120		10/27/19 13:15	1
Dibromofluoromethane (Surr)	100		75 - 123		10/27/19 13:15	1
Toluene-d8 (Surr)	97		80 - 120		10/27/19 13:15	1

Lab Sample ID: LCS 480-500533/6
Matrix: Water
Analysis Batch: 500533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	73 - 126
1,2,4-Trimethylbenzene	25.0	24.6		ug/L		99	76 - 121
1,3,5-Trimethylbenzene	25.0	24.4		ug/L		98	77 - 121
Benzene	25.0	24.5		ug/L		98	71 - 124
Chloromethane	25.0	22.1		ug/L		88	68 - 124
Ethylbenzene	25.0	24.8		ug/L		99	77 - 123
Methyl tert-butyl ether	25.0	24.2		ug/L		97	77 - 120
m-Xylene & p-Xylene	25.0	24.5		ug/L		98	76 - 122
Naphthalene	25.0	23.0		ug/L		92	66 - 125
n-Butylbenzene	25.0	24.8		ug/L		99	71 - 128
N-Propylbenzene	25.0	24.7		ug/L		99	75 - 127
o-Xylene	25.0	24.5		ug/L		98	76 - 122
Styrene	25.0	25.1		ug/L		100	80 - 120
Toluene	25.0	23.6		ug/L		95	80 - 122
Xylenes, Total	50.0	49.0		ug/L		98	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		77 - 120
4-Bromofluorobenzene (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	107		75 - 123
Toluene-d8 (Surr)	101		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-511565/1-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511565

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/24/19 12:07	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/24/19 12:07	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/24/19 12:07	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/23/19 15:07	10/24/19 12:07	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/23/19 15:07	10/24/19 12:07	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Nitrophenol	ND		10	2.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
3-Nitroaniline	ND		10	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Chloroaniline	ND		10	2.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Nitroaniline	ND		10	3.9	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
Acenaphthene	ND		1.0	0.36	ug/L		10/23/19 15:07	10/24/19 12:07	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/24/19 12:07	1
Anthracene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzoic acid	ND		20	4.6	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzyl alcohol	ND		20	3.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/23/19 15:07	10/24/19 12:07	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/23/19 15:07	10/24/19 12:07	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/24/19 12:07	1
Chrysene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/24/19 12:07	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/23/19 15:07	10/24/19 12:07	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/23/19 15:07	10/24/19 12:07	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/23/19 15:07	10/24/19 12:07	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/23/19 15:07	10/24/19 12:07	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/23/19 15:07	10/24/19 12:07	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/24/19 12:07	1

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-511565/1-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/23/19 15:07	10/24/19 12:07	1
Fluoranthene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/24/19 12:07	1
Fluorene	ND		1.0	0.38	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/23/19 15:07	10/24/19 12:07	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/23/19 15:07	10/24/19 12:07	1
Isophorone	ND		2.0	0.29	ug/L		10/23/19 15:07	10/24/19 12:07	1
Naphthalene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/23/19 15:07	10/24/19 12:07	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/23/19 15:07	10/24/19 12:07	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/23/19 15:07	10/24/19 12:07	1
Pentachlorophenol	ND		20	5.6	ug/L		10/23/19 15:07	10/24/19 12:07	1
Phenol	ND		5.0	0.36	ug/L		10/23/19 15:07	10/24/19 12:07	1
Pyrene	ND		1.0	0.48	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/23/19 15:07	10/24/19 12:07	1
Phenanthrene	ND		1.0	0.35	ug/L		10/23/19 15:07	10/24/19 12:07	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/23/19 15:07	10/24/19 12:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	50		40 - 145	10/23/19 15:07	10/24/19 12:07	1
2-Fluorobiphenyl	86		34 - 110	10/23/19 15:07	10/24/19 12:07	1
2-Fluorophenol (Surr)	32		27 - 110	10/23/19 15:07	10/24/19 12:07	1
Nitrobenzene-d5 (Surr)	87		36 - 120	10/23/19 15:07	10/24/19 12:07	1
Phenol-d5 (Surr)	31		20 - 100	10/23/19 15:07	10/24/19 12:07	1
Terphenyl-d14 (Surr)	104		40 - 145	10/23/19 15:07	10/24/19 12:07	1

Lab Sample ID: LCS 500-511565/2-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	40.0	26.9		ug/L		67	26 - 110
1,2-Dichlorobenzene	40.0	26.3		ug/L		66	26 - 110
1,3-Dichlorobenzene	40.0	25.6		ug/L		64	22 - 110
1,4-Dichlorobenzene	40.0	25.7		ug/L		64	23 - 110
1-Methylnaphthalene	40.0	29.9		ug/L		75	38 - 110
bis(chloroisopropyl) ether	40.0	40.4		ug/L		101	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	36.7		ug/L		92	44 - 118
2,4,5-Trichlorophenol	40.0	43.5		ug/L		109	63 - 120
2,4,6-Trichlorophenol	40.0	43.1		ug/L		108	62 - 110
2,4-Dichlorophenol	40.0	40.9		ug/L		102	62 - 110
2,4-Dinitrophenol	80.0	93.6		ug/L		117	37 - 130
2,4-Dinitrotoluene	40.0	46.0		ug/L		115	63 - 122
2,6-Dinitrotoluene	40.0	45.5		ug/L		114	63 - 119
3 & 4 Methylphenol	40.0	31.6		ug/L		79	53 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-511565/2-A

Matrix: Water

Analysis Batch: 511690

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 511565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	40.0	33.1		ug/L		83	39 - 110
2-Chlorophenol	40.0	37.7		ug/L		94	59 - 110
2-Methylnaphthalene	40.0	29.5		ug/L		74	34 - 110
2-Methylphenol	40.0	35.9		ug/L		90	53 - 110
2-Nitroaniline	40.0	45.4		ug/L		113	59 - 122
2-Nitrophenol	40.0	37.8		ug/L		95	58 - 110
3-Nitroaniline	40.0	37.9		ug/L		95	47 - 123
4,6-Dinitro-2-methylphenol	80.0	87.9		ug/L		110	50 - 117
4-Bromophenyl phenyl ether	40.0	41.5		ug/L		104	58 - 120
4-Chloro-3-methylphenol	40.0	41.9		ug/L		105	64 - 120
4-Chloroaniline	40.0	42.4		ug/L		106	35 - 128
4-Chlorophenyl phenyl ether	40.0	38.2		ug/L		96	47 - 112
4-Nitroaniline	40.0	30.4		ug/L		76	52 - 147
4-Nitrophenol	80.0	25.7		ug/L		32	20 - 110
Acenaphthene	40.0	36.8		ug/L		92	46 - 110
Acenaphthylene	40.0	37.7		ug/L		94	47 - 110
Anthracene	40.0	42.3		ug/L		106	67 - 110
Benzo[a]pyrene	40.0	44.6		ug/L		112	70 - 120
Benzo[b]fluoranthene	40.0	44.0		ug/L		110	69 - 123
Benzo[g,h,i]perylene	40.0	45.4		ug/L		114	70 - 120
Benzo[k]fluoranthene	40.0	44.8		ug/L		112	70 - 120
Benzoic acid	80.0	27.0		ug/L		34	10 - 100
Benzyl alcohol	40.0	37.2		ug/L		93	33 - 127
Bis(2-chloroethoxy)methane	40.0	38.6		ug/L		96	60 - 110
Bis(2-chloroethyl)ether	40.0	36.8		ug/L		92	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	45.5		ug/L		114	69 - 120
Butyl benzyl phthalate	40.0	45.6		ug/L		114	68 - 120
Chrysene	40.0	46.3		ug/L		116	68 - 120
Dibenz(a,h)anthracene	40.0	46.4		ug/L		116	70 - 127
Dibenzofuran	40.0	38.8		ug/L		97	51 - 110
Diethyl phthalate	40.0	44.0		ug/L		110	62 - 120
Dimethyl phthalate	40.0	44.5		ug/L		111	63 - 120
Di-n-butyl phthalate	40.0	43.6		ug/L		109	70 - 120
Di-n-octyl phthalate	40.0	45.6		ug/L		114	70 - 122
Fluoranthene	40.0	45.1		ug/L		113	68 - 120
Fluorene	40.0	39.7		ug/L		99	53 - 120
Hexachlorobenzene	40.0	42.3		ug/L		106	61 - 120
Hexachlorobutadiene	40.0	24.2		ug/L		61	20 - 100
Hexachlorocyclopentadiene	40.0	15.2	J	ug/L		38	10 - 100
Hexachloroethane	40.0	23.5		ug/L		59	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	46.0		ug/L		115	65 - 133
Isophorone	40.0	39.6		ug/L		99	57 - 110
Naphthalene	40.0	29.3		ug/L		73	36 - 110
Nitrobenzene	40.0	36.3		ug/L		91	53 - 110
N-Nitrosodi-n-propylamine	40.0	36.6		ug/L		91	58 - 110
N-Nitrosodiphenylamine	40.0	42.0		ug/L		105	66 - 110
Pentachlorophenol	80.0	59.0		ug/L		74	23 - 129
Phenol	40.0	17.5		ug/L		44	33 - 100
Pyrene	40.0	46.0	*	ug/L		115	70 - 110

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-511565/2-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dimethylphenol	40.0	39.7		ug/L		99	51 - 110
Benzo[a]anthracene	40.0	44.8		ug/L		112	70 - 120
Phenanthrene	40.0	42.4		ug/L		106	65 - 120
3,3'-Dichlorobenzidine	40.0	45.0		ug/L		113	60 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	113		40 - 145
2-Fluorobiphenyl	98		34 - 110
2-Fluorophenol (Surr)	62		27 - 110
Nitrobenzene-d5 (Surr)	94		36 - 120
Phenol-d5 (Surr)	43		20 - 100
Terphenyl-d14 (Surr)	117		40 - 145

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-499539/1-A
Matrix: Water
Analysis Batch: 500726

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499539

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 17:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	56		24 - 146	10/22/19 16:11	10/28/19 17:30	1
2-Fluorobiphenyl	87		37 - 120	10/22/19 16:11	10/28/19 17:30	1
2-Fluorophenol (Surr)	47		10 - 120	10/22/19 16:11	10/28/19 17:30	1
Nitrobenzene-d5 (Surr)	80		26 - 120	10/22/19 16:11	10/28/19 17:30	1
Phenol-d5 (Surr)	34		11 - 120	10/22/19 16:11	10/28/19 17:30	1
p-Terphenyl-d14	100		64 - 127	10/22/19 16:11	10/28/19 17:30	1

Lab Sample ID: LCS 480-499539/2-A
Matrix: Water
Analysis Batch: 500726

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499539

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	16.0	13.8		ug/L		86	10 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	116		24 - 146
2-Fluorobiphenyl	101		37 - 120
2-Fluorophenol (Surr)	56		10 - 120
Nitrobenzene-d5 (Surr)	102		26 - 120
Phenol-d5 (Surr)	40		11 - 120
p-Terphenyl-d14	117		64 - 127

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

GC/MS VOA

Analysis Batch: 500393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-1	SUPE-TB -02-101619	Total/NA	Water	8260C	
480-161258-4	SUPE-W-06C-101619	Total/NA	Water	8260C	
480-161258-5	SUPE-W-12A-101619	Total/NA	Water	8260C	
480-161258-6	SUPE-EB-02-101619	Total/NA	Water	8260C	
480-161258-7	SUPE-W-12CR-101619	Total/NA	Water	8260C	
480-161258-9	SUPE-M-99A-101619	Total/NA	Water	8260C	
MB 480-500393/7	Method Blank	Total/NA	Water	8260C	
LCS 480-500393/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 500533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-2	SUPE-W-30C-101619	Total/NA	Water	8260C	
480-161258-3	SUPE-W-06A-101619	Total/NA	Water	8260C	
MB 480-500533/8	Method Blank	Total/NA	Water	8260C	
LCS 480-500533/6	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 499539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-2	SUPE-W-30C-101619	Total/NA	Water	3510C	
480-161258-3	SUPE-W-06A-101619	Total/NA	Water	3510C	
480-161258-4	SUPE-W-06C-101619	Total/NA	Water	3510C	
480-161258-5	SUPE-W-12A-101619	Total/NA	Water	3510C	
480-161258-6	SUPE-EB-02-101619	Total/NA	Water	3510C	
480-161258-7	SUPE-W-12CR-101619	Total/NA	Water	3510C	
480-161258-8	SUPE-W-18D-101619	Total/NA	Water	3510C	
480-161258-9	SUPE-M-99A-101619	Total/NA	Water	3510C	
MB 480-499539/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-499539/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 500726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-2	SUPE-W-30C-101619	Total/NA	Water	8270D LL	499539
480-161258-3	SUPE-W-06A-101619	Total/NA	Water	8270D LL	499539
480-161258-4	SUPE-W-06C-101619	Total/NA	Water	8270D LL	499539
480-161258-5	SUPE-W-12A-101619	Total/NA	Water	8270D LL	499539
480-161258-6	SUPE-EB-02-101619	Total/NA	Water	8270D LL	499539
480-161258-7	SUPE-W-12CR-101619	Total/NA	Water	8270D LL	499539
480-161258-8	SUPE-W-18D-101619	Total/NA	Water	8270D LL	499539
480-161258-9	SUPE-M-99A-101619	Total/NA	Water	8270D LL	499539
MB 480-499539/1-A	Method Blank	Total/NA	Water	8270D LL	499539
LCS 480-499539/2-A	Lab Control Sample	Total/NA	Water	8270D LL	499539

Prep Batch: 511565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-2	SUPE-W-30C-101619	Total/NA	Water	3510C	
480-161258-3	SUPE-W-06A-101619	Total/NA	Water	3510C	
480-161258-4	SUPE-W-06C-101619	Total/NA	Water	3510C	
480-161258-5	SUPE-W-12A-101619	Total/NA	Water	3510C	
480-161258-6	SUPE-EB-02-101619	Total/NA	Water	3510C	

Eurofins TestAmerica, Buffalo

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

GC/MS Semi VOA (Continued)

Prep Batch: 511565 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-7	SUPE-W-12CR-101619	Total/NA	Water	3510C	
480-161258-8	SUPE-W-18D-101619	Total/NA	Water	3510C	
480-161258-9	SUPE-M-99A-101619	Total/NA	Water	3510C	
MB 500-511565/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-511565/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 511690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-511565/1-A	Method Blank	Total/NA	Water	8270D	511565
LCS 500-511565/2-A	Lab Control Sample	Total/NA	Water	8270D	511565

Analysis Batch: 512301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161258-2	SUPE-W-30C-101619	Total/NA	Water	8270D	511565
480-161258-3	SUPE-W-06A-101619	Total/NA	Water	8270D	511565
480-161258-4	SUPE-W-06C-101619	Total/NA	Water	8270D	511565
480-161258-5	SUPE-W-12A-101619	Total/NA	Water	8270D	511565
480-161258-6	SUPE-EB-02-101619	Total/NA	Water	8270D	511565
480-161258-7	SUPE-W-12CR-101619	Total/NA	Water	8270D	511565
480-161258-8	SUPE-W-18D-101619	Total/NA	Water	8270D	511565
480-161258-9	SUPE-M-99A-101619	Total/NA	Water	8270D	511565

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-TB -02-101619

Lab Sample ID: 480-161258-1

Date Collected: 10/16/19 00:00

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500393	10/26/19 11:17	RJF	TAL BUF

Client Sample ID: SUPE-W-30C-101619

Lab Sample ID: 480-161258-2

Date Collected: 10/16/19 09:42

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500533	10/27/19 13:54	CRL	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/28/19 22:54	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 19:53	PJQ	TAL BUF

Client Sample ID: SUPE-W-06A-101619

Lab Sample ID: 480-161258-3

Date Collected: 10/16/19 11:11

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500533	10/27/19 14:18	CRL	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/28/19 23:18	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 20:22	PJQ	TAL BUF

Client Sample ID: SUPE-W-06C-101619

Lab Sample ID: 480-161258-4

Date Collected: 10/16/19 12:13

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500393	10/26/19 12:29	RJF	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/28/19 23:42	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 20:50	PJQ	TAL BUF

Client Sample ID: SUPE-W-12A-101619

Lab Sample ID: 480-161258-5

Date Collected: 10/16/19 13:22

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500393	10/26/19 12:54	RJF	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/29/19 00:06	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 21:18	PJQ	TAL BUF

Eurofins TestAmerica, Buffalo

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Client Sample ID: SUPE-EB-02-101619

Lab Sample ID: 480-161258-6

Date Collected: 10/16/19 14:00

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500393	10/26/19 13:18	RJF	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/29/19 00:31	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 21:47	PJQ	TAL BUF

Client Sample ID: SUPE-W-12CR-101619

Lab Sample ID: 480-161258-7

Date Collected: 10/16/19 14:45

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500393	10/26/19 13:42	RJF	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/29/19 00:55	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 22:15	PJQ	TAL BUF

Client Sample ID: SUPE-W-18D-101619

Lab Sample ID: 480-161258-8

Date Collected: 10/16/19 16:10

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/29/19 01:19	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 22:43	PJQ	TAL BUF

Client Sample ID: SUPE-M-99A-101619

Lab Sample ID: 480-161258-9

Date Collected: 10/16/19 22:00

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	500393	10/26/19 14:06	RJF	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	512301	10/29/19 01:44	NRJ	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 23:12	PJQ	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	998310390	08-31-20

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	999580010	08-31-20

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-19
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-19
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	12-31-19
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-30-19
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161258-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-161258-1	SUPE-TB -02-101619	Water	10/16/19 00:00	10/17/19 10:00	
480-161258-2	SUPE-W-30C-101619	Water	10/16/19 09:42	10/17/19 10:00	
480-161258-3	SUPE-W-06A-101619	Water	10/16/19 11:11	10/17/19 10:00	
480-161258-4	SUPE-W-06C-101619	Water	10/16/19 12:13	10/17/19 10:00	
480-161258-5	SUPE-W-12A-101619	Water	10/16/19 13:22	10/17/19 10:00	
480-161258-6	SUPE-EB-02-101619	Water	10/16/19 14:00	10/17/19 10:00	
480-161258-7	SUPE-W-12CR-101619	Water	10/16/19 14:45	10/17/19 10:00	
480-161258-8	SUPE-W-18D-101619	Water	10/16/19 16:10	10/17/19 10:00	
480-161258-9	SUPE-M-99A-101619	Water	10/16/19 22:00	10/17/19 10:00	



CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 501197

501197

Project Name: Superior 2019 2SA Sampling
 Project Number: OM-0556-19
 Laboratory: TABUF
 Shipment Method FEDEX

Company: Field & Technical Services
 Address: 200 Third Avenue
 Carnegie, PA 15106
 (412) 279-3363

Client: Beazer East, Inc.
 Contact: (724) 858-5953
 btrask.2006@f-ts.com

Program: Superior 2019 2SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative HCL			Notes:
					8260B_VOA+naphtha	8270C_SVOC (less naphtha)	8270C_SVOC+naphtha	
				Total Bottle Count				
10/16/2019	0000	GW	SUPE-TB-02-101619	2	2	0		
10/16/2019	0942	GW	SUPE-W-30C-101619	5	2	3		
10/16/2019	1111	GW	SUPE-W-06A-101619	5	2	3		
10/16/2019	1213	GW	SUPE-W-06C-101619	5	2	3		
10/16/2019	1322	GW	SUPE-W-12A-101619	5	2	3		
10/16/2019	1400	GW	SUPE-EB-02-101619	5	2	3		
10/16/2019	1445	GW	SUPE-W-12CR-101619	5	2	3		
10/16/2019	1610	GW	SUPE-W-18D-101619	3	0	0		
10/16/2019	2200	GW	SUPE-M-99A-101619	5	2	3		



Relinquished by: Signature: Printed Name: Ben Trask Firm: FTS Date/Time: 10/16/2019 1641	Received by: Signature: Printed Name: Ben Trask Firm: FTS Date/Time: 10/17/19 1000	Relinquished by: Signature: Printed Name: Firm:	Received by: Signature: Printed Name: Firm:
Turnaround Requirements: <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard		2-8 4.1 #4 3.2 3.9	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161258-1

Login Number: 161258

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Manhardt, Kara M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	FTS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161258-1

Login Number: 161258

List Number: 2

Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago

List Creation: 10/23/19 09:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

FTS, LLC

DATE: November 19, 2019

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 480-161261-1

SAMPLES: SUPE-TB-01-101519, SUPE-W-28C-101519, SUPE-EB-01-101519

ANALYSES: Method 8260C (VOCs), 8270D/8270D LL (SVOCs)

LABORATORY: Eurofins TestAmerica Laboratories, Buffalo, Chicago

The data contained in this SDG were evaluated with regard to the following parameters:

- Data Completeness
Noncompliance: None
- Holding Times
Noncompliance: SVOCs were extracted outside of hold time for W-28C and results in this sample were qualified as estimated, "J".
- Laboratory Blank Contamination
Noncompliance: None
- Field Blank Contamination
Noncompliance: None
- Surrogate Recoveries
Noncompliance: None
- Laboratory Control Sample
Noncompliance: The LCS recoveries of 1,1,1-trichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, styrene, and pyrene were above the recovery limits. No action was taken on this basis.
- Matrix Spike/Matrix Spike Duplicate Sample
Noncompliance: The MS/MSD recoveries of VOCs and SVOCs were outside of the recovery limits. SVOC RPDs were above the recovery limits. No action was taken on this basis.

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-161261-1

Client Project/Site: Superior, WI Semiannual Groundwater
Revision: 3

For:

Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:
11/22/2019 9:40:38 AM

Veronica Bortot, Senior Project Manager
(412)963-2435

veronica.bortot@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	6
Client Sample Results	7
Surrogate Summary	13
QC Sample Results	15
QC Association Summary	25
Lab Chronicle	26
Certification Summary	27
Method Summary	28
Sample Summary	29
Chain of Custody	30
Receipt Checklists	31

Definitions/Glossary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Job ID: 480-161261-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-161261-1

Revised : to remove PCP from full list

Revised: to correct formatter

Comments

No additional comments.

Receipt

The samples were received on 10/17/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.8° C, 3.2° C, 3.4° C and 4.1° C.

GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-499719 recovered above the upper control limit for Styrene, n-Butylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and 1,1,1-Trichloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SUPE-TB -01-101519, SUPE-W -28C-101519 and SUPE-EB -01-101519.

Method 8260C: The laboratory control sample (LCS) for analytical batch 480-499719 recovered outside control limits for the following analytes: Styrene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and 1,1,1-Trichloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C: Numerous analytes recovered outside of control limits (high) for the MS/MSD of sample SUPE W-28C-101519 in analytical batch 480-499719. Some of these analytes were biased high in the LCS. None of these analytes were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA Buffalo

Method 8270D LL: The continuing calibration verification (CCV) associated with batch 480-500726 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: SUPE-W-28C-1101519 and SUPE-EB-01-101519.

Organic Prep

Method 3510C: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: SUPE-EB -01-101519.

GC/MS Semi VOA Chicago

The laboratory control sample (LCS) for preparation batch 500-511565 and analytical batch 500-511690 recovered outside control limits for the following Pyrene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported

Method 8270D: 480-161261-2MSD had all surrogates and all spikes biased low. The MS was in control, with the exception of 2 analytes biased high. All RPD's were out of control. The MSD sample has been reanalyzed with similar results. The original sample was non-detect for all compounds. The MSD sample was not re-extracted as the holding times was exceeded.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep Chicago

Method 3510C: (full list)

Heavy sample receipts in the Buffalo lab caused delays in login and shipping, as a result the SVOC full list samples,

Case Narrative

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Job ID: 480-161261-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

SUPE-W-28-101519, MS, MSD, SUPE-EB-01-101519, were extracted one day outside of the recommended holding time;

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-TB -01-101519

Lab Sample ID: 480-161261-1

No Detections.

Client Sample ID: SUPE-W -28C-101519

Lab Sample ID: 480-161261-2

No Detections.

Client Sample ID: SUPE-EB -01-101519

Lab Sample ID: 480-161261-3

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-TB -01-101519

Lab Sample ID: 480-161261-1

Date Collected: 10/15/19 00:00

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	*	1.0	0.82	ug/L			10/24/19 05:02	1
1,2,4-Trimethylbenzene	ND	*	1.0	0.75	ug/L			10/24/19 05:02	1
1,3,5-Trimethylbenzene	ND	*	1.0	0.77	ug/L			10/24/19 05:02	1
Benzene	ND		1.0	0.41	ug/L			10/24/19 05:02	1
Chloromethane	ND		1.0	0.35	ug/L			10/24/19 05:02	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/24/19 05:02	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/24/19 05:02	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/24/19 05:02	1
Naphthalene	ND		1.0	0.43	ug/L			10/24/19 05:02	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/24/19 05:02	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/19 05:02	1
o-Xylene	ND		1.0	0.76	ug/L			10/24/19 05:02	1
Styrene	ND	*	1.0	0.73	ug/L			10/24/19 05:02	1
Toluene	ND		1.0	0.51	ug/L			10/24/19 05:02	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/24/19 05:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120					10/24/19 05:02	1
4-Bromofluorobenzene (Surr)	109		73 - 120					10/24/19 05:02	1
Dibromofluoromethane (Surr)	109		75 - 123					10/24/19 05:02	1
Toluene-d8 (Surr)	104		80 - 120					10/24/19 05:02	1

Client Sample ID: SUPE-W -28C-101519

Lab Sample ID: 480-161261-2

Date Collected: 10/15/19 16:48

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	F1 *	1.0	0.82	ug/L			10/24/19 05:26	1
1,2,4-Trimethylbenzene	ND	F1 *	1.0	0.75	ug/L			10/24/19 05:26	1
1,3,5-Trimethylbenzene	ND	F1 *	1.0	0.77	ug/L			10/24/19 05:26	1
Benzene	ND		1.0	0.41	ug/L			10/24/19 05:26	1
Chloromethane	ND	F1	1.0	0.35	ug/L			10/24/19 05:26	1
Ethylbenzene	ND	F1	1.0	0.74	ug/L			10/24/19 05:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/24/19 05:26	1
m-Xylene & p-Xylene	ND	F1	2.0	0.66	ug/L			10/24/19 05:26	1
Naphthalene	ND		1.0	0.43	ug/L			10/24/19 05:26	1
n-Butylbenzene	ND	F1	1.0	0.64	ug/L			10/24/19 05:26	1
N-Propylbenzene	ND	F1	1.0	0.69	ug/L			10/24/19 05:26	1
o-Xylene	ND	F1	1.0	0.76	ug/L			10/24/19 05:26	1
Styrene	ND	F1 *	1.0	0.73	ug/L			10/24/19 05:26	1
Toluene	ND	F1	1.0	0.51	ug/L			10/24/19 05:26	1
Xylenes, Total	ND	F1	2.0	0.66	ug/L			10/24/19 05:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120					10/24/19 05:26	1
4-Bromofluorobenzene (Surr)	109		73 - 120					10/24/19 05:26	1
Dibromofluoromethane (Surr)	108		75 - 123					10/24/19 05:26	1
Toluene-d8 (Surr)	104		80 - 120					10/24/19 05:26	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-W -28C-101519

Lab Sample ID: 480-161261-2

Date Collected: 10/15/19 16:48

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 19:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	99		24 - 146				10/22/19 16:11	10/28/19 19:24	1
2-Fluorobiphenyl	103		37 - 120				10/22/19 16:11	10/28/19 19:24	1
2-Fluorophenol (Surr)	57		10 - 120				10/22/19 16:11	10/28/19 19:24	1
Nitrobenzene-d5 (Surr)	97		26 - 120				10/22/19 16:11	10/28/19 19:24	1
Phenol-d5 (Surr)	37		11 - 120				10/22/19 16:11	10/28/19 19:24	1
p-Terphenyl-d14	114		64 - 127				10/22/19 16:11	10/28/19 19:24	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H F2 F1	1.9	0.29	ug/L		10/23/19 15:07	10/24/19 15:19	1
1,2-Dichlorobenzene	ND	H F2 F1	1.9	0.28	ug/L		10/23/19 15:07	10/24/19 15:19	1
1,3-Dichlorobenzene	ND	H F2 F1	1.9	0.24	ug/L		10/23/19 15:07	10/24/19 15:19	1
1,4-Dichlorobenzene	ND	H F2 F1	1.9	0.26	ug/L		10/23/19 15:07	10/24/19 15:19	1
1-Methylnaphthalene	ND	H F2 F1	1.9	0.48	ug/L		10/23/19 15:07	10/24/19 15:19	1
bis(chloroisopropyl) ether	ND	H F1 F2	1.9	0.29	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,3,4,6-Tetrachlorophenol	ND	H F1	4.8	1.4	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,4,5-Trichlorophenol	ND	H F2 F1	9.5	2.2	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,4,6-Trichlorophenol	ND	H F2 F1	4.8	1.0	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,4-Dichlorophenol	ND	H F2 F1	9.5	2.2	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,4-Dinitrophenol	ND	H F2 F1	19	7.1	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,4-Dinitrotoluene	ND	H F2 F1	0.95	0.29	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,6-Dinitrotoluene	ND	H F2 F1	0.95	0.11	ug/L		10/23/19 15:07	10/24/19 15:19	1
3 & 4 Methylphenol	ND	H F2 F1	1.9	0.42	ug/L		10/23/19 15:07	10/24/19 15:19	1
2-Chloronaphthalene	ND	H F2 F1	1.9	0.32	ug/L		10/23/19 15:07	10/24/19 15:19	1
2-Chlorophenol	ND	H F2 F1	4.8	0.76	ug/L		10/23/19 15:07	10/24/19 15:19	1
2-Methylnaphthalene	ND	H F2 F1	1.9	0.12	ug/L		10/23/19 15:07	10/24/19 15:19	1
2-Methylphenol	ND	H F2 F1	1.9	0.29	ug/L		10/23/19 15:07	10/24/19 15:19	1
2-Nitroaniline	ND	H F2 F1	4.8	1.0	ug/L		10/23/19 15:07	10/24/19 15:19	1
2-Nitrophenol	ND	H F2 F1	9.5	2.0	ug/L		10/23/19 15:07	10/24/19 15:19	1
3-Nitroaniline	ND	H F2 F1	9.5	2.2	ug/L		10/23/19 15:07	10/24/19 15:19	1
4,6-Dinitro-2-methylphenol	ND	H F2 F1	19	4.7	ug/L		10/23/19 15:07	10/24/19 15:19	1
4-Bromophenyl phenyl ether	ND	H F2 F1	4.8	0.87	ug/L		10/23/19 15:07	10/24/19 15:19	1
4-Chloro-3-methylphenol	ND	H F2 F1	9.5	2.1	ug/L		10/23/19 15:07	10/24/19 15:19	1
4-Chloroaniline	ND	H F2 F1	9.5	2.0	ug/L		10/23/19 15:07	10/24/19 15:19	1
4-Chlorophenyl phenyl ether	ND	H F2 F1	4.8	0.77	ug/L		10/23/19 15:07	10/24/19 15:19	1
4-Nitroaniline	ND	H F2 F1	9.5	3.7	ug/L		10/23/19 15:07	10/24/19 15:19	1
4-Nitrophenol	ND	H F1	19	2.2	ug/L		10/23/19 15:07	10/24/19 15:19	1
Acenaphthene	ND	H F2 F1	0.95	0.34	ug/L		10/23/19 15:07	10/24/19 15:19	1
Acenaphthylene	ND	H F2 F1	0.95	0.30	ug/L		10/23/19 15:07	10/24/19 15:19	1
Anthracene	ND	H F2 F1	0.95	0.30	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzo[a]pyrene	ND	H F2 F1	0.19	0.053	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzo[b]fluoranthene	ND	H F2 F1	0.19	0.055	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzo[g,h,i]perylene	ND	H F2 F1	0.95	0.40	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzo[k]fluoranthene	ND	H F2 F1	0.19	0.070	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzoic acid	ND	H F1	19	4.3	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzyl alcohol	ND	H F2 F1	19	2.9	ug/L		10/23/19 15:07	10/24/19 15:19	1
Bis(2-chloroethoxy)methane	ND	H F2 F1	1.9	0.29	ug/L		10/23/19 15:07	10/24/19 15:19	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-W -28C-101519

Lab Sample ID: 480-161261-2

Date Collected: 10/15/19 16:48

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND	H F2 F1	1.9	0.33	ug/L		10/23/19 15:07	10/24/19 15:19	1
Bis(2-ethylhexyl) phthalate	ND	H F2 F1	9.5	2.3	ug/L		10/23/19 15:07	10/24/19 15:19	1
Butyl benzyl phthalate	ND	H F2 F1	1.9	0.26	ug/L		10/23/19 15:07	10/24/19 15:19	1
Chrysene	ND	H F2 F1	0.48	0.13	ug/L		10/23/19 15:07	10/24/19 15:19	1
Dibenz(a,h)anthracene	ND	H F2 F1	0.29	0.061	ug/L		10/23/19 15:07	10/24/19 15:19	1
Dibenzofuran	ND	H F2 F1	1.9	0.33	ug/L		10/23/19 15:07	10/24/19 15:19	1
Diethyl phthalate	ND	H F2 F1	1.9	0.42	ug/L		10/23/19 15:07	10/24/19 15:19	1
Dimethyl phthalate	ND	H F2 F1	1.9	0.36	ug/L		10/23/19 15:07	10/24/19 15:19	1
Di-n-butyl phthalate	ND	H F2 F1	4.8	0.76	ug/L		10/23/19 15:07	10/24/19 15:19	1
Di-n-octyl phthalate	ND	H F2 F1	9.5	2.3	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,3,5,6-Tetrachlorophenol	ND	H	4.8	2.4	ug/L		10/23/19 15:07	10/24/19 15:19	1
Fluoranthene	ND	H F2 F1	0.95	0.30	ug/L		10/23/19 15:07	10/24/19 15:19	1
Fluorene	ND	H F2 F1	0.95	0.36	ug/L		10/23/19 15:07	10/24/19 15:19	1
Hexachlorobenzene	ND	H F2 F1	0.48	0.13	ug/L		10/23/19 15:07	10/24/19 15:19	1
Hexachlorobutadiene	ND	H F2 F1	4.8	1.1	ug/L		10/23/19 15:07	10/24/19 15:19	1
Hexachlorocyclopentadiene	ND	H F1	19	3.3	ug/L		10/23/19 15:07	10/24/19 15:19	1
Hexachloroethane	ND	H F2 F1	4.8	0.92	ug/L		10/23/19 15:07	10/24/19 15:19	1
Indeno[1,2,3-cd]pyrene	ND	H F2 F1	0.19	0.080	ug/L		10/23/19 15:07	10/24/19 15:19	1
Isophorone	ND	H F2 F1	1.9	0.28	ug/L		10/23/19 15:07	10/24/19 15:19	1
Nitrobenzene	ND	H F2 F1	0.95	0.43	ug/L		10/23/19 15:07	10/24/19 15:19	1
N-Nitrosodi-n-propylamine	ND	H F2 F1	0.48	0.13	ug/L		10/23/19 15:07	10/24/19 15:19	1
N-Nitrosodiphenylamine	ND	H F2 F1	1.9	0.32	ug/L		10/23/19 15:07	10/24/19 15:19	1
Phenol	ND	H F2 F1	4.8	0.34	ug/L		10/23/19 15:07	10/24/19 15:19	1
Pyrene	ND	H F1 F2 *	0.95	0.46	ug/L		10/23/19 15:07	10/24/19 15:19	1
2,4-Dimethylphenol	ND	H F2 F1	9.5	3.2	ug/L		10/23/19 15:07	10/24/19 15:19	1
Benzo[a]anthracene	ND	H F2 F1	0.19	0.042	ug/L		10/23/19 15:07	10/24/19 15:19	1
Phenanthrene	ND	H F2 F1	0.95	0.33	ug/L		10/23/19 15:07	10/24/19 15:19	1
3,3'-Dichlorobenzidine	ND	H F2 F1	4.8	0.89	ug/L		10/23/19 15:07	10/24/19 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	102		40 - 145	10/23/19 15:07	10/24/19 15:19	1
2-Fluorobiphenyl	102		34 - 110	10/23/19 15:07	10/24/19 15:19	1
2-Fluorophenol (Surr)	51		27 - 110	10/23/19 15:07	10/24/19 15:19	1
Nitrobenzene-d5 (Surr)	99		36 - 120	10/23/19 15:07	10/24/19 15:19	1
Phenol-d5 (Surr)	36		20 - 100	10/23/19 15:07	10/24/19 15:19	1
Terphenyl-d14 (Surr)	104		40 - 145	10/23/19 15:07	10/24/19 15:19	1

Client Sample ID: SUPE-EB -01-101519

Lab Sample ID: 480-161261-3

Date Collected: 10/15/19 17:41

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	*	1.0	0.82	ug/L			10/24/19 05:51	1
1,2,4-Trimethylbenzene	ND	*	1.0	0.75	ug/L			10/24/19 05:51	1
1,3,5-Trimethylbenzene	ND	*	1.0	0.77	ug/L			10/24/19 05:51	1
Benzene	ND		1.0	0.41	ug/L			10/24/19 05:51	1
Chloromethane	ND		1.0	0.35	ug/L			10/24/19 05:51	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/24/19 05:51	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/24/19 05:51	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-EB -01-101519

Lab Sample ID: 480-161261-3

Date Collected: 10/15/19 17:41

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/24/19 05:51	1
Naphthalene	ND		1.0	0.43	ug/L			10/24/19 05:51	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/24/19 05:51	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/24/19 05:51	1
o-Xylene	ND		1.0	0.76	ug/L			10/24/19 05:51	1
Styrene	ND	*	1.0	0.73	ug/L			10/24/19 05:51	1
Toluene	ND		1.0	0.51	ug/L			10/24/19 05:51	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/24/19 05:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		77 - 120		10/24/19 05:51	1
4-Bromofluorobenzene (Surr)	107		73 - 120		10/24/19 05:51	1
Dibromofluoromethane (Surr)	111		75 - 123		10/24/19 05:51	1
Toluene-d8 (Surr)	104		80 - 120		10/24/19 05:51	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.5	0.52	ug/L		10/22/19 16:11	10/28/19 23:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		24 - 146	10/22/19 16:11	10/28/19 23:41	1
2-Fluorobiphenyl	105		37 - 120	10/22/19 16:11	10/28/19 23:41	1
2-Fluorophenol (Surr)	73		10 - 120	10/22/19 16:11	10/28/19 23:41	1
Nitrobenzene-d5 (Surr)	101		26 - 120	10/22/19 16:11	10/28/19 23:41	1
Phenol-d5 (Surr)	55		11 - 120	10/22/19 16:11	10/28/19 23:41	1
p-Terphenyl-d14	116		64 - 127	10/22/19 16:11	10/28/19 23:41	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	H	2.2	0.32	ug/L		10/23/19 15:08	10/24/19 15:43	1
1,2-Dichlorobenzene	ND	H	2.2	0.31	ug/L		10/23/19 15:08	10/24/19 15:43	1
1,3-Dichlorobenzene	ND	H	2.2	0.27	ug/L		10/23/19 15:08	10/24/19 15:43	1
1,4-Dichlorobenzene	ND	H	2.2	0.29	ug/L		10/23/19 15:08	10/24/19 15:43	1
1-Methylnaphthalene	ND	H	2.2	0.54	ug/L		10/23/19 15:08	10/24/19 15:43	1
bis(chloroisopropyl) ether	ND	H	2.2	0.32	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,3,4,6-Tetrachlorophenol	ND	H	5.4	1.6	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,4,5-Trichlorophenol	ND	H	11	2.5	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,4,6-Trichlorophenol	ND	H	5.4	1.2	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,4-Dichlorophenol	ND	H	11	2.5	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,4-Dinitrophenol	ND	H	22	8.0	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,4-Dinitrotoluene	ND	H	1.1	0.32	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,6-Dinitrotoluene	ND	H	1.1	0.13	ug/L		10/23/19 15:08	10/24/19 15:43	1
3 & 4 Methylphenol	ND	H	2.2	0.47	ug/L		10/23/19 15:08	10/24/19 15:43	1
2-Chloronaphthalene	ND	H	2.2	0.37	ug/L		10/23/19 15:08	10/24/19 15:43	1
2-Chlorophenol	ND	H	5.4	0.86	ug/L		10/23/19 15:08	10/24/19 15:43	1
2-Methylnaphthalene	ND	H	2.2	0.14	ug/L		10/23/19 15:08	10/24/19 15:43	1
2-Methylphenol	ND	H	2.2	0.33	ug/L		10/23/19 15:08	10/24/19 15:43	1
2-Nitroaniline	ND	H	5.4	1.2	ug/L		10/23/19 15:08	10/24/19 15:43	1
2-Nitrophenol	ND	H	11	2.3	ug/L		10/23/19 15:08	10/24/19 15:43	1
3-Nitroaniline	ND	H	11	2.5	ug/L		10/23/19 15:08	10/24/19 15:43	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-EB -01-101519

Lab Sample ID: 480-161261-3

Date Collected: 10/15/19 17:41

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND	H	22	5.3	ug/L		10/23/19 15:08	10/24/19 15:43	1
4-Bromophenyl phenyl ether	ND	H	5.4	0.98	ug/L		10/23/19 15:08	10/24/19 15:43	1
4-Chloro-3-methylphenol	ND	H	11	2.4	ug/L		10/23/19 15:08	10/24/19 15:43	1
4-Chloroaniline	ND	H	11	2.3	ug/L		10/23/19 15:08	10/24/19 15:43	1
4-Chlorophenyl phenyl ether	ND	H	5.4	0.87	ug/L		10/23/19 15:08	10/24/19 15:43	1
4-Nitroaniline	ND	H	11	4.2	ug/L		10/23/19 15:08	10/24/19 15:43	1
4-Nitrophenol	ND	H	22	2.5	ug/L		10/23/19 15:08	10/24/19 15:43	1
Acenaphthene	ND	H	1.1	0.39	ug/L		10/23/19 15:08	10/24/19 15:43	1
Acenaphthylene	ND	H	1.1	0.35	ug/L		10/23/19 15:08	10/24/19 15:43	1
Anthracene	ND	H	1.1	0.35	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzo[a]pyrene	ND	H	0.22	0.060	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzo[b]fluoranthene	ND	H	0.22	0.063	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzo[g,h,i]perylene	ND	H	1.1	0.45	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzo[k]fluoranthene	ND	H	0.22	0.080	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzoic acid	ND	H	22	4.9	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzyl alcohol	ND	H	22	3.3	ug/L		10/23/19 15:08	10/24/19 15:43	1
Bis(2-chloroethoxy)methane	ND	H	2.2	0.32	ug/L		10/23/19 15:08	10/24/19 15:43	1
Bis(2-chloroethyl)ether	ND	H	2.2	0.38	ug/L		10/23/19 15:08	10/24/19 15:43	1
Bis(2-ethylhexyl) phthalate	ND	H	11	2.6	ug/L		10/23/19 15:08	10/24/19 15:43	1
Butyl benzyl phthalate	ND	H	2.2	0.29	ug/L		10/23/19 15:08	10/24/19 15:43	1
Chrysene	ND	H	0.54	0.15	ug/L		10/23/19 15:08	10/24/19 15:43	1
Dibenz(a,h)anthracene	ND	H	0.32	0.069	ug/L		10/23/19 15:08	10/24/19 15:43	1
Dibenzofuran	ND	H	2.2	0.38	ug/L		10/23/19 15:08	10/24/19 15:43	1
Diethyl phthalate	ND	H	2.2	0.47	ug/L		10/23/19 15:08	10/24/19 15:43	1
Dimethyl phthalate	ND	H	2.2	0.41	ug/L		10/23/19 15:08	10/24/19 15:43	1
Di-n-butyl phthalate	ND	H	5.4	0.86	ug/L		10/23/19 15:08	10/24/19 15:43	1
Di-n-octyl phthalate	ND	H	11	2.7	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,3,5,6-Tetrachlorophenol	ND	H	5.4	2.7	ug/L		10/23/19 15:08	10/24/19 15:43	1
Fluoranthene	ND	H	1.1	0.35	ug/L		10/23/19 15:08	10/24/19 15:43	1
Fluorene	ND	H	1.1	0.41	ug/L		10/23/19 15:08	10/24/19 15:43	1
Hexachlorobenzene	ND	H	0.54	0.15	ug/L		10/23/19 15:08	10/24/19 15:43	1
Hexachlorobutadiene	ND	H	5.4	1.2	ug/L		10/23/19 15:08	10/24/19 15:43	1
Hexachlorocyclopentadiene	ND	H	22	3.7	ug/L		10/23/19 15:08	10/24/19 15:43	1
Hexachloroethane	ND	H	5.4	1.0	ug/L		10/23/19 15:08	10/24/19 15:43	1
Indeno[1,2,3-cd]pyrene	ND	H	0.22	0.091	ug/L		10/23/19 15:08	10/24/19 15:43	1
Isophorone	ND	H	2.2	0.31	ug/L		10/23/19 15:08	10/24/19 15:43	1
Nitrobenzene	ND	H	1.1	0.49	ug/L		10/23/19 15:08	10/24/19 15:43	1
N-Nitrosodi-n-propylamine	ND	H	0.54	0.15	ug/L		10/23/19 15:08	10/24/19 15:43	1
N-Nitrosodiphenylamine	ND	H	2.2	0.37	ug/L		10/23/19 15:08	10/24/19 15:43	1
Phenol	ND	H	5.4	0.39	ug/L		10/23/19 15:08	10/24/19 15:43	1
Pyrene	ND	H *	1.1	0.52	ug/L		10/23/19 15:08	10/24/19 15:43	1
2,4-Dimethylphenol	ND	H	11	3.6	ug/L		10/23/19 15:08	10/24/19 15:43	1
Benzo[a]anthracene	ND	H	0.22	0.047	ug/L		10/23/19 15:08	10/24/19 15:43	1
Phenanthrene	ND	H	1.1	0.38	ug/L		10/23/19 15:08	10/24/19 15:43	1
3,3'-Dichlorobenzidine	ND	H	5.4	1.0	ug/L		10/23/19 15:08	10/24/19 15:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		40 - 145	10/23/19 15:08	10/24/19 15:43	1
2-Fluorobiphenyl	100		34 - 110	10/23/19 15:08	10/24/19 15:43	1
2-Fluorophenol (Surr)	59		27 - 110	10/23/19 15:08	10/24/19 15:43	1

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-EB -01-101519

Lab Sample ID: 480-161261-3

Date Collected: 10/15/19 17:41

Matrix: Water

Date Received: 10/17/19 10:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Nitrobenzene-d5 (Surr)</i>	99		36 - 120	10/23/19 15:08	10/24/19 15:43	1
<i>Phenol-d5 (Surr)</i>	41		20 - 100	10/23/19 15:08	10/24/19 15:43	1
<i>Terphenyl-d14 (Surr)</i>	113		40 - 145	10/23/19 15:08	10/24/19 15:43	1

Surrogate Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-161261-1	SUPE-TB -01-101519	109	109	109	104
480-161261-2	SUPE-W -28C-101519	109	109	108	104
480-161261-2 MS	SUPE-W -28C-101519	107	104	108	101
480-161261-2 MSD	SUPE-W -28C-101519	109	108	108	104
480-161261-3	SUPE-EB -01-101519	112	107	111	104
LCS 480-499719/5	Lab Control Sample	111	108	115	107
MB 480-499719/7	Method Blank	111	106	110	105

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-161261-2	SUPE-W -28C-101519	102	102	51	99	36	104
480-161261-2 MS	SUPE-W -28C-101519	110	104	58	97	39	107
480-161261-2 MSD	SUPE-W -28C-101519	15 X	21 X	13 X	20 X	7 X	23 X
480-161261-3	SUPE-EB -01-101519	89	100	59	99	41	113
LCS 500-511565/2-A	Lab Control Sample	113	98	62	94	43	117
MB 500-511565/1-A	Method Blank	50	86	32	87	31	104

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-161261-2	SUPE-W -28C-101519	99	103	57	97	37	114
480-161261-2 MS	SUPE-W -28C-101519	121	105	56	106	39	113
480-161261-2 MSD	SUPE-W -28C-101519	121	103	56	106	39	113
480-161261-3	SUPE-EB -01-101519	87	105	73	101	55	116
LCS 480-499539/2-A	Lab Control Sample	116	101	56	102	40	117
MB 480-499539/1-A	Method Blank	56	87	47	80	34	100

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)

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Surrogate Summary

Client: Field & Technical Services LLC

Project/Site: Superior, WI Semiannual Groundwater

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHd14 = p-Terphenyl-d14

Job ID: 480-161261-1

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-499719/7
Matrix: Water
Analysis Batch: 499719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/23/19 22:32	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/23/19 22:32	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/23/19 22:32	1
Benzene	ND		1.0	0.41	ug/L			10/23/19 22:32	1
Chloromethane	ND		1.0	0.35	ug/L			10/23/19 22:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/23/19 22:32	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/23/19 22:32	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/23/19 22:32	1
Naphthalene	ND		1.0	0.43	ug/L			10/23/19 22:32	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/23/19 22:32	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/23/19 22:32	1
o-Xylene	ND		1.0	0.76	ug/L			10/23/19 22:32	1
Styrene	ND		1.0	0.73	ug/L			10/23/19 22:32	1
Toluene	ND		1.0	0.51	ug/L			10/23/19 22:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/23/19 22:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		77 - 120		10/23/19 22:32	1
4-Bromofluorobenzene (Surr)	106		73 - 120		10/23/19 22:32	1
Dibromofluoromethane (Surr)	110		75 - 123		10/23/19 22:32	1
Toluene-d8 (Surr)	105		80 - 120		10/23/19 22:32	1

Lab Sample ID: LCS 480-499719/5
Matrix: Water
Analysis Batch: 499719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	33.2	*	ug/L		133	73 - 126
1,2,4-Trimethylbenzene	25.0	32.6	*	ug/L		131	76 - 121
1,3,5-Trimethylbenzene	25.0	31.9	*	ug/L		127	77 - 121
Benzene	25.0	29.3		ug/L		117	71 - 124
Chloromethane	25.0	28.3		ug/L		113	68 - 124
Ethylbenzene	25.0	29.8		ug/L		119	77 - 123
Methyl tert-butyl ether	25.0	29.1		ug/L		116	77 - 120
m-Xylene & p-Xylene	25.0	29.9		ug/L		120	76 - 122
Naphthalene	25.0	26.7		ug/L		107	66 - 125
n-Butylbenzene	25.0	30.6		ug/L		122	71 - 128
N-Propylbenzene	25.0	30.3		ug/L		121	75 - 127
o-Xylene	25.0	29.6		ug/L		118	76 - 122
Styrene	25.0	30.4	*	ug/L		122	80 - 120
Toluene	25.0	29.1		ug/L		116	80 - 122
Xylenes, Total	50.0	59.5		ug/L		119	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		77 - 120
4-Bromofluorobenzene (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	115		75 - 123
Toluene-d8 (Surr)	107		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: 480-161261-2 MS

Matrix: Water

Analysis Batch: 499719

Client Sample ID: SUPE-W -28C-101519

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
1,1,1-Trichloroethane	ND	F1 *	25.0	35.9	F1	ug/L		144	73 - 126
1,2,4-Trimethylbenzene	ND	F1 *	25.0	31.6	F1	ug/L		126	76 - 121
1,3,5-Trimethylbenzene	ND	F1 *	25.0	31.3	F1	ug/L		125	77 - 121
Benzene	ND		25.0	30.9		ug/L		124	71 - 124
Chloromethane	ND	F1	25.0	31.3	F1	ug/L		125	68 - 124
Ethylbenzene	ND	F1	25.0	31.5	F1	ug/L		126	77 - 123
Methyl tert-butyl ether	ND		25.0	29.2		ug/L		117	77 - 120
m-Xylene & p-Xylene	ND	F1	25.0	31.6	F1	ug/L		126	76 - 122
Naphthalene	ND		25.0	25.4		ug/L		102	66 - 125
n-Butylbenzene	ND	F1	25.0	30.9		ug/L		123	71 - 128
N-Propylbenzene	ND	F1	25.0	30.9		ug/L		124	75 - 127
o-Xylene	ND	F1	25.0	30.4		ug/L		122	76 - 122
Styrene	ND	F1 *	25.0	30.7	F1	ug/L		123	80 - 120
Toluene	ND	F1	25.0	30.5		ug/L		122	80 - 122
Xylenes, Total	ND	F1	50.0	62.0	F1	ug/L		124	76 - 122

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	107		77 - 120
4-Bromofluorobenzene (Surr)	104		73 - 120
Dibromofluoromethane (Surr)	108		75 - 123
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 480-161261-2 MSD

Matrix: Water

Analysis Batch: 499719

Client Sample ID: SUPE-W -28C-101519

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier		Result	Qualifier						
1,1,1-Trichloroethane	ND	F1 *	25.0	36.4	F1	ug/L		145	73 - 126	1	15
1,2,4-Trimethylbenzene	ND	F1 *	25.0	33.2	F1	ug/L		133	76 - 121	5	20
1,3,5-Trimethylbenzene	ND	F1 *	25.0	32.7	F1	ug/L		131	77 - 121	4	20
Benzene	ND		25.0	31.1		ug/L		124	71 - 124	1	13
Chloromethane	ND	F1	25.0	30.9		ug/L		124	68 - 124	1	15
Ethylbenzene	ND	F1	25.0	32.6	F1	ug/L		130	77 - 123	4	15
Methyl tert-butyl ether	ND		25.0	29.1		ug/L		117	77 - 120	0	37
m-Xylene & p-Xylene	ND	F1	25.0	32.3	F1	ug/L		129	76 - 122	2	16
Naphthalene	ND		25.0	26.7		ug/L		107	66 - 125	5	20
n-Butylbenzene	ND	F1	25.0	32.7	F1	ug/L		131	71 - 128	6	15
N-Propylbenzene	ND	F1	25.0	32.1	F1	ug/L		128	75 - 127	4	15
o-Xylene	ND	F1	25.0	31.6	F1	ug/L		127	76 - 122	4	16
Styrene	ND	F1 *	25.0	31.9	F1	ug/L		128	80 - 120	4	20
Toluene	ND	F1	25.0	31.3	F1	ug/L		125	80 - 122	3	15
Xylenes, Total	ND	F1	50.0	63.9	F1	ug/L		128	76 - 122	3	16

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	109		77 - 120
4-Bromofluorobenzene (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	108		75 - 123
Toluene-d8 (Surr)	104		80 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-511565/1-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511565

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/23/19 15:07	10/24/19 12:07	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/23/19 15:07	10/24/19 12:07	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/23/19 15:07	10/24/19 12:07	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/23/19 15:07	10/24/19 12:07	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/23/19 15:07	10/24/19 12:07	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
2-Nitrophenol	ND		10	2.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
3-Nitroaniline	ND		10	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Chloroaniline	ND		10	2.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Nitroaniline	ND		10	3.9	ug/L		10/23/19 15:07	10/24/19 12:07	1
4-Nitrophenol	ND		20	2.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
Acenaphthene	ND		1.0	0.36	ug/L		10/23/19 15:07	10/24/19 12:07	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/24/19 12:07	1
Anthracene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzoic acid	ND		20	4.6	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzyl alcohol	ND		20	3.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/23/19 15:07	10/24/19 12:07	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/23/19 15:07	10/24/19 12:07	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/23/19 15:07	10/24/19 12:07	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/23/19 15:07	10/24/19 12:07	1
Chrysene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/24/19 12:07	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/23/19 15:07	10/24/19 12:07	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/23/19 15:07	10/24/19 12:07	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/23/19 15:07	10/24/19 12:07	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/23/19 15:07	10/24/19 12:07	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/23/19 15:07	10/24/19 12:07	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/23/19 15:07	10/24/19 12:07	1

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-511565/1-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511565

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/23/19 15:07	10/24/19 12:07	1
Fluoranthene	ND		1.0	0.32	ug/L		10/23/19 15:07	10/24/19 12:07	1
Fluorene	ND		1.0	0.38	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/23/19 15:07	10/24/19 12:07	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/23/19 15:07	10/24/19 12:07	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/23/19 15:07	10/24/19 12:07	1
Isophorone	ND		2.0	0.29	ug/L		10/23/19 15:07	10/24/19 12:07	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/23/19 15:07	10/24/19 12:07	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/23/19 15:07	10/24/19 12:07	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/23/19 15:07	10/24/19 12:07	1
Phenol	ND		5.0	0.36	ug/L		10/23/19 15:07	10/24/19 12:07	1
Pyrene	ND		1.0	0.48	ug/L		10/23/19 15:07	10/24/19 12:07	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/23/19 15:07	10/24/19 12:07	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/23/19 15:07	10/24/19 12:07	1
Phenanthrene	ND		1.0	0.35	ug/L		10/23/19 15:07	10/24/19 12:07	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/23/19 15:07	10/24/19 12:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	50		40 - 145	10/23/19 15:07	10/24/19 12:07	1
2-Fluorobiphenyl	86		34 - 110	10/23/19 15:07	10/24/19 12:07	1
2-Fluorophenol (Surr)	32		27 - 110	10/23/19 15:07	10/24/19 12:07	1
Nitrobenzene-d5 (Surr)	87		36 - 120	10/23/19 15:07	10/24/19 12:07	1
Phenol-d5 (Surr)	31		20 - 100	10/23/19 15:07	10/24/19 12:07	1
Terphenyl-d14 (Surr)	104		40 - 145	10/23/19 15:07	10/24/19 12:07	1

Lab Sample ID: LCS 500-511565/2-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	40.0	26.9		ug/L		67	26 - 110
1,2-Dichlorobenzene	40.0	26.3		ug/L		66	26 - 110
1,3-Dichlorobenzene	40.0	25.6		ug/L		64	22 - 110
1,4-Dichlorobenzene	40.0	25.7		ug/L		64	23 - 110
1-Methylnaphthalene	40.0	29.9		ug/L		75	38 - 110
bis(chloroisopropyl) ether	40.0	40.4		ug/L		101	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	36.7		ug/L		92	44 - 118
2,4,5-Trichlorophenol	40.0	43.5		ug/L		109	63 - 120
2,4,6-Trichlorophenol	40.0	43.1		ug/L		108	62 - 110
2,4-Dichlorophenol	40.0	40.9		ug/L		102	62 - 110
2,4-Dinitrophenol	80.0	93.6		ug/L		117	37 - 130
2,4-Dinitrotoluene	40.0	46.0		ug/L		115	63 - 122
2,6-Dinitrotoluene	40.0	45.5		ug/L		114	63 - 119
3 & 4 Methylphenol	40.0	31.6		ug/L		79	53 - 110
2-Chloronaphthalene	40.0	33.1		ug/L		83	39 - 110
2-Chlorophenol	40.0	37.7		ug/L		94	59 - 110

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QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-511565/2-A

Matrix: Water

Analysis Batch: 511690

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 511565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	40.0	29.5		ug/L		74	34 - 110
2-Methylphenol	40.0	35.9		ug/L		90	53 - 110
2-Nitroaniline	40.0	45.4		ug/L		113	59 - 122
2-Nitrophenol	40.0	37.8		ug/L		95	58 - 110
3-Nitroaniline	40.0	37.9		ug/L		95	47 - 123
4,6-Dinitro-2-methylphenol	80.0	87.9		ug/L		110	50 - 117
4-Bromophenyl phenyl ether	40.0	41.5		ug/L		104	58 - 120
4-Chloro-3-methylphenol	40.0	41.9		ug/L		105	64 - 120
4-Chloroaniline	40.0	42.4		ug/L		106	35 - 128
4-Chlorophenyl phenyl ether	40.0	38.2		ug/L		96	47 - 112
4-Nitroaniline	40.0	30.4		ug/L		76	52 - 147
4-Nitrophenol	80.0	25.7		ug/L		32	20 - 110
Acenaphthene	40.0	36.8		ug/L		92	46 - 110
Acenaphthylene	40.0	37.7		ug/L		94	47 - 110
Anthracene	40.0	42.3		ug/L		106	67 - 110
Benzo[a]pyrene	40.0	44.6		ug/L		112	70 - 120
Benzo[b]fluoranthene	40.0	44.0		ug/L		110	69 - 123
Benzo[g,h,i]perylene	40.0	45.4		ug/L		114	70 - 120
Benzo[k]fluoranthene	40.0	44.8		ug/L		112	70 - 120
Benzoic acid	80.0	27.0		ug/L		34	10 - 100
Benzyl alcohol	40.0	37.2		ug/L		93	33 - 127
Bis(2-chloroethoxy)methane	40.0	38.6		ug/L		96	60 - 110
Bis(2-chloroethyl)ether	40.0	36.8		ug/L		92	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	45.5		ug/L		114	69 - 120
Butyl benzyl phthalate	40.0	45.6		ug/L		114	68 - 120
Chrysene	40.0	46.3		ug/L		116	68 - 120
Dibenz(a,h)anthracene	40.0	46.4		ug/L		116	70 - 127
Dibenzofuran	40.0	38.8		ug/L		97	51 - 110
Diethyl phthalate	40.0	44.0		ug/L		110	62 - 120
Dimethyl phthalate	40.0	44.5		ug/L		111	63 - 120
Di-n-butyl phthalate	40.0	43.6		ug/L		109	70 - 120
Di-n-octyl phthalate	40.0	45.6		ug/L		114	70 - 122
Fluoranthene	40.0	45.1		ug/L		113	68 - 120
Fluorene	40.0	39.7		ug/L		99	53 - 120
Hexachlorobenzene	40.0	42.3		ug/L		106	61 - 120
Hexachlorobutadiene	40.0	24.2		ug/L		61	20 - 100
Hexachlorocyclopentadiene	40.0	15.2	J	ug/L		38	10 - 100
Hexachloroethane	40.0	23.5		ug/L		59	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	46.0		ug/L		115	65 - 133
Isophorone	40.0	39.6		ug/L		99	57 - 110
Nitrobenzene	40.0	36.3		ug/L		91	53 - 110
N-Nitrosodi-n-propylamine	40.0	36.6		ug/L		91	58 - 110
N-Nitrosodiphenylamine	40.0	42.0		ug/L		105	66 - 110
Pentachlorophenol	80.0	59.0		ug/L		74	23 - 129
Phenol	40.0	17.5		ug/L		44	33 - 100
Pyrene	40.0	46.0	*	ug/L		115	70 - 110
2,4-Dimethylphenol	40.0	39.7		ug/L		99	51 - 110
Benzo[a]anthracene	40.0	44.8		ug/L		112	70 - 120
Phenanthrene	40.0	42.4		ug/L		106	65 - 120

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-511565/2-A
Matrix: Water
Analysis Batch: 511690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511565

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	40.0	45.0		ug/L		113	60 - 132
Surrogate							
	LCS %Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	113		40 - 145				
2-Fluorobiphenyl	98		34 - 110				
2-Fluorophenol (Surr)	62		27 - 110				
Nitrobenzene-d5 (Surr)	94		36 - 120				
Phenol-d5 (Surr)	43		20 - 100				
Terphenyl-d14 (Surr)	117		40 - 145				

Lab Sample ID: 480-161261-2 MS
Matrix: Water
Analysis Batch: 511690

Client Sample ID: SUPE-W -28C-101519
Prep Type: Total/NA
Prep Batch: 511565

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND	H F2 F1	39.1	31.3	H	ug/L		80	26 - 110
1,2-Dichlorobenzene	ND	H F2 F1	39.1	29.1	H	ug/L		74	26 - 110
1,3-Dichlorobenzene	ND	H F2 F1	39.1	29.2	H	ug/L		75	22 - 110
1,4-Dichlorobenzene	ND	H F2 F1	39.1	29.2	H	ug/L		75	23 - 110
1-Methylnaphthalene	ND	H F2 F1	39.1	34.3	H	ug/L		88	38 - 110
bis(chloroisopropyl) ether	ND	H F1 F2	39.1	43.4	H F1	ug/L		111	38 - 110
2,3,4,6-Tetrachlorophenol	ND	H F1	39.1	30.6	H	ug/L		78	44 - 118
2,4,5-Trichlorophenol	ND	H F2 F1	39.1	40.2	H	ug/L		103	63 - 120
2,4,6-Trichlorophenol	ND	H F2 F1	39.1	41.5	H	ug/L		106	62 - 110
2,4-Dichlorophenol	ND	H F2 F1	39.1	40.0	H	ug/L		102	62 - 110
2,4-Dinitrophenol	ND	H F2 F1	78.2	86.8	H	ug/L		111	37 - 130
2,4-Dinitrotoluene	ND	H F2 F1	39.1	42.5	H	ug/L		109	63 - 122
2,6-Dinitrotoluene	ND	H F2 F1	39.1	43.3	H	ug/L		111	63 - 119
3 & 4 Methylphenol	ND	H F2 F1	39.1	28.3	H	ug/L		72	53 - 110
2-Chloronaphthalene	ND	H F2 F1	39.1	37.1	H	ug/L		95	39 - 110
2-Chlorophenol	ND	H F2 F1	39.1	36.8	H	ug/L		94	59 - 110
2-Methylnaphthalene	ND	H F2 F1	39.1	34.3	H	ug/L		88	34 - 110
2-Methylphenol	ND	H F2 F1	39.1	33.1	H	ug/L		84	53 - 110
2-Nitroaniline	ND	H F2 F1	39.1	42.2	H	ug/L		108	59 - 122
2-Nitrophenol	ND	H F2 F1	39.1	38.5	H	ug/L		98	58 - 110
3-Nitroaniline	ND	H F2 F1	39.1	36.4	H	ug/L		93	47 - 123
4,6-Dinitro-2-methylphenol	ND	H F2 F1	78.2	84.3	H	ug/L		108	50 - 117
4-Bromophenyl phenyl ether	ND	H F2 F1	39.1	40.4	H	ug/L		103	58 - 120
4-Chloro-3-methylphenol	ND	H F2 F1	39.1	39.6	H	ug/L		101	64 - 120
4-Chloroaniline	ND	H F2 F1	39.1	40.0	H	ug/L		102	35 - 128
4-Chlorophenyl phenyl ether	ND	H F2 F1	39.1	36.3	H	ug/L		93	47 - 112
4-Nitroaniline	ND	H F2 F1	39.1	30.6	H	ug/L		78	52 - 147
4-Nitrophenol	ND	H F1	78.2	18.8	J H	ug/L		24	20 - 110
Acenaphthene	ND	H F2 F1	39.1	38.6	H	ug/L		99	46 - 110
Acenaphthylene	ND	H F2 F1	39.1	38.9	H	ug/L		99	47 - 110
Anthracene	ND	H F2 F1	39.1	40.6	H	ug/L		104	67 - 110
Benzo[a]pyrene	ND	H F2 F1	39.1	42.4	H	ug/L		108	70 - 120
Benzo[b]fluoranthene	ND	H F2 F1	39.1	43.2	H	ug/L		111	69 - 123

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-161261-2 MS

Matrix: Water

Analysis Batch: 511690

Client Sample ID: SUPE-W -28C-101519

Prep Type: Total/NA

Prep Batch: 511565

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Benzo[g,h,i]perylene	ND	H F2 F1	39.1	42.8	H	ug/L		109		70 - 120
Benzo[k]fluoranthene	ND	H F2 F1	39.1	40.7	H	ug/L		104		70 - 120
Benzoic acid	ND	H F1	78.2	25.7	H	ug/L		33		10 - 100
Benzyl alcohol	ND	H F2 F1	39.1	34.7	H	ug/L		89		33 - 127
Bis(2-chloroethoxy)methane	ND	H F2 F1	39.1	37.4	H	ug/L		96		60 - 110
Bis(2-chloroethyl)ether	ND	H F2 F1	39.1	36.9	H	ug/L		94		49 - 110
Bis(2-ethylhexyl) phthalate	ND	H F2 F1	39.1	42.3	H	ug/L		108		69 - 120
Butyl benzyl phthalate	ND	H F2 F1	39.1	42.6	H	ug/L		109		68 - 120
Chrysene	ND	H F2 F1	39.1	42.8	H	ug/L		109		68 - 120
Dibenz(a,h)anthracene	ND	H F2 F1	39.1	43.7	H	ug/L		112		70 - 127
Dibenzofuran	ND	H F2 F1	39.1	39.5	H	ug/L		101		51 - 110
Diethyl phthalate	ND	H F2 F1	39.1	42.0	H	ug/L		107		62 - 120
Dimethyl phthalate	ND	H F2 F1	39.1	41.9	H	ug/L		107		63 - 120
Di-n-butyl phthalate	ND	H F2 F1	39.1	41.7	H	ug/L		106		70 - 120
Di-n-octyl phthalate	ND	H F2 F1	39.1	42.6	H	ug/L		109		70 - 122
Fluoranthene	ND	H F2 F1	39.1	42.7	H	ug/L		109		68 - 120
Fluorene	ND	H F2 F1	39.1	36.5	H	ug/L		93		53 - 120
Hexachlorobenzene	ND	H F2 F1	39.1	40.3	H	ug/L		103		61 - 120
Hexachlorobutadiene	ND	H F2 F1	39.1	26.3	H	ug/L		67		20 - 100
Hexachlorocyclopentadiene	ND	H F1	39.1	17.9	J H	ug/L		46		10 - 100
Hexachloroethane	ND	H F2 F1	39.1	25.6	H	ug/L		65		20 - 100
Indeno[1,2,3-cd]pyrene	ND	H F2 F1	39.1	43.6	H	ug/L		112		65 - 133
Isophorone	ND	H F2 F1	39.1	38.6	H	ug/L		99		57 - 110
Nitrobenzene	ND	H F2 F1	39.1	36.7	H	ug/L		94		53 - 110
N-Nitrosodi-n-propylamine	ND	H F2 F1	39.1	34.5	H	ug/L		88		58 - 110
N-Nitrosodiphenylamine	ND	H F2 F1	39.1	39.5	H	ug/L		101		66 - 110
Pentachlorophenol	ND	H F2 F1	78.2	54.8	H	ug/L		70		23 - 129
Phenol	ND	H F2 F1	39.1	15.5	H	ug/L		40		33 - 100
Pyrene	ND	H F1 F2 *	39.1	43.4	H F1	ug/L		111		70 - 110
2,4-Dimethylphenol	ND	H F2 F1	39.1	37.7	H	ug/L		96		51 - 110
Benzo[a]anthracene	ND	H F2 F1	39.1	42.2	H	ug/L		108		70 - 120
Phenanthrene	ND	H F2 F1	39.1	40.8	H	ug/L		104		65 - 120
3,3'-Dichlorobenzidine	ND	H F2 F1	39.1	41.1	H	ug/L		105		60 - 132

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	110		40 - 145
2-Fluorobiphenyl	104		34 - 110
2-Fluorophenol (Surr)	58		27 - 110
Nitrobenzene-d5 (Surr)	97		36 - 120
Phenol-d5 (Surr)	39		20 - 100
Terphenyl-d14 (Surr)	107		40 - 145

Lab Sample ID: 480-161261-2 MSD

Matrix: Water

Analysis Batch: 511690

Client Sample ID: SUPE-W -28C-101519

Prep Type: Total/NA

Prep Batch: 511565

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier							
1,2,4-Trichlorobenzene	ND	H F2 F1	38.4	6.36	H F1 F2	ug/L		17		26 - 110	132	20

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-161261-2 MSD

Matrix: Water

Analysis Batch: 511690

Client Sample ID: SUPE-W -28C-101519

Prep Type: Total/NA

Prep Batch: 511565

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
1,2-Dichlorobenzene	ND	H F2 F1	38.4	6.11	H F1 F2	ug/L		16	26 - 110	131	20	
1,3-Dichlorobenzene	ND	H F2 F1	38.4	5.97	H F1 F2	ug/L		16	22 - 110	132	20	
1,4-Dichlorobenzene	ND	H F2 F1	38.4	5.97	H F1 F2	ug/L		16	23 - 110	132	20	
1-Methylnaphthalene	ND	H F2 F1	38.4	7.12	H F1 F2	ug/L		19	38 - 110	131	20	
bis(chloroisopropyl) ether	ND	H F1 F2	38.4	6.81	H F1 F2	ug/L		18	38 - 110	146	20	
2,3,4,6-Tetrachlorophenol	ND	H F1	38.4	ND	H F1	ug/L		0	44 - 118	NC	20	
2,4,5-Trichlorophenol	ND	H F2 F1	38.4	6.72	J H F1 F2	ug/L		18	63 - 120	143	20	
2,4,6-Trichlorophenol	ND	H F2 F1	38.4	7.47	H F1 F2	ug/L		19	62 - 110	139	20	
2,4-Dichlorophenol	ND	H F2 F1	38.4	7.68	J H F1 F2	ug/L		20	62 - 110	136	20	
2,4-Dinitrophenol	ND	H F2 F1	76.8	8.06	J H F1 F2	ug/L		10	37 - 130	166	20	
2,4-Dinitrotoluene	ND	H F2 F1	38.4	8.55	H F1 F2	ug/L		22	63 - 122	133	20	
2,6-Dinitrotoluene	ND	H F2 F1	38.4	8.16	H F1 F2	ug/L		21	63 - 119	137	20	
3 & 4 Methylphenol	ND	H F2 F1	38.4	5.80	H F1 F2	ug/L		15	53 - 110	132	20	
2-Chloronaphthalene	ND	H F2 F1	38.4	7.51	H F1 F2	ug/L		20	39 - 110	133	20	
2-Chlorophenol	ND	H F2 F1	38.4	7.31	H F1 F2	ug/L		19	59 - 110	134	20	
2-Methylnaphthalene	ND	H F2 F1	38.4	7.01	H F1 F2	ug/L		18	34 - 110	132	20	
2-Methylphenol	ND	H F2 F1	38.4	6.54	H F1 F2	ug/L		17	53 - 110	134	20	
2-Nitroaniline	ND	H F2 F1	38.4	8.59	H F1 F2	ug/L		22	59 - 122	132	20	
2-Nitrophenol	ND	H F2 F1	38.4	7.67	J H F1 F2	ug/L		20	58 - 110	134	20	
3-Nitroaniline	ND	H F2 F1	38.4	9.28	J H F1 F2	ug/L		24	47 - 123	119	20	
4,6-Dinitro-2-methylphenol	ND	H F2 F1	76.8	13.8	J H F1 F2	ug/L		18	50 - 117	144	20	
4-Bromophenyl phenyl ether	ND	H F2 F1	38.4	8.35	H F1 F2	ug/L		22	58 - 120	132	20	
4-Chloro-3-methylphenol	ND	H F2 F1	38.4	7.45	J H F1 F2	ug/L		19	64 - 120	137	20	
4-Chloroaniline	ND	H F2 F1	38.4	12.9	H F1 F2	ug/L		34	35 - 128	102	20	
4-Chlorophenyl phenyl ether	ND	H F2 F1	38.4	7.82	H F1 F2	ug/L		20	47 - 112	129	20	
4-Nitroaniline	ND	H F2 F1	38.4	7.47	J H F1 F2	ug/L		19	52 - 147	122	20	
4-Nitrophenol	ND	H F1	76.8	ND	H F1	ug/L		0	20 - 110	NC	20	
Acenaphthene	ND	H F2 F1	38.4	7.80	H F1 F2	ug/L		20	46 - 110	133	20	
Acenaphthylene	ND	H F2 F1	38.4	7.95	H F1 F2	ug/L		21	47 - 110	132	20	
Anthracene	ND	H F2 F1	38.4	8.36	H F1 F2	ug/L		22	67 - 110	132	20	
Benzo[a]pyrene	ND	H F2 F1	38.4	8.27	H F1 F2	ug/L		22	70 - 120	135	20	
Benzo[b]fluoranthene	ND	H F2 F1	38.4	8.18	H F1 F2	ug/L		21	69 - 123	136	20	
Benzo[g,h,i]perylene	ND	H F2 F1	38.4	8.23	H F1 F2	ug/L		21	70 - 120	136	20	
Benzo[k]fluoranthene	ND	H F2 F1	38.4	8.57	H F1 F2	ug/L		22	70 - 120	130	20	
Benzoic acid	ND	H F1	76.8	ND	H F1	ug/L		0	10 - 100	NC	20	
Benzyl alcohol	ND	H F2 F1	38.4	9.59	J H F1 F2	ug/L		25	33 - 127	113	20	
Bis(2-chloroethoxy)methane	ND	H F2 F1	38.4	7.72	H F1 F2	ug/L		20	60 - 110	132	20	
Bis(2-chloroethyl)ether	ND	H F2 F1	38.4	7.64	H F1 F2	ug/L		20	49 - 110	131	20	
Bis(2-ethylhexyl) phthalate	ND	H F2 F1	38.4	8.33	J H F1 F2	ug/L		22	69 - 120	134	20	
Butyl benzyl phthalate	ND	H F2 F1	38.4	8.16	H F1 F2	ug/L		21	68 - 120	136	20	
Chrysene	ND	H F2 F1	38.4	8.17	H F1 F2	ug/L		21	68 - 120	136	20	
Dibenz(a,h)anthracene	ND	H F2 F1	38.4	8.38	H F1 F2	ug/L		22	70 - 127	136	20	
Dibenzofuran	ND	H F2 F1	38.4	7.97	H F1 F2	ug/L		21	51 - 110	133	20	
Diethyl phthalate	ND	H F2 F1	38.4	8.50	H F1 F2	ug/L		22	62 - 120	133	20	
Dimethyl phthalate	ND	H F2 F1	38.4	8.22	H F1 F2	ug/L		21	63 - 120	134	20	
Di-n-butyl phthalate	ND	H F2 F1	38.4	8.56	H F1 F2	ug/L		22	70 - 120	132	20	
Di-n-octyl phthalate	ND	H F2 F1	38.4	7.78	J H F1 F2	ug/L		20	70 - 122	138	20	
Fluoranthene	ND	H F2 F1	38.4	8.58	H F1 F2	ug/L		22	68 - 120	133	20	
Fluorene	ND	H F2 F1	38.4	7.99	H F1 F2	ug/L		21	53 - 120	128	20	

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-161261-2 MSD

Client Sample ID: SUPE-W -28C-101519

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 511690

Prep Batch: 511565

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Hexachlorobenzene	ND	H F2 F1	38.4	8.23	H F1 F2	ug/L		21	61 - 120	132	20
Hexachlorobutadiene	ND	H F2 F1	38.4	5.53	H F1 F2	ug/L		14	20 - 100	131	20
Hexachlorocyclopentadiene	ND	H F1	38.4	ND	H F1	ug/L		0	10 - 100	NC	20
Hexachloroethane	ND	H F2 F1	38.4	5.66	H F1 F2	ug/L		15	20 - 100	127	20
Indeno[1,2,3-cd]pyrene	ND	H F2 F1	38.4	8.33	H F1 F2	ug/L		22	65 - 133	136	20
Isophorone	ND	H F2 F1	38.4	7.62	H F1 F2	ug/L		20	57 - 110	134	20
Nitrobenzene	ND	H F2 F1	38.4	7.80	H F1 F2	ug/L		20	53 - 110	130	20
N-Nitrosodi-n-propylamine	ND	H F2 F1	38.4	7.52	H F1 F2	ug/L		20	58 - 110	128	20
N-Nitrosodiphenylamine	ND	H F2 F1	38.4	8.49	H F1 F2	ug/L		22	66 - 110	129	20
Pentachlorophenol	ND	H F2 F1	76.8	9.33	J H F1 F2	ug/L		12	23 - 129	142	20
Phenol	ND	H F2 F1	38.4	2.98	J H F1 F2	ug/L		8	33 - 100	136	20
Pyrene	ND	H F1 F2 *	38.4	8.49	H F1 F2	ug/L		22	70 - 110	134	20
2,4-Dimethylphenol	ND	H F2 F1	38.4	7.64	J H F1 F2	ug/L		20	51 - 110	133	20
Benzo[a]anthracene	ND	H F2 F1	38.4	8.09	H F1 F2	ug/L		21	70 - 120	136	20
Phenanthrene	ND	H F2 F1	38.4	8.29	H F1 F2	ug/L		22	65 - 120	132	20
3,3'-Dichlorobenzidine	ND	H F2 F1	38.4	7.80	H F1 F2	ug/L		20	60 - 132	136	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	15	X	40 - 145
2-Fluorobiphenyl	21	X	34 - 110
2-Fluorophenol (Surr)	13	X	27 - 110
Nitrobenzene-d5 (Surr)	20	X	36 - 120
Phenol-d5 (Surr)	7	X	20 - 100
Terphenyl-d14 (Surr)	23	X	40 - 145

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 480-499539/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 500726

Prep Batch: 499539

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pentachlorophenol	ND		1.0	0.34	ug/L		10/22/19 16:11	10/28/19 17:30	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	56		24 - 146	10/22/19 16:11	10/28/19 17:30	1
2-Fluorobiphenyl	87		37 - 120	10/22/19 16:11	10/28/19 17:30	1
2-Fluorophenol (Surr)	47		10 - 120	10/22/19 16:11	10/28/19 17:30	1
Nitrobenzene-d5 (Surr)	80		26 - 120	10/22/19 16:11	10/28/19 17:30	1
Phenol-d5 (Surr)	34		11 - 120	10/22/19 16:11	10/28/19 17:30	1
p-Terphenyl-d14	100		64 - 127	10/22/19 16:11	10/28/19 17:30	1

Lab Sample ID: LCS 480-499539/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 500726

Prep Batch: 499539

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Pentachlorophenol	16.0	13.8		ug/L		86	10 - 131	

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 480-499539/2-A
Matrix: Water
Analysis Batch: 500726

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499539

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	116		24 - 146
2-Fluorobiphenyl	101		37 - 120
2-Fluorophenol (Surr)	56		10 - 120
Nitrobenzene-d5 (Surr)	102		26 - 120
Phenol-d5 (Surr)	40		11 - 120
p-Terphenyl-d14	117		64 - 127

Lab Sample ID: 480-161261-2 MS
Matrix: Water
Analysis Batch: 500726

Client Sample ID: SUPE-W -28C-101519
Prep Type: Total/NA
Prep Batch: 499539

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	ND		16.0	14.6		ug/L		91	23 - 149
Surrogate	MS %Recovery	MS Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	121		24 - 146						
2-Fluorobiphenyl	105		37 - 120						
2-Fluorophenol (Surr)	56		10 - 120						
Nitrobenzene-d5 (Surr)	106		26 - 120						
Phenol-d5 (Surr)	39		11 - 120						
p-Terphenyl-d14	113		64 - 127						

Lab Sample ID: 480-161261-2 MSD
Matrix: Water
Analysis Batch: 500726

Client Sample ID: SUPE-W -28C-101519
Prep Type: Total/NA
Prep Batch: 499539

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Pentachlorophenol	ND		16.0	14.8		ug/L		92	23 - 149	1	37
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	121		24 - 146								
2-Fluorobiphenyl	103		37 - 120								
2-Fluorophenol (Surr)	56		10 - 120								
Nitrobenzene-d5 (Surr)	106		26 - 120								
Phenol-d5 (Surr)	39		11 - 120								
p-Terphenyl-d14	113		64 - 127								

QC Association Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

GC/MS VOA

Analysis Batch: 499719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161261-1	SUPE-TB -01-101519	Total/NA	Water	8260C	
480-161261-2	SUPE-W -28C-101519	Total/NA	Water	8260C	
480-161261-3	SUPE-EB -01-101519	Total/NA	Water	8260C	
MB 480-499719/7	Method Blank	Total/NA	Water	8260C	
LCS 480-499719/5	Lab Control Sample	Total/NA	Water	8260C	
480-161261-2 MS	SUPE-W -28C-101519	Total/NA	Water	8260C	
480-161261-2 MSD	SUPE-W -28C-101519	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 499539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161261-2	SUPE-W -28C-101519	Total/NA	Water	3510C	
480-161261-3	SUPE-EB -01-101519	Total/NA	Water	3510C	
MB 480-499539/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-499539/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-161261-2 MS	SUPE-W -28C-101519	Total/NA	Water	3510C	
480-161261-2 MSD	SUPE-W -28C-101519	Total/NA	Water	3510C	

Analysis Batch: 500726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161261-2	SUPE-W -28C-101519	Total/NA	Water	8270D LL	499539
480-161261-3	SUPE-EB -01-101519	Total/NA	Water	8270D LL	499539
MB 480-499539/1-A	Method Blank	Total/NA	Water	8270D LL	499539
LCS 480-499539/2-A	Lab Control Sample	Total/NA	Water	8270D LL	499539
480-161261-2 MS	SUPE-W -28C-101519	Total/NA	Water	8270D LL	499539
480-161261-2 MSD	SUPE-W -28C-101519	Total/NA	Water	8270D LL	499539

Prep Batch: 511565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161261-2	SUPE-W -28C-101519	Total/NA	Water	3510C	
480-161261-3	SUPE-EB -01-101519	Total/NA	Water	3510C	
MB 500-511565/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-511565/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-161261-2 MS	SUPE-W -28C-101519	Total/NA	Water	3510C	
480-161261-2 MSD	SUPE-W -28C-101519	Total/NA	Water	3510C	

Analysis Batch: 511690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-161261-2	SUPE-W -28C-101519	Total/NA	Water	8270D	511565
480-161261-3	SUPE-EB -01-101519	Total/NA	Water	8270D	511565
MB 500-511565/1-A	Method Blank	Total/NA	Water	8270D	511565
LCS 500-511565/2-A	Lab Control Sample	Total/NA	Water	8270D	511565
480-161261-2 MS	SUPE-W -28C-101519	Total/NA	Water	8270D	511565
480-161261-2 MSD	SUPE-W -28C-101519	Total/NA	Water	8270D	511565

Lab Chronicle

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Client Sample ID: SUPE-TB -01-101519

Lab Sample ID: 480-161261-1

Date Collected: 10/15/19 00:00

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	499719	10/24/19 05:02	BTP	TAL BUF

Client Sample ID: SUPE-W -28C-101519

Lab Sample ID: 480-161261-2

Date Collected: 10/15/19 16:48

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	499719	10/24/19 05:26	BTP	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:07	DAK	TAL CHI
Total/NA	Analysis	8270D		1	511690	10/24/19 15:19	GWB	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 19:24	PJQ	TAL BUF

Client Sample ID: SUPE-EB -01-101519

Lab Sample ID: 480-161261-3

Date Collected: 10/15/19 17:41

Matrix: Water

Date Received: 10/17/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	499719	10/24/19 05:51	BTP	TAL BUF
Total/NA	Prep	3510C			511565	10/23/19 15:08	DAK	TAL CHI
Total/NA	Analysis	8270D		1	511690	10/24/19 15:43	GWB	TAL CHI
Total/NA	Prep	3510C			499539	10/22/19 16:11	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	500726	10/28/19 23:41	PJQ	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Field & Technical Services LLC
 Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	998310390	08-31-20

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	999580010	08-31-20

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-19
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-19
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	12-31-19
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-30-19
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior, WI Semiannual Groundwater

Job ID: 480-161261-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-161261-1	SUPE-TB -01-101519	Water	10/15/19 00:00	10/17/19 10:00	
480-161261-2	SUPE-W -28C-101519	Water	10/15/19 16:48	10/17/19 10:00	
480-161261-3	SUPE-EB -01-101519	Water	10/15/19 17:41	10/17/19 10:00	

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**CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS
REQUEST FORM**

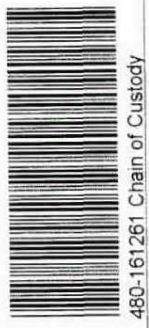
REF.# 501196

501196

Project Name: Superior 2019 2SA Sampling Company: Field & Technical Services Client: Beazer East, Inc.
 Project Number: OM-0556-19 Address: 200 Third Avenue Contact: (724) 858-5953
 Laboratory: TABUF Carnegie, PA 15106 btrask.2006@f-ts.com
 Shipment Method: FEDEX (412) 279-3363

Program: Superior 2019 2SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					8260B_VOA+naphtha	8270C_SVOC (less naphtha)		
10/15/2019	0000	GW	SUPE-TB-01-101519		2	0		
10/15/2019	1648	GW	SUPE-W-28C-101519		2	3		
10/15/2019	1648	GW	SUPE-W-28C/MS/MSD-101519		4	6		
10/15/2019	1741	GW	SUPE-EB-01-101519		2	3		



Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Ben Trask	Printed Name:	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm:	Firm:	Firm:	
Date/Time: 10/15/2019 1751	Date/Time:	Date/Time:	Date/Time: 10/17/19 1000	

2.8 4.1
 3.2 3.4
 7H



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161261-1

Login Number: 161261

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Manhardt, Kara M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	FTS
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161261-1

Login Number: 161261

List Number: 2

Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago

List Creation: 10/23/19 09:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-161261-1

Login Number: 161261

List Number: 3

Creator: Scott, Sherri L

List Source: Eurofins TestAmerica, Chicago

List Creation: 10/31/19 08:02 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

APPENDIX D
Data Summary Tables

First Semi-Annual Event

Table D1
Summary of Detected Constituents
First Semi-Annual 2019 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8270D LL					
W-10AR2	1-Methylnaphthalene	57	NA	NA	NA
W-12CR	2,4,6-Trichlorophenol	1.9 J	NA	NA	NA
W-12CR DUP	2,4,6-Trichlorophenol	1.6 J	NA	NA	NA
W-10AR2	Acenaphthene	110	NA	NA	NA
W-10AR2	Acenaphthylene	1.5	NA	NA	NA
W-04AR2	Anthracene	5.6 J	600	3000	NA
W-10AR2	Anthracene	1.2	600	3000	NA
W-04AR2	Benzo(a)anthracene	0.37 J	NA	NA	NA
W-04AR2	Benzo(a)pyrene	0.21 J	0.02	0.2	NA
W-04AR2	Benzo(b)fluoranthene	0.54 J	0.02	0.2	NA
W-04AR2	Benzo(k)fluoranthene	0.34 J	NA	NA	NA
W-04AR2	Chrysene	0.51 J	0.02	0.2	NA
W-10AR2	Dibenzofuran	42	NA	NA	NA
W-04AR2	Fluoranthene	0.72 J	80	400	NA
W-10AR2	Fluoranthene	2.2	80	400	NA
W-10AR2	Fluorene	32	80	400	NA
W-04AR2	Indeno(1,2,3-cd)pyrene	0.22 J	NA	NA	NA
W-10AR2	Phenanthrene	6	NA	NA	NA
W-04AR2	Pyrene	0.57 J	50	250	NA
W-10AR2	Pyrene	1.3	50	250	NA
8260C					
W-10AR2	1,2,4-Trimethylbenzene	8.9	96*	480*	NA
W-10AR2	Benzene	17	0.5	5	5
W-30A	Benzene	0.76 J	0.5	5	5
W-10AR2	Ethylbenzene	34	140	700	700
W-30A	Ethylbenzene	1.6	140	700	700
W-10AR2	Naphthalene	2.2	10	100	NA
W-30A	Naphthalene	22	10	100	NA
W-10AR2	Toluene	2.3	160	800	1000
W-10AR2	Xylene, Meta & Para	5	400**	2000**	10000**
W-10AR2	Xylene, Ortho	16	400**	2000**	10000**

Table D1
Summary of Detected Constituents
First Semi-Annual 2019 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8290A					
W-04AR2	1,2,3,4,6,7,8-HPCDD	0.00079	NA	NA	NA
W-10AR2	1,2,3,4,6,7,8-HPCDD	0.000019 J	NA	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDD	0.00005	NA	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDD	0.00047	NA	NA	NA
W-04AR2	1,2,3,4,6,7,8-HPCDF	0.0002	NA	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDF	0.000021 J	NA	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDF	0.00017	NA	NA	NA
W-04AR2	1,2,3,4,7,8,9-HPCDF	0.000017 JI	NA	NA	NA
W-30A	1,2,3,4,7,8,9-HPCDF	0.000015 J	NA	NA	NA
W-04AR2	1,2,3,4,7,8-HXCDD	0.0000094 J	NA	NA	NA
W-12A	1,2,3,4,7,8-HXCDD	0.0000014 JI	NA	NA	NA
W-30A	1,2,3,4,7,8-HXCDD	0.0000017 JI	NA	NA	NA
W-04AR2	1,2,3,4,7,8-HXCDF	0.000022 JI	NA	NA	NA
W-12A	1,2,3,4,7,8-HXCDF	0.0000034 J	NA	NA	NA
W-30A	1,2,3,4,7,8-HXCDF	0.000023 J	NA	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDD	0.000036 J	NA	NA	NA
W-30A	1,2,3,6,7,8-HXCDD	0.000018 JI	NA	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDF	0.000029 JI	NA	NA	NA
W-10AR2	1,2,3,6,7,8-HXCDF	0.000002 JI	NA	NA	NA
W-12A	1,2,3,6,7,8-HXCDF	0.0000059 JI	NA	NA	NA
W-28C	1,2,3,6,7,8-HXCDF	0.0000011 JI	NA	NA	NA
W-30A	1,2,3,6,7,8-HXCDF	0.000031 JI	NA	NA	NA
W-04AR2	1,2,3,7,8,9-HXCDD	0.000016 J	NA	NA	NA
W-12A	2,3,4,6,7,8-HXCDF	0.00000098 JI	NA	NA	NA
W-12A	2,3,7,8-TCDF	0.0000014 JI	NA	NA	NA
W-28C	2,3,7,8-TCDF	0.0000007 JI	NA	NA	NA
W-30C	2,3,7,8-TCDF	0.00000041 JI	NA	NA	NA
W-04AR2	OCDD	0.0063	NA	NA	NA
W-10AR2	OCDD	0.00026	NA	NA	NA
W-12A	OCDD	0.00056	NA	NA	NA
W-12CR DUP	OCDD	0.00006 J	NA	NA	NA
W-28C	OCDD	0.00011	NA	NA	NA
W-30A	OCDD	0.0063	NA	NA	NA
W-04AR2	OCDF	0.00052	NA	NA	NA
W-12A	OCDF	0.000052 J	NA	NA	NA
W-30A	OCDF	0.0005	NA	NA	NA
W-04AR2	Total HPCDD	0.002	NA	NA	NA
W-10AR2	Total HPCDD	0.000041 J	NA	NA	NA
W-12A	Total HPCDD	0.000097	NA	NA	NA
W-28C	Total HPCDD	0.000055	NA	NA	NA
W-30A	Total HPCDD	0.001	NA	NA	NA
W-04AR2	Total HPCDF	0.00073 I	NA	NA	NA
W-10AR2	Total HPCDF	0.000021 JI	NA	NA	NA
W-12A	Total HPCDF	0.000087 I	NA	NA	NA
W-30A	Total HPCDF	0.00067	NA	NA	NA
W-04AR2	Total HXCDD	0.00022	NA	NA	NA
W-30A	Total HXCDD	0.000074 I	NA	NA	NA

Table D1
Summary of Detected Constituents
First Semi-Annual 2019 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
W-04AR2	Total HXCDF	0.00065 I	NA	NA	NA
W-10AR2	Total HXCDF	0.000019 JI	NA	NA	NA
W-12A	Total HXCDF	0.000094 I	NA	NA	NA
W-30A	Total HXCDF	0.00055 I	NA	NA	NA
W-04AR2	Total PECDD	0.0000037 JI	NA	NA	NA
W-04AR2	Total PECDF	0.00024 I	NA	NA	NA
W-06A	Total PECDF	0.00000045 JI	NA	NA	NA
W-10AR2	Total PECDF	0.000011 JI	NA	NA	NA
W-12A	Total PECDF	0.000049 I	NA	NA	NA
W-28C	Total PECDF	0.0000016 JI	NA	NA	NA
W-30A	Total PECDF	0.00024 I	NA	NA	NA
W-30C	Total PECDF	0.0000021 JI	NA	NA	NA
W-06A	Total TCDD	0.00000046 JI	NA	NA	NA
W-10AR2	Total TCDD	0.00000068 JI	NA	NA	NA
W-12A	Total TCDD	0.00000084 JI	NA	NA	NA
W-12CR	Total TCDD	0.00000048 JI	NA	NA	NA
W-04AR2	Total TCDF	0.000053 I	NA	NA	NA
W-10AR2	Total TCDF	0.0000063 JI	NA	NA	NA
W-12A	Total TCDF	0.000018 I	NA	NA	NA
W-28C	Total TCDF	0.0000014 JI	NA	NA	NA
W-30A	Total TCDF	0.000046 I	NA	NA	NA
W-30C	Total TCDF	0.0000023 JI	NA	NA	NA
W-04AR2	2,3,7,8-TCDD TEQ	2.34E-05	3E-06	0.00003	0.00003
W-10AR2	2,3,7,8-TCDD TEQ	4.68E-07	3E-06	0.00003	0.00003
W-12A	2,3,7,8-TCDD TEQ	2.20E-06	3E-06	0.00003	0.00003
W-12CR DUP	2,3,7,8-TCDD TEQ	1.80E-08	3E-06	0.00003	0.00003
W-28C	2,3,7,8-TCDD TEQ	2.13E-07	3E-06	0.00003	0.00003
W-30A	2,3,7,8-TCDD TEQ	1.60E-05	3E-06	0.00003	0.00003
W-30C	2,3,7,8-TCDD TEQ	4.10E-08	3E-06	0.00003	0.00003

Notes:

 - Indicates the detected value exceeds one or more specified standards.

PAL - Preventative Action Limit

MCL - Maximum Contaminant Levels for drinking water

ES - Enforcement Standard

NA - Not available

J - Estimated

* - Total trimethylbenzene standard

** - Total xylene standard

At the request of WDNR, 2,3,7,8-TCDD TEQ values are compared to the congener-specific PAL and ES for 2,3,7,8-TCDD.

Second Semi-Annual Event

Table D2
Summary of Detected Constituents
Second Semi-Annual 2019 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8270D LL					
W-10AR2	1-Methylnaphthalene	28 J	NA	NA	NA
W-12CR	2,4,6-Trichlorophenol	3.4 J	NA	NA	NA
W-12CR	2-Chloronaphthalene	9.9	NA	NA	NA
W-10AR2	Acenaphthene	91 J	NA	NA	NA
W-30A	Acenaphthene	14 J	NA	NA	NA
W-10AR2	Acenaphthylene	1.9 J	NA	NA	NA
W-04AR2	Anthracene	2.4 J	600	3000	NA
W-10AR2	Anthracene	0.73 J	600	3000	NA
W-30A	Anthracene	0.61 J	600	3000	NA
W-04AR2	Benzo(a)anthracene	0.59 J	NA	NA	NA
W-10AR2	Benzo(a)anthracene	0.13 J	NA	NA	NA
W-30A	Benzo(a)anthracene	0.11 J	NA	NA	NA
W-04AR2	Benzo(a)pyrene	0.25 J	0.02	0.2	0.2
W-04AR2	Benzo(b)fluoranthene	0.5 J	0.02	0.2	NA
W-30A	Benzo(b)fluoranthene	0.069 J	0.02	0.2	NA
W-04AR2	Chrysene	0.77 J	0.02	0.2	NA
W-04AR2	Benzo(k)fluoranthene	0.19 J	NA	NA	NA
W-10AR2	Dibenzofuran	12 J	NA	NA	NA
W-30A	Dibenzofuran	2.9 J	NA	NA	NA
W-04AR2	Fluoranthene	2.2 J	80	400	NA
W-10AR2	Fluoranthene	2 J	80	400	NA
W-30A	Fluoranthene	0.99 J	80	400	NA
W-10AR2	Fluorene	19 J	80	400	NA
W-30A	Fluorene	1.5 J	80	400	NA
W-04AR2	Indeno(1,2,3-cd)pyrene	0.1 J	NA	NA	NA
W-04AR2	Phenanthrene	0.85 J	NA	NA	NA
W-10AR2	Phenanthrene	0.36 J	NA	NA	NA
W-04AR2	Pyrene	1.4 J	50	250	NA
W-10AR2	Pyrene	1.2 J	50	250	NA
W-30A	Pyrene	0.65 J	50	250	NA

Table D2
Summary of Detected Constituents
Second Semi-Annual 2019 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8260C					
W-10AR2	1,2,4-Trimethylbenzene	9.4	96*	480*	NA
W-30A	1,2,4-Trimethylbenzene	3.2	96*	480*	NA
W-10AR2	Benzene	22	0.5	5	5
W-30A	Benzene	2.4	0.5	5	5
W-10AR2	Ethylbenzene	46	140	700	700
W-30A	Ethylbenzene	10	140	700	700
W-30A	Naphthalene	91	10	100	NA
W-10AR2	Toluene	2.7	160	800	1000
W-30A	Toluene	1.1	160	800	1000
W-10AR2	Xylene, Meta & Para	3.3	400**	2000**	10000**
W-30A	Xylene, Meta & Para	4.1	400**	2000**	10000**
W-10AR2	Xylene, Ortho	19	400**	2000**	10000**
W-30A	Xylene, Ortho	3.2	400**	2000**	10000**

Notes:

- Indicates the detected value exceeds one or more specified standards.

PAL - Preventative Action Limit

MCL - Maximum Contaminant Levels for drinking water

ES - Enforcement Standard

NA - Not available

J - Estimated

* - Total trimethylbenzene standard

** - Total xylene standard

APPENDIX E

Linear Regression Analysis

BENZENE STATISTICAL ANALYSIS

	W-10AR2 Benzene	W-30A Benzene	PAL	ES/MCL	
Feb-99			0.5	5	Benzene data for Feb-99 W-10AR2 and May-99 W-10AR2 not included; Well W-10A was abandoned prior to 3rd quarter 1999 sampling and well W-10AR was installed. Data is not available for W-10A.
May-99			0.5	5	
Aug-99	140	0	0.5	5	
Nov-99	140	0	0.5	5	
Feb-00	130	0	0.5	5	
May-00	110	0	0.5	5	
Aug-00	0	0	0.5	5	
Nov-00	120	0	0.5	5	
Feb-01	100	14	0.5	5	
May-01	73	0	0.5	5	
Aug-01	0	32	0.5	5	
Dec-01	91	100	0.5	5	
Apr-02	28	2.8	0.5	5	
Oct-02	63	0	0.5	5	
Apr-03	75	19	0.5	5	
Oct-03	11	0	0.5	5	
Apr-04	41	0.18	0.5	5	
Oct-04	44	0	0.5	5	
Apr-05	54	0	0.5	5	
Oct-05	14	3.7	0.5	5	
Apr-06	35	0.14	0.5	5	
Oct-06	46	13	0.5	5	
Apr-07	5	0	0.5	5	
Oct-07	0	0	0.5	5	
May-08	3.7	0	0.5	5	
Oct-08	5.5	0	0.5	5	
Apr-09	5.4	0.4	0.5	5	
Oct-09	21	0.29	0.5	5	
Apr-10	8.6	0.35	0.5	5	
Oct-10	1.2	8.9	0.5	5	
Apr-11	0	0	0.5	5	
Oct-11	28	22	0.5	5	
Apr-12	2.2	0	0.5	5	
Oct-12	30	17	0.5	5	
May-13	2.4	0	0.5	5	
Oct-13	17	2.3	0.5	5	
Apr-14	0.64	0	0.5	5	
Oct-14	9.3	3.7	0.5	5	
Apr-15	8.7	0.33	0.5	5	
Oct-15	13	8.2	0.5	5	
Apr-16	5.8	2.5	0.5	5	
Oct-16	12	8.5	0.5	5	
Apr-17	8.6	5.6	0.5	5	
Oct-17	16	11	0.5	5	
May-18	13	8.9	0.5	5	
Oct-18	16	3.6	0.5	5	
Apr-19	17	0.76	0.5	5	
Oct-19	22	2.4	0.5	5	

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2019)

SUMMARY OUTPUT

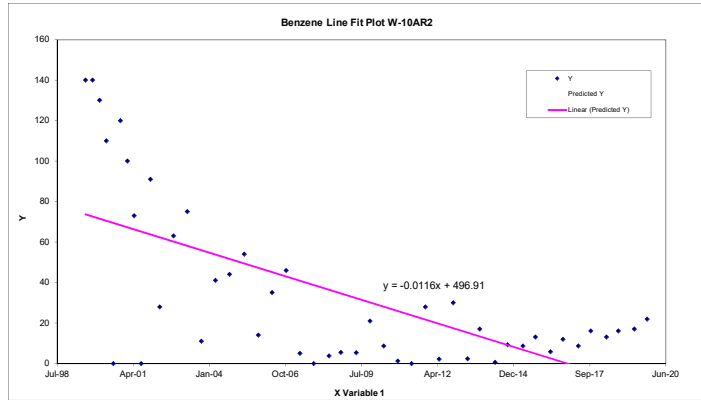
Regression Statistics	
Multiple R	0.653998784
R Square	0.427714441
Adjusted R Square	0.414707919
Standard Error	31.57654131
Observations	46

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	32788.59929	32788.59929	32.88468964	8.2755E-07
Residual	44	43871.43027	997.0779608		
Total	45	76660.02957			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	496.9142108	80.77112739	6.152126717	2.01627E-07	334.1306997	659.6977219	334.1306997	659.6977219
X Variable 1	-0.011638012	0.002029118	-5.734517385	8.2755E-07	-0.01572543	-0.007546593	-0.01572543	-0.007546593

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	73.67755085	66.32244915
2	72.67073776	67.30296224
3	71.53952467	58.46347533
4	70.4892836	39.5107164
5	69.4187705	-69.4187705
6	68.34825741	51.65174259
7	67.2774432	32.7222568
8	66.24213926	6.757860738
9	65.17162817	-65.17162817
10	63.75203272	27.24796728
11	62.34407528	-34.34407528
12	60.21468511	2.785314889
13	59.08693095	16.90369905
14	55.96754078	-44.96754078
15	53.80324257	-12.80324257
16	51.67385239	-7.673852395
17	49.38155806	4.618441944
18	47.25216788	-33.25216788
19	45.13441372	-10.13441372
20	43.00502355	2.994976452
21	40.91054141	-35.91054141
22	38.79278725	-38.79278725
23	36.43067684	-32.73067684
24	34.627095	-29.127095
25	32.2795206	-26.8795206
26	30.14723043	-9.14723043
27	28.05274829	-19.45274829
28	25.9117221	-24.7117221
29	23.80560395	-23.80560395
30	21.67621378	6.323786218
31	19.58173164	-17.38173164
32	17.44070546	12.55929454
33	15.24149921	-12.84149921
34	13.35646529	3.64334709
35	11.00599089	-10.36599089
36	9.132592981	0.167407019
37	6.75846558	1.941153442
38	4.88544846	8.114551354
39	2.54661026	3.2538974
40	0.661576336	11.33842366
41	-1.712170087	10.31217009
42	-3.58567998	19.58568
43	-6.029130492	19.02913049
44	-7.809440309	23.80944031
45	-10.24136679	27.24136679
46	-12.21948881	34.21948881



BENZENE STATISTICAL ANALYSIS

SUMMARY OUTPUT

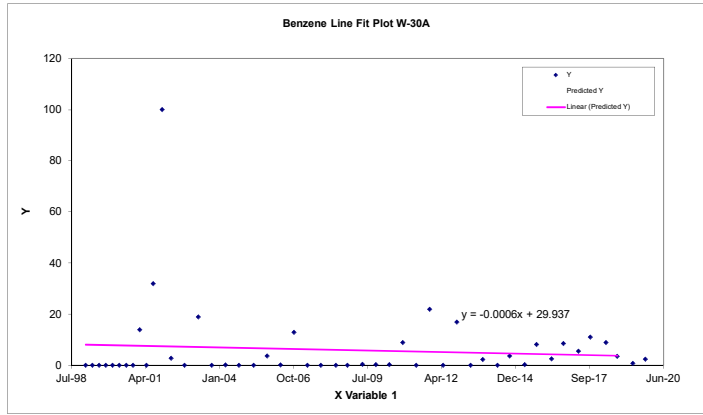
Regression Statistics	
Multiple R	0.092542493
R Square	0.008564113
Adjusted R Square	-0.012988841
Standard Error	15.58461032
Observations	48

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	96.50892511	96.50892511	0.397352165	0.531579096
Residual	46	11172.48362	242.880788		
Total	47	11268.99255			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	29.93669173	37.92257098	0.789416196	0.433919089	-46.3974845	106.270868	-46.3974845	106.270868
X Variable 1	-0.000602687	0.000956102	-0.630358759	0.531579096	-0.002527222	0.001321847	-0.002527222	0.001321847

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	8.12422586	-8.12422586
2	8.070596673	-8.070596673
3	8.015139423	-8.015139423
4	7.959692173	-7.959692173
5	7.904244924	-7.904244924
6	7.85003049	-7.85003049
7	7.794555799	-7.794555799
8	7.73910855	-7.73910855
9	7.6836613	6.3163387
10	7.630022113	-7.630022113
11	7.574574863	24.42542514
12	7.51040999	92.49895301
13	7.428121802	-4.628121802
14	7.31782999	-7.31782999
15	7.208140865	11.79185913
16	7.097849054	-7.097849054
17	6.985749179	-6.805749179
18	6.875457368	-6.875457368
19	6.756727931	-6.756727931
20	6.646436119	-2.946436119
21	6.536746995	-6.396746995
22	6.426455183	6.573544817
23	6.317971433	-6.317971433
24	6.208292309	-6.208292309
25	6.085936747	-6.085936747
26	5.992520185	-5.992520185
27	5.870777311	-5.470777311
28	5.760485499	-5.470485499
29	5.65200175	-5.30200175
30	5.541107251	3.358892749
31	5.432020814	-5.432020814
32	5.321729002	16.678271
33	5.213245253	-5.213245253
34	5.102350753	11.89784925
35	4.98842817	-4.98842817
36	4.890807442	-2.590807442
37	4.789064568	-4.789064568
38	4.672031881	-0.972031881
39	4.549083632	-4.219083632
40	4.452050945	3.747949555
41	4.33910758	-1.33910758
42	4.23275384	4.265724616
43	4.110327134	1.489672866
44	4.013294447	6.986705553
45	3.886730073	5.013289927
46	3.794518896	-0.194518896
47	3.6885572	-2.9085572
48	3.566100325	-1.166100325



CHRYSENE STATISTICAL ANALYSIS

	W-10AR2 Chrysene	W-30A Chrysene	PAL	ES	
Feb-99		28	0.02	0.2	Chrysene data for Feb-99 W-10AR2 and May-99 W-10AR2not included; Well W-10A was abandoned prior to 3rd quarter 1999 sampling and well W-10AR was installed. Data is not available for W-10A.
May-99		0	0.02	0.2	
Aug-99	0	13	0.02	0.2	
Nov-99	0	0	0.02	0.2	
Feb-00	0	0	0.02	0.2	
May-00	0	33	0.02	0.2	
Aug-00	0	6.6	0.02	0.2	
Nov-00	3.2	4.1	0.02	0.2	
Feb-01	1.4	0	0.02	0.2	
May-01	0.62	13	0.02	0.2	
Aug-01	0	5.3	0.02	0.2	
Dec-01	1	0.059	0.02	0.2	
Apr-02	0	0.36	0.02	0.2	
Oct-02	0	0.12	0.02	0.2	
Apr-03	0	0	0.02	0.2	
Oct-03	0	0.067	0.02	0.2	
Apr-04	0	0.041	0.02	0.2	
Oct-04	0	0	0.02	0.2	
Apr-05	0	0	0.02	0.2	
Oct-05	0	0	0.02	0.2	
Apr-06	0	0	0.02	0.2	
Oct-06	0	0.68	0.02	0.2	
Apr-07	0.19	4.2	0.02	0.2	
Oct-07	0	0.074	0.02	0.2	
May-08	0	0	0.02	0.2	
Oct-08	0	0	0.02	0.2	
Apr-09	0	0	0.02	0.2	
Oct-09	0	0	0.02	0.2	
Apr-10	0	0	0.02	0.2	
Oct-10	0	0.22	0.02	0.2	
Apr-11	0	0.22	0.02	0.2	
Oct-11	0	0.2	0.02	0.2	
Apr-12	0	0	0.02	0.2	
Oct-12	3.4	2	0.02	0.2	
May-13	0	0	0.02	0.2	
Oct-13	0	0	0.02	0.2	
Apr-14	0	0.05	0.02	0.2	
Oct-14	0	0	0.02	0.2	
Apr-15	0	0	0.02	0.2	
Oct-15	0	0	0.02	0.2	
Apr-16	0	0.13	0.02	0.2	
Oct-16	0	0	0.02	0.2	
Apr-17	0	0.5	0.02	0.2	
Oct-17	0	0.62	0.02	0.2	
May-18	0	0	0.02	0.2	
Oct-18	0	0	0.02	0.2	
Apr-19	0	0	0.02	0.2	
Oct-19	0	0	0.02	0.2	

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2019)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.167978064
R Square	0.028215958
Adjusted R Square	0.006129957
Standard Error	0.714094297
Observations	46

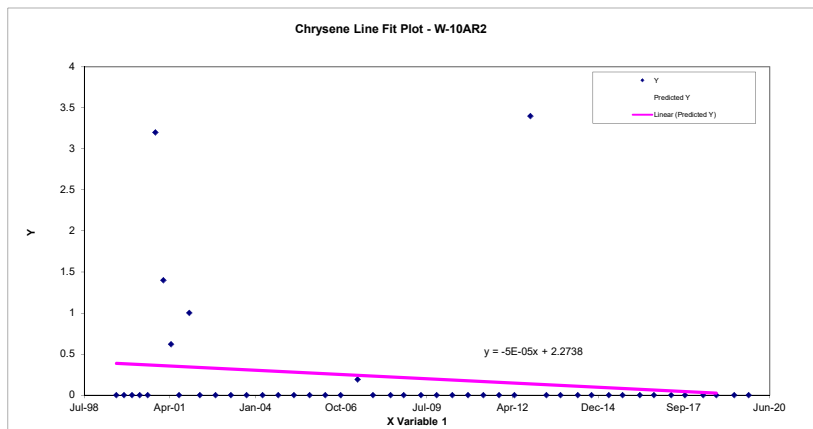
ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.651461637	0.651461637	1.277549445	0.264479031
Residual	44	22.43694923	0.509930664		
Total	45	23.08841087			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2.273836039	1.826092116	1.245192408	0.219651906	-1.406410799	5.954082877	-1.406410799	5.954082877
X Variable 1	-5.18534E-05	4.58763E-05	-1.130287328	0.264479031	-0.000144311	4.06042E-05	-0.000144311	4.06042E-05

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	0.387773388	-0.387773388
2	0.383002878	-0.383002878
3	0.378232368	-0.378232368
4	0.373565565	-0.373565565
5	0.368795055	-0.368795055
6	0.364024545	2.835975455
7	0.359254035	1.040745965
8	0.354639085	0.265360915
9	0.349868575	-0.349868575
10	0.343542463	0.656457537
11	0.337268205	-0.337268205
12	0.327779039	-0.327779039
13	0.318341725	-0.318341725
14	0.308852558	-0.308852558
15	0.299207831	-0.299207831
16	0.289718665	-0.289718665
17	0.280281351	-0.280281351
18	0.270792184	-0.270792184
19	0.261354871	-0.261354871
20	0.251865704	-0.251865704
21	0.241754297	-0.051754297
22	0.23242069	-0.23242069
23	0.221790749	-0.221790749
24	0.213753477	-0.213753477
25	0.203279096	-0.203279096
26	0.193789929	-0.193789929
27	0.184456322	-0.184456322
28	0.174915302	-0.174915302
29	0.165529842	-0.165529842
30	0.156040675	-0.156040675
31	0.146707068	-0.146707068
32	0.137166048	3.262833952
33	0.127365761	-0.127365761
34	0.118965515	-0.118965515
35	0.108491134	-0.108491134
36	0.100142741	-0.100142741
37	0.089564654	-0.089564654
38	0.081216261	-0.081216261
39	0.07093734	-0.07093734
40	0.062393488	-0.062393488
41	0.0518154	-0.0518154
42	0.043467007	-0.043467007
43	0.0325778	-0.0325778
44	0.024644234	-0.024644234
45	0.013806879	-0.013806879
46	0.004991806	-0.004991806



CHRYSENE STATISTICAL ANALYSIS

SUMMARY OUTPUT

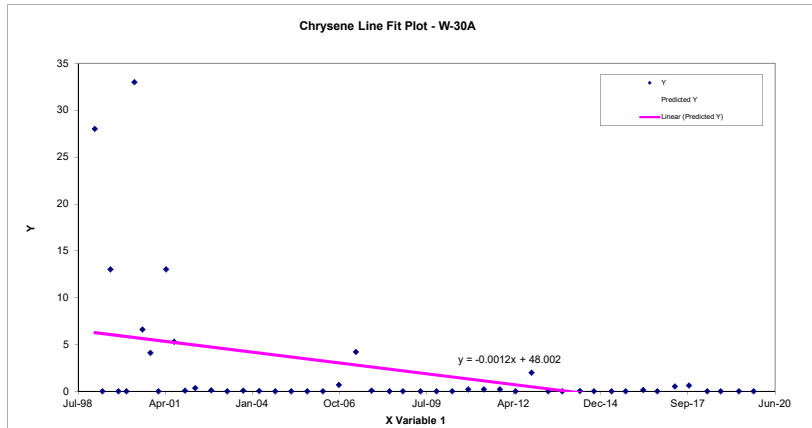
Regression Statistics	
Multiple R	0.414368564
R Square	0.171701307
Adjusted R Square	0.153694813
Standard Error	6.088434283
Observations	48

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	353.4725569	353.4725569	9.535521639	0.003411188
Residual	46	1705.175473	37.06903201		
Total	47	2058.648029			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	48.00235506	14.81190592	3.240817177	0.00221842	18.1877361	77.81697401	18.1877361	77.81697401
X Variable 1	-0.001153189	0.000373447	-3.087963996	0.003411188	-0.001904898	-0.000401481	-0.001904898	-0.000401481

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	6.266121119	21.73387888
2	6.163487254	-6.163487254
3	6.057393821	6.942606179
4	5.951300388	-5.951300388
5	5.845206956	-5.845206956
6	5.741419902	27.2585801
7	5.635326469	0.964673531
8	5.529233036	-1.429233036
9	5.423139603	-5.423139603
10	5.320505739	7.679494261
11	5.214412306	0.085587694
12	5.073723188	-5.014723188
13	4.93418726	-4.57418726
14	4.723153584	-4.603153584
15	4.513273097	-4.513273097
16	4.302239421	-4.235239421
17	4.087746176	-4.046746176
18	3.8767125	-3.8767125
19	3.666832013	-3.666832013
20	3.455798337	-3.455798337
21	3.24591785	-3.24591785
22	3.034884174	-2.354884174
23	2.810012224	1.389967776
24	2.602438116	-2.529438116
25	2.366034271	-2.366034271
26	2.187289901	-2.187289901
27	1.954345624	-1.954345624
28	1.743311948	-1.743311948
29	1.53573784	-1.53573784
30	1.323550974	-1.103550974
31	1.114823677	-0.894823677
32	0.903790001	-0.703790001
33	0.696215893	-0.696215893
34	0.484029027	1.515970973
35	0.266076214	-0.266076214
36	0.079259517	-0.079259517
37	-0.153684759	0.203684759
38	-0.339348267	0.339348267
39	-0.574598922	0.574598922
40	-0.76026243	0.76026243
41	-0.992053517	1.122053517
42	-1.178870214	-1.178870214
43	-1.414120869	1.914120869
44	-1.599784377	2.219784377
45	-1.841954169	1.841954169
46	-2.018392161	2.018392161
47	-2.259408764	2.259408764
48	-2.455450977	2.455450977



NAPHTHALENE STATISTICAL ANALYSIS

	W-10AR2 Naphthalene	W-30A Naphthalene	PAL	ES/MCL	
Feb-99		8500	10	100	
May-99		5300	10	100	Naphthalene data for Feb-99 W-10AR2 and May-99 W-10AR2 not included; Well W-10A was abandoned prior to 3rd quarter 1999 sampling and well W-10AR was installed. Data is not available for W-10A.
Aug-99	4100	2600	10	100	
Nov-99	5300	4800	10	100	
Feb-00	4400	6200	10	100	
May-00	3400	2700	10	100	
Aug-00	3400	1400	10	100	
Nov-00	3000	2000	10	100	
Feb-01	3100	4000	10	100	
May-01	2500	2600	10	100	
Aug-01	0	8000	10	100	
Dec-01	3800	56	10	100	
Apr-02	1000	1600	10	100	
Oct-02	1900	0	10	100	
Apr-03	1200	1300	10	100	
Oct-03	290	240	10	100	
Apr-04	800	7.1	10	100	
Oct-04	1400	130	10	100	
Apr-05	2000	110	10	100	
Oct-05	660	92	10	100	
Apr-06	2000	22	10	100	
Oct-06	2100	610	10	100	
Apr-07	220	2500	10	100	
Oct-07	0	0	10	100	
May-08	70	20	10	100	
Oct-08	240	37	10	100	
Apr-09	200	54	10	100	
Oct-09	660	44	10	100	
Apr-10	200	35	10	100	
Oct-10	33	300	10	100	
Apr-11	60	84	10	100	
Oct-11	890	810	10	100	
Apr-12	210	9.9	10	100	
Oct-12	780	230	10	100	
May-13	11	15	10	100	
Oct-13	69	96	10	100	
Apr-14	4.9	4.2	10	100	
Oct-14	47	11	10	100	
Apr-15	37	1.8	10	100	
Oct-15	49	37	10	100	
Apr-16	7.2	11	10	100	
Oct-16	1.5	12	10	100	
Apr-17	2	14	10	100	
Oct-17	1.7	26	10	100	
May-18	1.5	29	10	100	
Oct-18	1.9	67	10	100	
Apr-19	2.2	22	10	100	
Oct-19	0	91	10	100	

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2019)

SUMMARY OUTPUT

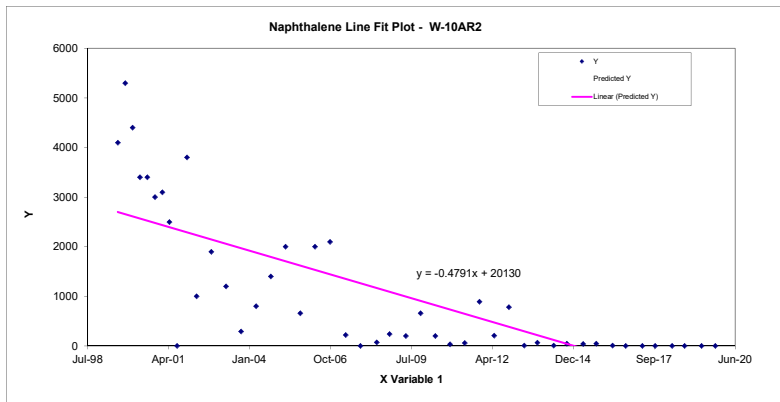
Regression Statistics	
Multiple R	0.762456031
R Square	0.581339199
Adjusted R Square	0.57182418
Standard Error	954.1195196
Observations	46

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	55619303.43	55619303.43	61.09701377	7.41207E-10
Residual	44	40055138.54	910344.0577		
Total	45	95674441.97			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	20129.74927	2439.888038	8.250275815	1.76828E-10	15212.47804	25047.02051	15212.47804	25047.02051
X Variable 1	-0.479121149	0.061296454	-7.816457879	7.41207E-10	-0.602656035	-0.35586264	-0.602656035	-0.35586264

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2702.675706	1397.324294
2	2658.596561	2641.403439
3	2614.517415	1785.482585
4	2571.396512	828.6034884
5	2527.317366	872.6826342
6	2483.23822	516.7617799
7	2439.159074	660.8409257
8	2396.517292	103.482708
9	2352.438146	-2352.438146
10	2293.985366	1506.014634
11	2236.011707	-1236.011707
12	2148.332537	-248.3325367
13	2061.132487	-861.1324875
14	1973.453317	-1683.453317
15	1884.336783	-1084.336783
16	1798.657613	-396.657613
17	1709.457564	290.5424362
18	1621.778393	-961.7783935
19	1534.578344	465.4216557
20	1446.899174	653.100826
21	1353.47055	-1133.47055
22	1267.228743	-1267.228743
23	1169.008907	-1099.008907
24	1094.745129	-854.7451292
25	997.962657	-797.962657
26	910.2834867	-250.2834867
27	824.0416798	-624.0416798
28	735.8833683	-702.8833683
29	649.1624603	-589.1624603
30	561.4832899	328.5167101
31	475.241483	-265.241483
32	387.0831916	392.9168084
33	296.5292943	-285.5292943
34	218.9116681	-149.9116681
35	122.1291959	-117.2291959
36	44.9906909	2.0093091
37	-52.75002357	89.75002357
38	-129.8885286	178.8885286
39	-226.1918796	233.3918796
40	-303.8095058	305.3095058
41	-401.5502203	403.5502203
42	-478.6887254	480.3887254
43	-579.3041667	580.8041667
44	-652.6097026	654.5097026
45	-752.7460228	754.9460228
46	-834.1966182	834.1966182



NAPHTHALENE STATISTICAL ANALYSIS

SUMMARY OUTPUT

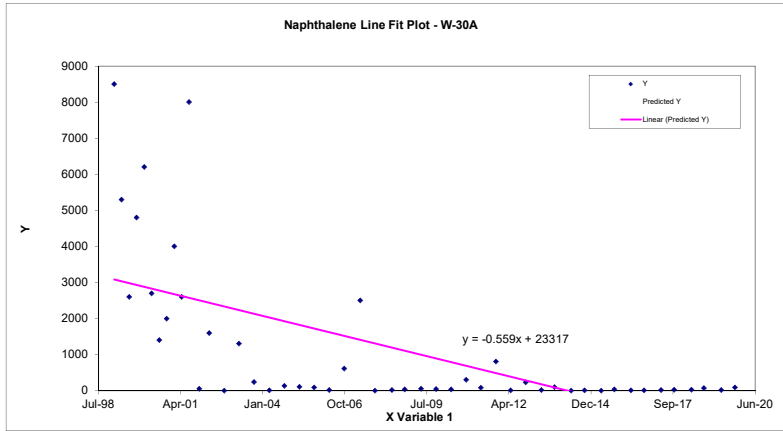
Regression Statistics	
Multiple R	0.624305286
R Square	0.38975709
Adjusted R Square	0.37649094
Standard Error	1681.457859
Observations	48

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	8306577.45	8306577.45	29.37981883	2.11917E-06
Residual	46	130055624.5	2827300.533		
Total	47	213121402			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	23317.26953	4090.612845	5.700189778	8.1309E-07	15083.29293	31551.24612	15083.29293	31551.24612
X Variable 1	-0.559027752	0.10313565	-5.420315381	2.11917E-06	-0.766629049	-0.351426455	-0.766629049	-0.351426455

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	3084.937123	5415.062877
2	3035.183653	2264.816347
3	2983.7531	-383.7531001
4	2932.322547	1867.677453
5	2880.891994	3319.108006
6	2830.579496	-130.6794961
7	2779.148943	-1379.148943
8	2727.71839	-727.7183897
9	2676.287836	1323.712164
10	2626.534367	-26.53436654
11	2575.103813	5424.896187
12	2506.902428	-2450.902428
13	2439.26007	-839.2600696
14	2336.957991	-2336.957991
15	2235.21494	-935.2149401
16	2132.912861	-1892.912861
17	2028.9337	-2021.8337
18	1926.631621	-1796.631621
19	1824.88857	-1714.88857
20	1722.586491	-1630.586491
21	1620.843441	-1598.843441
22	1518.541362	-908.5413619
23	1409.53095	1099.46995
24	1308.905955	-1308.905955
25	1194.305266	-1174.305266
26	1107.655964	-1070.655964
27	994.7323582	-940.7323582
28	892.4302796	-848.4302796
29	791.8052842	-758.8052842
30	688.9441779	-388.9441779
31	587.7601547	-503.7601547
32	485.4580761	324.5419239
33	384.8330807	-374.9330807
34	281.9719743	-51.97197434
35	176.3157292	-161.3157292
36	85.75323396	10.24676664
37	-27.17037256	31.37037256
38	-117.1738406	128.1738406
39	-231.2155021	233.0155021
40	-321.2189702	358.2189702
41	-433.5835483	444.5835483
42	-524.1460442	536.1460442
43	-638.1877056	652.1877056
44	-728.1911737	754.1911737
45	-845.5870016	874.5870016
46	-931.1182477	998.1182477
47	-1047.955048	1069.955048
48	-1142.989766	1233.989766



PENTACHLOROPHENOL STATISTICAL ANALYSIS

W-10AR2 Penta	W-30A Penta	PAL	ES	
Feb-99		0	0.1	1
May-99		6	0.1	1
Aug-99		6	0.1	1
Nov-99		10	0.1	1
Feb-00		3.1	0.1	1
May-00		0	0.1	1
Aug-00		0	0.1	1
Nov-00		1.1	0.1	1
Feb-01		3.7	0.1	1
May-01		0	0.1	1
Dec-01		3.8	0.1	1
Apr-02		0	0.1	1
Oct-02	0.0255	1.7	0.1	1
Apr-03	3.8	0.18	0.1	1
Oct-03	60	0.95	0.1	1
Apr-04	42	0.4	0.1	1
Oct-04	38	0	0.1	1
Apr-05	0.4695	0	0.1	1
Oct-05	8.3	0	0.1	1
Apr-06	0	0.11	0.1	1
Oct-06	0.305	0	0.1	1
Apr-07	16	0.24	0.1	1
Oct-07	0	0	0.1	1
May-08	0	0	0.1	1
Oct-08	0	0	0.1	1
Apr-09	0	0	0.1	1
Oct-09	0	0	0.1	1
Apr-10	0	0	0.1	1
Oct-10	0	0	0.1	1
Apr-11	0	0	0.1	1
Oct-11	0	0	0.1	1
Apr-12	0	0	0.1	1
Oct-12	0	0	0.1	1
May-13	0.81	0	0.1	1
Oct-13	0	0	0.1	1
Apr-14	0.76	0	0.1	1
Oct-14	0.35	0	0.1	1
Apr-15	0	0	0.1	1
Oct-15	0	0.39	0.1	1
Apr-16	0	0	0.1	1
Oct-16	0	0	0.1	1
Apr-17	0	0	0.1	1
Oct-17	0	0	0.1	1
May-18	0	0	0.1	1
Oct-18	0	0	0.1	1
Apr-19	0	0	0.1	1
Oct-19	0	0	0.1	1

Pentachlorophenol data for Feb-99 W-10AR2 and May-99 W-10AR2 not included; Well W-10A was abandoned prior to 3rd quarter 1999 sampling and well W-10AR was installed. Data is not available for W-10A. Pentachlorophenol data for Aug-01 W-10AR2 not available

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2019)

SUMMARY OUTPUT

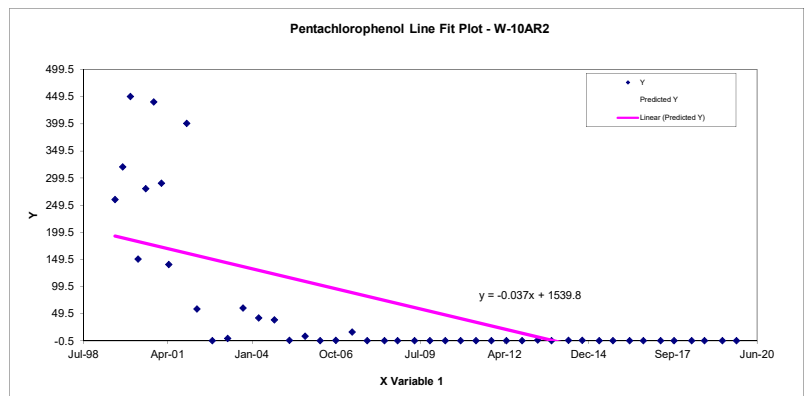
Regression Statistics	
Multiple R	0.657380449
R Square	0.432149055
Adjusted R Square	0.418943219
Standard Error	99.29928732
Observations	45

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	322670.9988	322670.9988	32.72409693	9.31112E-07
Residual	43	423994.9839	9860.348462		
Total	44	746665.9827			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1539.839085	256.1099946	5.965825104	4.09969E-07	1019.310673	2060.367498	1019.310673	2060.367498
X Variable 1	-0.037040146	0.006474986	-5.720497961	9.31112E-07	-0.050098201	-0.023982092	-0.050098201	-0.023982092

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	192.57784	67.42216001
2	189.1701485	130.8298535
3	185.7624531	254.2375469
4	182.4288399	-32.42883987
5	179.0211464	100.9788536
6	175.6134529	264.3865471
7	172.2057595	117.7942405
8	168.8091864	-28.90918643
9	160.9825951	239.0174049
10	156.5007374	-98.50073738
11	149.7223906	-149.6968906
12	142.9810839	-139.1810839
13	136.2027371	-76.20273715
14	129.3132699	-87.31326992
15	122.5349231	-84.53492312
16	115.7936165	-115.3241165
17	109.0152697	-100.7152697
18	102.273963	-102.273963
19	95.49561624	-95.19061624
20	88.27278769	-72.27278769
21	81.60556133	-81.60556133
22	74.01233132	-74.01233132
23	68.27110863	-68.27110863
24	60.7899905	-60.7899905
25	54.01065226	-54.01065226
26	47.3434259	-47.3434259
27	40.52803896	-40.52803896
28	33.82377246	-33.82377246
29	27.04542567	-27.04542567
30	20.37819931	-20.37819931
31	13.56281237	-13.56281237
32	6.56224701	-6.56224701
33	0.561720982	-0.561720982
34	-6.920388594	7.680388594
35	-12.88385217	13.2385217
36	-20.44004203	20.44004203
37	-26.40350561	26.40350561
38	-33.84857504	33.84857504
39	-39.84907876	39.84907876
40	-47.40526862	47.40526862
41	-53.3687322	53.3687322
42	-61.14716294	61.14716294
43	-66.7772652	66.7772652
44	-74.55569595	74.55569595
45	-80.85252084	80.85252084



PENTACHLOROPHENOL STATISTICAL ANALYSIS

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.486981597
R Square	0.237151076
Adjusted R Square	0.220567404
Standard Error	1.754372652
Observations	48

ANOVA

	df	SS	MS	F	Significance F
Regression	1	44.01372146	44.01372146	14.30027514	0.000448028
Residual	46	141.5798765	3.077823401		
Total	47	185.5935979			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	16.89611938	4.269004409	3.958786768	0.000259187	8.305072089	25.48716667	8.305072089	25.48716667
X Variable 1	-0.000406928	0.000107608	-3.781570459	0.000448028	-0.000623532	-0.000190324	-0.000623532	-0.000190324

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2.168576231	-2.168576231
2	2.132359627	3.867640373
3	2.094922238	3.905077762
4	2.057484849	7.942515151
5	2.020047461	1.079952539
6	1.983423928	-1.983423928
7	1.94598654	-1.94598654
8	1.908549151	-0.808549151
9	1.871111762	1.82888238
10	1.834895158	-1.834895158
11	1.79745777	2.00254223
12	1.747812537	-1.747812537
13	1.698574232	0.001425768
14	1.624106383	-1.444106383
15	1.550045462	-0.600045462
16	1.475577613	-1.075577613
17	1.399888979	-1.399888979
18	1.32542113	-1.32542113
19	1.251360209	-1.251360209
20	1.17689236	-1.06689236
21	1.102831439	-1.102831439
22	1.02836359	-0.78836359
23	0.949012603	-0.949012603
24	0.875765538	-0.875765538
25	0.79234527	-0.79234527
26	0.729271409	-0.729271409
27	0.647071925	-0.647071925
28	0.573011004	-0.573011004
29	0.499357011	-0.499357011
30	0.424482234	-0.424482234
31	0.350828241	-0.350828241
32	0.276360392	-0.276360392
33	0.203113327	-0.203113327
34	0.12823855	-0.12823855
35	0.051329132	-0.051329132
36	-0.014593226	0.014593226
37	-0.08679271	0.08679271
38	-0.16230814	0.16230814
39	-0.24532148	0.63532148
40	-0.31083691	0.31083691
41	-0.392629466	0.392629466
42	-0.458551824	0.458551824
43	-0.541565164	0.541565164
44	-0.607080594	0.607080594
45	-0.692535503	0.692535503
46	-0.754795508	0.754795508
47	-0.839843489	0.839843489
48	-0.909021272	0.909021272

