



## Field & Technical Services

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February 23, 2023

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

**RE: 2022 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 2022 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. Coenen, WDNR  
B. Tatsch, Koppers Inc. (electronic copy only)  
J. Patarcity, Beazer East (electronic copy only)  
D. Bessingpass (.pdf transmittal)  
H. Pappert, FTS – site copy

# **2022 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  
Carnegie, Pennsylvania 15106



**February 23, 2023**

# CERTIFICATION


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"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation."

Document:                   **2022 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)

2/27/23

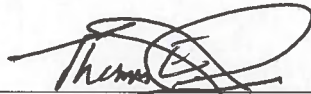
(Date)

# PROFESSIONAL GEOLOGIST CERTIFICATION

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“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: **2022 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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2/13/2023  
Date



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## 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
CCO	Conditional Close-Out
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.
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

**ABBREVIATIONS/ACRONYMS  
(CONTINUED)**

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 2022 Resource Conservation and Recovery Act (RCRA) Annual Groundwater Monitoring Report to summarize the compliance groundwater monitoring data collected in 2022 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 2022, 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 2022 groundwater sampling activities were completed on the following dates:

- First semi-annual event - April 26, 2022 through April 29, 2022; and
- Second semi-annual event - October 3, 2022 through October 6, 2022.

A total of 37 wells comprised the monitoring well network during 2022 (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 2022 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 2022 semi-annual sampling events. During the April 2022, well inspection, flush-mount monitoring well W-29A was inaccessible and unable to be opened to be gauged due to this well

being frozen. Monitoring well W-29A was accessible and in good condition during the October 2022 well inspection. During the October 2022 well inspection, well W-31C had an obstruction at 4.67 feet below the top of casing which prevented it from being gauged; this well will be further evaluated in 2023 with a downhole camera. All of the other monitoring wells were reported to be in good condition with no major repairs required during the April 2022 and October 2022 well inspections.

## **1.5 DOCUMENT ORGANIZATION**

The remainder of the 2022 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 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 2.56 to 7.69 feet below top of casing (ft-btoc) during the April 2022 event (Table 2A), and from 1.37 to 9.78 ft-btoc during the October 2022 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 6.31 to 8.39 ft-btoc

during the April 2022 event (Table 2A), and from 6.68 to 8.60 ft-btoc during the October 2022 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 10.82 to 15.77 ft-btoc in April 2022 (Table 2A), and from 11.00 to 15.96 ft-btoc in October 2022 (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 37.32 to 46.24 ft-btoc during the April 2022 event (Table 2A) and from 39.14 to 47.11 ft-btoc during the October 2022 event (Table 2B).

### **Dense Non-Aqueous Phase Liquid (DNAPL)**

All accessible wells were gauged for the presence of dense non-aqueous phase liquid (DNAPL) on April 26, 2022 and October 3 through 4, 2022. DNAPL was not observed in any monitoring wells at the Site during either the April or the October 2022 monitoring events.

### **Groundwater Flow Directions**

On April 26, 2022 and October 3 through 4, 2022, 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 26, 2022) and Figure 4 (October 3 and 4, 2022). 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 northwards.

C-zone groundwater elevation contours are presented on Figure 3 (April 26, 2022) and Figure 5 (October 3 and 4, 2022). 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 2022 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 2022 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 2022 monitoring events are presented in Table 3. Based on the 2022 water level data, the average vertical gradient between the A- and C-zones was -0.317 ft/ft for the April 2022 monitoring event and -0.212 ft/ft for the October 2022 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 0.0078 ft/ft for the April 2022 monitoring event, and 0.0097 ft/ft for the October 2022 monitoring event. The average horizontal hydraulic gradient for the C-zone was calculated to be 0.0032 ft/ft and 0.0042 ft/ft for the April 2022 and October 2022 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

The average hydraulic conductivity for the A-zone is  $3.28 \times 10^{-3}$  feet per day (ft/day) which was determined from an evaluation of slug test data (Chester Environmental, 1995). The average hydraulic conductivity in the C-zone is 22.6 ft/day which was determined from the slug test evaluation (Chester Environmental, 1995).

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 0.3 value is used to evaluate flow through the pore space in the upper most clay (primary porosity). The 0.01 value is used to evaluate the flow through the microfractures in the upper most clay (secondary porosity). 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:**

$2.5 \times 10^{-3}$  ft/day (April) and  $3.2 \times 10^{-3}$  ft/day (October) ( $n_e = 0.01$ )

$8.5 \times 10^{-5}$  ft/day (April) and  $1.1 \times 10^{-4}$  ft/day (October) ( $n_e = 0.3$ )

**C-zone:**

$3.6 \times 10^{-1}$  ft/day (April) and  $4.8 \times 10^{-1}$  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 2022 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:**

$-2.3 \times 10^{-3}$  ft/day (April) and  $-1.5 \times 10^{-3}$  ft/day (October) ( $n_e = 0.01$ )

$-7.5 \times 10^{-5}$  ft/day (April) and  $-5.0 \times 10^{-5}$  ft/day (October) ( $n_e = 0.3$ )

A hydraulic conductivity value of  $7.1 \times 10^{-5}$  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 2022 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 2022 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) or WDNR Enforcement Standards (ESs) for the April 2022 and October 2022 groundwater sampling events. A map depicting the data for key historical constituents of interest from the first and second semi-annual 2022 sampling events is provided as Figure 6.

Upon receipt, FTS evaluated each laboratory data report. FTS's data evaluation team determined that the 2022 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 2022 semi-annual sampling event were analyzed for an extended list of semi-volatile organic compounds (SVOCs) by Eurofins Laboratories, Inc., using USEPA Method 8270D LL.

As shown in Table 8, during the first semi-annual 2022 sampling event, the sample from monitoring well W-04AR2 contained benzo(a)pyrene (0.51 micrograms per liter [ug/l]), benzo(b)fluoranthene (1.5 ug/l), and chrysene (2.9 ug/l) above their WDNR PALs of 0.02 ug/l and their WDNR ESs of 0.2 ug/l. The sample from monitoring well W-10AR2 contained benzo(b)fluoranthene (0.13 ug/l) and chrysene (0.22 ug/l) above their WDNR PALs; chrysene was also detected above its WDNR ES. The sample from monitoring well W-12CR contained benzo(b)fluoranthene (0.072 J ug/l) and chrysene (0.093 J ug/l) above their WDNR PALs (Table 8).

During the second semi-annual 2022 event, the sample from monitoring well W-04AR2 contained benzo(a)pyrene (0.061 J ug/l), benzo(b)fluoranthene (0.2 ug/l), and chrysene (0.16 J ug/l) above their WDNR PALs of 0.02 ug/l. Monitoring well W-04AR2 also contained bis(2-ethylhexyl)phthalate (15 J+ ug/l) above its WDNR PAL of 0.6 ug/l and its WDNR ES of 6 ug/l. Bis(2-Ethylhexyl)phthalate was also detected above the quantitation limit in the equipment blank, causing the result in sample W-04AR2 to be qualified "J+" (Appendix C). Bis(2-Ethylhexyl)phthalate is not a Site-related constituent of concern. The sample from monitoring well W-10AR2 contained benzo(a)pyrene (0.062 J ug/l), benzo(b)fluoranthene (0.25 ug/l), and chrysene (0.22 ug/l) above their WDNR PALs; benzo(b)fluoranthene and chrysene were also detected above their WDNR

ESs of 0.2 ug/l. The sample from monitoring well W-30C contained pentachlorophenol (0.46 J ug/l) above its WDNR PAL of 0.1 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 2022). Dioxins and/or furans were detected in samples collected from all nine of the monitoring wells sampled (W-04AR2, W-06A, W-06C, W-10AR2, W-12A, W-12CR, W-28C, W-30A, and 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 2022 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-12A and W-30A were the only samples with a 2,3,7,8-TCDD TEQ value 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 Eurofins Laboratories, Inc., using USEPA Method 8260C during each 2022 semi-annual sampling event. As shown on Table 8, benzene was detected in monitoring well W-10AR2 (9.4 ug/l and 19 ug/l) above the WDNR ES of 5 ug/l and WDNR PAL of 0.5 ug/l during the first and second semi-annual 2022 events. Benzene was also detected in monitoring well W-30A (13 ug/l) above the WDNR ES and WDNR PAL during the second semi-annual 2022 event.

As shown on Table 8, naphthalene was detected in monitoring well W-30A (19 ug/l) above the WDNR PAL of 10 ug/l during the second semi-annual 2022 event.

### 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: April and October 2021 and April and October 2022.

### 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, chrysene exceeded its WDNR PAL in all of the past four sampling rounds (three of those four samples also exceeded the WDNR ES for chrysene), naphthalene was detected below its WDNR PAL and WDNR ES in all of the past four sampling rounds, and pentachlorophenol was not detected in any of the last four sampling rounds. At monitoring well W-30A, benzene exceeded its WDNR PAL in three of the last four sampling rounds (two of those four samples also exceeded the WDNR ES for benzene), chrysene exceeded its WDNR PAL in two of the last four sampling rounds (one of those four samples also exceeded the WDNR ES for chrysene), naphthalene exceeded its WDNR PAL in two of the past four sampling rounds (one of those four samples also exceeded the WDNR ES for naphthalene), and pentachlorophenol was 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, naphthalene, and pentachlorophenol, 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, naphthalene, and pentachlorophenol 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

During the April 2022 event, the sample from monitoring well W-12CR contained benzo(b)fluoranthene (0.072 J ug/l) and chrysene (0.093 J ug/l) above their WDNR PALs

of 0.02 ug/l; however, these detections were below the WDNR ES for benzo(b)fluoranthene and chrysene (0.2 ug/l). During the October 2022 event, the sample from monitoring well W-30C contained pentachlorophenol (0.46 J ug/l) above its WDNR PAL of 0.1 ug/l; however, this detection was below the WDNR ES for pentachlorophenol (1 ug/l). No other 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. During the October 2021 event, pentachlorophenol (0.84 ug/l) was detected above its WDNR PAL of 0.1 ug/l in monitoring well W-18D; however, this detection was below the WDNR ES for pentachlorophenol (1 ug/l). No other 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 2023.

## 5.0 REFERENCES

ARCADIS, 2014, *Groundwater Natural Attenuation Demonstration Summary Report*, letter to WDNR dated June 12, 2014.

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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**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

W-02C	<b>W-10AR2</b>	W-18D	W-26A	W-32C	W-39A
<b>W-04AR2*</b>	W-11A	W-19A	W-26B	W-33D	W-40A
W-05CR	<b>W-12A</b>	W-19C	<b>W-28C</b>	W-34D	
<b>W-06A</b>	<b>W-12CR</b>	W-20AR	W-29A	W-35A	
<b>W-06C</b>	W-14A	W-21A	<b>W-30A</b>	W-36A	
W-08A	W-14B	W-21B	<b>W-30C</b>	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 2022 at Beazer's discretion.

**Table 2A**  
**First Semi-Annual 2022 Groundwater Elevations**  
**2022 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 26, 2022		
				Depth to Water (feet)	Groundwater Elevation (feet msl)	Apparent DNAPL Thickness (feet msl)
W-02C	672.37	632.65	627.65	10.82	661.55	NP
W-04AR2	676.15	672.53	662.53	3.59	672.56	NP
W-05CR	674.69	643.53	633.53	12.95	661.74	NP
W-06A	673.65	670.04	660.04	3.35	670.30	NP
W-06C	674.33	633.93	628.93	12.66	661.67	NP
W-08A <sup>(1)</sup>	677.06	670.62	660.62	3.85	673.21	NP
W-09C	673.16	630.41	625.41	11.63	661.53	NP
W-10AR2	677.09	672.77	659.77	3.70	673.39	NP
W-11A	676.40	669.81	659.81	5.05	671.35	NP
W-12A	677.11	673.33	663.33	2.88	674.23	NP
W-12CR	677.39	635.34	630.34	15.77	661.62	NP
W-14A	678.61	673.05	663.05	4.32	674.29	NP
W-14B	677.60	644.97	639.97	6.31	671.29	NP
W-16AR	675.37	668.20	658.20	4.77	670.60	NP
W-18D	674.79	491.23	471.23	46.24	628.55	NP
W-19A	675.39	669.63	659.63	3.90	671.49	NP
W-19C	674.96	635.79	630.79	13.41	661.55	NP
W-20AR	674.72	669.33	659.33	4.93	669.79	NP
W-21A <sup>(1)</sup>	674.59	667.88	657.88	4.15	670.44	NP
W-21B	674.61	641.71	636.71	8.39	666.22	NP
W-25A	678.77	672.68	662.68	5.38	673.39	NP
W-26A	673.67	668.05	658.05	3.06	670.61	NP
W-26B	674.02	644.42	639.42	8.07	665.95	NP
W-28C	676.33	635.74	630.74	14.38	661.95	NP
W-29A	673.21	668.38	658.38	NM	NM	NM
W-30A <sup>(1)</sup>	676.51	672.86	662.86	2.56	673.95	NP
W-30C	676.91	633.50	628.50	15.48	661.43	NP
W-31C	671.76	626.64	621.64	11.70	660.06	NP
W-32C	672.88	618.93	613.93	14.31	658.57	NP
W-33D	673.43	495.58	475.58	44.73	628.70	NP
W-34D	674.28	496.07	476.07	37.32	636.96	NP
W-35A	675.05	669.28	659.28	3.42	671.63	NP
W-36A	678.44	673.00	663.00	3.41	675.03	NP
W-37A	676.47	671.05	661.05	7.69	668.78	NP
W-38A	676.78	671.35	661.35	2.71	674.07	NP
W-39A	678.40	672.64	662.64	5.06	673.34	NP
W-40A	676.79	671.18	661.18	3.72	673.07	NP

**Notes:**

- feet-msl - Feet above mean sea level
- DNAPL - Dense Non-Aqueous Phase Liquid
- NP - DNAPL Not Present
- NM - Not measured; well inaccessible.
- <sup>(1)</sup> - Wells were resurveyed on June 1, 2021.

**Table 2B**  
**Second Semi-Annual 2022 Groundwater Elevations**  
**2022 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 3-4, 2022		
				Depth to Water (feet)	Groundwater Elevation (feet msl)	Apparent DNAPL Thickness (feet msl)
W-02C	672.37	632.65	627.65	11.00	661.37	NP
W-04AR2	676.15	672.53	662.53	3.84	672.31	NP
W-05CR	674.69	643.53	633.53	13.12	661.57	NP
W-06A	673.65	670.04	660.04	8.90	664.75	NP
W-06C	674.33	633.93	628.93	12.86	661.47	NP
W-08A <sup>(1)</sup>	677.06	670.62	660.62	7.54	669.52	NP
W-09C	673.16	630.41	625.41	11.89	661.27	NP
W-10AR2	677.09	672.77	659.77	9.46	667.63	NP
W-11A	676.40	669.81	659.81	4.95	671.45	NP
W-12A	677.11	673.33	663.33	5.89	671.22	NP
W-12CR	677.39	635.34	630.34	15.96	661.43	NP
W-14A	678.61	673.05	663.05	6.74	671.87	NP
W-14B	677.60	644.97	639.97	6.68	670.92	NP
W-16AR	675.37	668.20	658.20	4.43	670.94	NP
W-18D	674.79	491.23	471.23	47.11	627.68	NP
W-19A	675.39	669.63	659.63	7.60	667.79	NP
W-19C	674.96	635.79	630.79	13.62	661.34	NP
W-20AR	674.72	669.33	659.33	7.93	666.79	NP
W-21A <sup>(1)</sup>	674.59	667.88	657.88	9.00	665.59	NP
W-21B	674.61	641.71	636.71	8.60	666.01	NP
W-25A	678.77	672.68	662.68	6.48	672.29	NP
W-26A	673.67	668.05	658.05	9.78	663.89	NP
W-26B	674.02	644.42	639.42	7.38	666.64	NP
W-28C	676.33	635.74	630.74	14.46	661.87	NP
W-29A	673.21	668.38	658.38	1.37	671.84	NP
W-30A <sup>(1)</sup>	676.51	672.86	662.86	6.58	669.93	NP
W-30C	676.91	633.50	628.50	15.69	661.22	NP
W-31C	671.76	626.64	621.64	NM	NM	NM
W-32C	672.88	618.93	613.93	14.52	658.36	NP
W-33D	673.43	495.58	475.58	45.60	627.83	NP
W-34D	674.28	496.07	476.07	39.14	635.14	NP
W-35A	675.05	669.28	659.28	8.33	666.72	NP
W-36A	678.44	673.00	663.00	5.05	673.39	NP
W-37A	676.47	671.05	661.05	2.84	673.63	NP
W-38A	676.78	671.35	661.35	4.38	672.40	NP
W-39A	678.40	672.64	662.64	6.60	671.80	NP
W-40A	676.79	671.18	661.18	5.27	671.52	NP

**Notes:**

feet-msl - Feet above mean sea level

DNAPL - Dense Non-Aqueous Phase Liquid

NP - DNAPL Not Present

<sup>(1)</sup> - Wells were resurveyed on June 1, 2021.

NM - Not measured; obstruction located at 4.67 feet below top of casing.

**Table 3**  
**Summary of 2022 Vertical Gradients**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

April 2022

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				
		Top (feet msl)	Bottom (feet msl)	Top (feet msl)	Bottom (feet msl)	---- (feet msl)	---- (feet msl)		---- (feet msl)	---- (feet msl)				
		t1	b1	t2	b2	$\frac{(t1+b1)}{2}$ (feet msl)	$\frac{(t1+b1)}{2}$ (feet msl)	(t1+b1)/2-(t2+b2)/2	h1	h2	h2-h1	(If yes)	(If no)	
W-06A	W-06C	670.04	660.04	633.98	628.98	665.04	631.48	33.56	670.30	661.67	-8.63	no		-0.257
W-12A	W-12CR	673.33	663.33	635.34	630.34	668.33	632.84	35.49	674.23	661.62	-12.61	no		-0.355
W-19A	W-19C	669.74	659.74	635.79	630.79	664.74	633.29	31.45	671.49	661.55	-9.94	no		-0.316
W-30A	W-30C	672.90	662.90	633.50	628.50	667.90	631.00	36.90	673.95	661.43	-12.52	no		-0.339
<b>AVERAGE VERTICAL GRADIENT<sup>(1)</sup> Between Zones A and C</b>												<b>-0.317</b>		

October 2022

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				
		Top (feet msl)	Bottom (feet msl)	Top (feet msl)	Bottom (feet msl)	---- (feet msl)	---- (feet msl)		---- (feet msl)	---- (feet msl)				
		t1	b1	t2	b2	$\frac{(t1+b1)}{2}$ (feet msl)	$\frac{(t1+b1)}{2}$ (feet msl)	(t1+b1)/2-(t2+b2)/2	h1	h2	h2-h1	(If yes)	(If no)	
W-06A	W-06C	670.04	660.04	633.98	628.98	665.04	631.48	33.56	664.75	661.47	-3.28	yes	-0.106	
W-12A	W-12CR	673.33	663.33	635.34	630.34	668.33	632.84	35.49	671.22	661.43	-9.79	yes	-0.284	
W-19A	W-19C	669.74	659.74	635.79	630.79	664.74	633.29	31.45	667.79	661.34	-6.45	yes	-0.212	
W-30A	W-30C	672.90	662.90	633.50	628.50	667.90	631.00	36.90	669.93	661.22	-8.71	yes	-0.246	
<b>AVERAGE VERTICAL GRADIENT<sup>(1)</sup> Between Zones A and C</b>												<b>-0.212</b>		

**Notes:**

<sup>(1)</sup> 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**  
**2022 Horizontal Groundwater Flow Velocities for the A-Zone**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

Parameters	First Semi-Annual 4/26/2022	Second Semi-Annual 10/3-4/22
<b>Hydraulic Gradient (i1) Vicinity of W-36A to W-04AR2</b>		
Upgradient Elevation (ft, msl), (h1)	675.03	673.39
Downgradient Elevation (ft, msl), (h2)	672.56	672.31
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	713.32	713.32
Horizontal Hydraulic Gradient (i1=(h1-h2)/l)	0.0035	0.0015
<b>Hydraulic Gradient (i2) Vicinity of W-19A to W-20AR</b>		
Upgradient Elevation (ft, msl), (h1)	671.49	--
Downgradient Elevation (ft, msl), (h2)	669.79	--
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	166.81	--
Horizontal Hydraulic Gradient (i2 = (h1-h2)/l)	0.0102	--
<b>Hydraulic Gradient (i2) Vicinity of W-11A to W-06A</b>		
Upgradient Elevation (ft, msl), (h1)	--	671.45
Downgradient Elevation (ft, msl), (h2)	--	664.75
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	--	483.00
Horizontal Hydraulic Gradient (i2 = (h1-h2)/l)	--	0.0139
<b>Hydraulic Gradient (i3) Vicinity of W-08A to W-21A</b>		
Upgradient Well - Elevation (ft, msl), (h1)	673.21	669.52
Downgradient Well - Elevation (ft, msl), (h2)	670.44	665.59
Horizontal Distance Between Up and Downgradient Well (ft), (l)	288.00	288.00
Horizontal Hydraulic Gradient (i3 = (h1-h2)/l)	0.0096	0.0136
Average Hydraulic Gradient $i = (i1 + i2 + i3)/3$	0.0078	0.0097
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
<b>Average Groundwater Velocity</b>		
<b>(V = Ki/n) (feet per day), Where n = 0.01</b>	<b>2.5E-03</b>	<b>3.2E-03</b>
<b>(V = Ki/n) (feet per day), Where n = 0.30</b>	<b>8.5E-05</b>	<b>1.1E-04</b>

**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**  
**2022 Horizontal Groundwater Flow Velocities for the C-Zone**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

Parameters	First Semi-Annual 4/26/2022	Second Semi-Annual 10/3-4/2022
<b>Hydraulic Gradient (i1) Vicinity of W-28C to W-32C</b>		
Upgradient Elevation (ft, msl), (h1)	661.95	661.87
Downgradient Elevation (ft, msl), (h2)	658.57	658.36
Horizontal Distance Between Up and Downgradient Elevations (ft), (l)	1377.00	1377.00
Horizontal Hydraulic Gradient ( $i_1=(h_1-h_2)/l$ )	0.0025	0.0025
<b>Hydraulic Gradient (i2) Vicinity of W-30C to W-32C</b>		
Upgradient Elevation (ft, msl), (h1)	661.43	661.22
Downgradient Elevation (ft, msl), (h2)	658.57	658.36
Horizontal Distance Between Up and Downgradient Elevations (ft), (l)	723.89	487.95
Horizontal Hydraulic Gradient ( $i_2 = (h_1-h_2)/l$ )	0.0040	0.0059
Average Hydraulic Gradient $i = (i_1 + i_2)/2$	0.0032	0.0042
Average Hydraulic Conductivity (K) (foot per day)	22.6	22.6
Effective Porosity (n)	0.20	0.20
<b>Average Groundwater Velocity</b>		
<b>(<math>V = Ki/n</math>) (feet per day), Where <math>n = 0.20</math></b>	<b>3.6E-01</b>	<b>4.8E-01</b>

**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 2022 Vertical Groundwater Flow Velocities**  
**for the A to C Zones**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

Parameters	First Semi-Annual 4/26/2022	Second Semi-Annual 10/3-4/2022
Average Vertical Hydraulic Gradient (i from Table 3)	-0.317	-0.212
Vertical Hydraulic Conductivity (K) (feet/day) <sup>(1)</sup>	7.1E-05	7.1E-05
Effective Porosity (n)	0.01	0.01
Effective Porosity (n)	0.30	0.30
<b>Average Groundwater Flow Velocity<sup>(2)</sup></b>		
V=Ki/n (ft/day) Where n=0.01	-2.3E-03	-1.5E-03
V=K/in (ft/day) Where n=0.3	-7.5E-05	-5.0E-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**  
**2022 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 <sup>(1)</sup>	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 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 <sup>(1)</sup>	Benzoic Acid
2,4-Dinitrophenol	Benzyl Alcohol
2,6-Dinitrotoluene <sup>(1)</sup>	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 <sup>(1)</sup>
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 8290A	
<u>Furans</u>	<u>Dioxins</u>
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 2022 Sampling Events**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

Well	Parameter	Sample Result (ug/L)	Regulatory Standard (ug/L)
<b>First Semi-Annual Sampling Event</b>			
<b>ES Exceedance</b>			
W-04AR2	Benzo(a)pyrene	0.51	0.2
	Benzo(b)fluoranthene	1.5	0.2
	Chrysene	2.9	0.2
W-10AR2	Benzene	9.4	5
	Chrysene	0.22	0.2
<b>PAL Exceedance</b>			
W-04AR2	Benzo(a)pyrene	0.51	0.02
	Benzo(b)fluoranthene	1.5	0.02
	Chrysene	2.9	0.02
W-10AR2	Benzene	9.4	0.5
	Benzo(b)fluoranthene	0.13	0.02
	Chrysene	0.22	0.02
W-12A	2,3,7,8-TCDD TEQ*	3.83E-06	3.00E-06
W-12CR	Benzo(b)fluoranthene	0.072 J	0.02
	Chrysene	0.093 J	0.02
W-30A	2,3,7,8-TCDD TEQ*	2.09E-05	3.00E-06

**Table 8**  
**Summary of Regulatory Exceedances**  
**First and Second Semi-Annual 2022 Sampling Events**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

Well	Parameter	Sample Result (ug/L)	Regulatory Standard (ug/L)
<b>Second Semi-Annual Sampling Event</b>			
<b>ES Exceedance</b>			
W-04AR2	bis(2-Ethylhexyl)phthalate**	15 J+	6
W-10AR2	Benzene	19	5
	Benzo(b)fluoranthene	0.25	0.2
	Chrysene	0.22	0.2
W-30A	Benzene	13	5
<b>PAL Exceedance</b>			
W-04AR2	Benzo(a)pyrene	0.061 J	0.02
	Benzo(b)fluoranthene	0.2	0.02
	bis(2-Ethylhexyl)phthalate**	15 J+	0.6
	Chrysene	0.16 J	0.02
W-10AR2	Benzene	19	0.5
	Benzo(a)pyrene	0.062 J	0.02
	Benzo(b)fluoranthene	0.25	0.02
	Chrysene	0.22	0.02
W-30A	Benzene	13	0.5
	Naphthalene	19	10
W-30C	Pentachlorophenol	0.46 J	0.1

**Notes:**

µg/L - micrograms per liter

J - estimated result

J+ - estimated result biased high

ES - WDNR Enforcement Standards

PAL - WDNR Preventative Action Limits

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.

\*\* bis(2-Ethylhexyl)phthalate was detected above the QL in the equipment blank and the result in sample W-04AR2 was qualified "J+". Bis(2-Ethylhexyl)phthalate is not a Site-related constituent of concern.

**Table 9**  
**Toxicity Equivalent Quotient of Detected Dioxin and Furans**  
**2022 RCRA Annual Groundwater Monitoring Report**  
**Former Koppers Inc. Facility - Superior, Wisconsin**

ANALYTE NAME	UNITS	TEFs	W-04AR2 4/28/2022	W-06A 4/27/2022	W-06C 4/27/2022	W-10AR2 4/28/2022	W-12A 4/27/2022	W-12CR 4/28/2022	W-28C 4/27/2022	W-28C DUP 4/27/2022	W-30A 4/28/2022	W-30C 4/28/2022	Equipment Blank 4/27/2022	Equipment Blank 4/28/2022
<b>8290A</b>														
1,2,3,4,6,7,8-HPCDD	UG/L	0.01	0.000052	0.000078	0.000013 JI	0.000023 J	0.000073 I	0.000042 J	0.000092 J	0.000014 JI	0.00067	0.0000078 J	0.0000017 U	0.000001 U
1,2,3,4,6,7,8-HPCDF	UG/L	0.01	0.000049 U	0.000047 U	0.000047 U	0.00005 U	0.000048 U	0.00005 U	0.00005 U	0.000049 U	0.00022	0.000049 U	0.00000095 J	0.00000047 JI
1,2,3,4,7,8,9-HPCDF	UG/L	0.01	0.000049 U	0.000047 U	0.00000053 U	0.00000056 U	0.000048 U	0.00000042 U	0.00005 U	0.00000058 U	0.000049 U	0.00000044 U	0.00000084 JI	0.00000029 U
1,2,3,4,7,8-HXCDD	UG/L	0.1	0.000049 U	0.000047 U	0.000047 U	0.00005 U	0.000048 U	0.00005 U	0.00005 U	0.000049 U	0.000049 U	0.000049 U	0.0000015 JI	0.00000087 J
1,2,3,4,7,8-HXCDF	UG/L	0.1	0.0000022 J	0.00000064 U	0.00000049 U	0.00000048 U	0.000008 J	0.00000036 U	0.00000026 U	0.00000044 U	0.000028 J	0.00000031 U	0.00000039 U	0.00000025 U
1,2,3,6,7,8-HXCDD	UG/L	0.1	0.000049 U	0.000047 U	0.00000026 U	0.00005 U	0.000048 U	0.00005 U	0.00005 U	0.000049 U	0.000049 U	0.000049 U	0.00000042 J	0.00000017 U
1,2,3,6,7,8-HXCDF	UG/L	0.1	0.0000025 JI	0.00000024 JI	0.00000051 U	0.00000054 U	0.0000061 JI	0.0000024 JI	0.0000003 U	0.00000048 U	0.000044 JI	0.00000034 U	0.00000038 U	0.00000028 U
1,2,3,7,8,9-HXCDD	UG/L	0.1	0.000049 U	0.000047 U	0.00000023 U	0.00005 U	0.000048 U	0.00005 U	0.00005 U	0.000049 U	0.000049 U	0.000049 U	0.0000005 J	0.00000039 JI
1,2,3,7,8,9-HXCDF	UG/L	0.1	0.0000019 J	0.0000008 U	0.00000064 U	0.00000059 U	0.00000089 U	0.00000047 U	0.00000036 U	0.00000067 U	0.0000066 U	0.0000004 U	0.00000047 U	0.00000032 U
1,2,3,7,8-PECDD	UG/L	1	0.0000011 JI	0.00000074 JI	0.00000029 U	0.0000003 U	0.00000098 JI	0.00000078 U	0.00000017 U	0.00000049 J	0.00000068 JI	0.00000019 U	0.00000024 U	0.00000022 U
1,2,3,7,8-PECDF	UG/L	0.03	0.0000009 J	0.00000021 U	0.00000025 U	0.0000003 U	0.00000092 J	0.00000048 U	0.0000002 U	0.00000016 U	0.000002 JI	0.00000024 U	0.00000026 U	0.00000017 U
2,3,4,6,7,8-HXCDF	UG/L	0.1	0.0000019 J	0.00000083 U	0.00000054 U	0.00000055 U	0.000001 U	0.00000039 U	0.00000034 U	0.00000059 U	0.0000063 U	0.00000035 U	0.00000042 U	0.00000029 U
2,3,4,7,8-PECDF	UG/L	0.3	0.00000065 J	0.00000025 U	0.00000026 U	0.0000003 U	0.0000016 JI	0.00000047 U	0.00000021 U	0.00000017 U	0.0000037 J	0.00000023 U	0.00000028 U	0.00000015 U
2,3,7,8-TCDD	UG/L	1	0.00000027 U	0.00000018 U	0.00000044 U	0.00000032 U	0.00000034 U	0.00000035 U	0.0000002 U	0.00000035 U	0.00000045 U	0.00000033 U	0.00000036 U	0.0000002 U
2,3,7,8-TCDF	UG/L	0.1	0.00000023 U	0.00000028 U	0.00000023 U	0.00000021 U	0.00000084 J	0.00000024 U	0.00000027 U	0.0000002 U	0.00000033 U	0.00000025 U	0.00000025 U	0.00000019 U
OCDD	UG/L	0.0003	0.00048	0.00062	0.000094 U	0.00021	0.00038	0.00042	0.0001 U	0.000098 U	0.0092	0.000097 U	0.0000033 JI	0.0000039 J
OCDF	UG/L	0.0003	0.000097 U	0.000094 U	0.000094 U	0.000099 U	0.000096 U	0.000099 U	0.0001 U	0.000098 U	0.00066	0.000097 U	0.0000012 JI	0.00000091 J
TOTAL HPCDD	UG/L	NA	0.00027	0.00029	0.000036 JI	0.000088	0.00015 I	0.00014	0.00004 J	0.000058 JI	0.0015	0.000033 J	0.0000017 U	0.000001 U
TOTAL HPCDF	UG/L	NA	0.000049 U	0.000047 U	0.000047 U	0.00005 U	0.00006	0.00005 U	0.00005 U	0.000049 U	0.00095	0.000049 U	0.0000018 JI	0.00000047 JI
TOTAL HXCDD	UG/L	NA	0.000049 U	0.000047 U	0.000047 U	0.00005 U	0.000048 U	0.00005 U	0.00005 U	0.000049 U	0.0001 IS	0.000049 U	0.0000032 JI	0.00000029 JI
TOTAL HXCDF	UG/L	NA	0.000029 JI	0.000037 JI	0.0000039 JI	0.000014 JI	0.00011 SI	0.000028 JI	0.0000057 JIS	0.000002 JI	0.00087 IS	0.0000013 JI	0.00000047 U	0.00000032 U
TOTAL PECDD	UG/L	NA	0.000049 U	0.000047 U	0.00000029 U	0.0000003 U	0.000048 U	0.00005 U	0.00005 U	0.000049 U	0.000049 U	0.00000019 U	0.00000024 U	0.00000092 JI
TOTAL PECDF	UG/L	NA	0.0000067 JI	0.000012 JI	0.0000016 JI	0.0000077 JI	0.000063 I	0.0000055 JI	0.00000061 JI	0.00000061 JI	0.00031 I	0.0000005 JI	0.00000028 U	0.00000017 U
TOTAL TCDD	UG/L	NA	0.00000027 U	0.00000018 U	0.00000044 U	0.00000051 JI	0.0000014 JI	0.00000035 U	0.0000002 U	0.00000035 U	0.00000045 U	0.00000033 U	0.00000036 U	0.0000002 U
TOTAL TCDF	UG/L	NA	0.0000023 JI	0.0000094 U	0.0000094 U	0.0000083 JI	0.000069 I	0.0000029 JI	0.00001 U	0.0000002 U	0.000076 I	0.0000015 J	0.0000022 J	0.00000019 U
2,3,7,8-TCDD TEQ - ND = 0	UG/L	NA	2.84E-06	1.95E-06	1.30E-07	2.93E-07	3.83E-06	7.86E-07	9.20E-08	6.30E-07	2.09E-05	7.80E-08	2.61E-07	1.32E-07




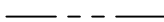






**Notes:**

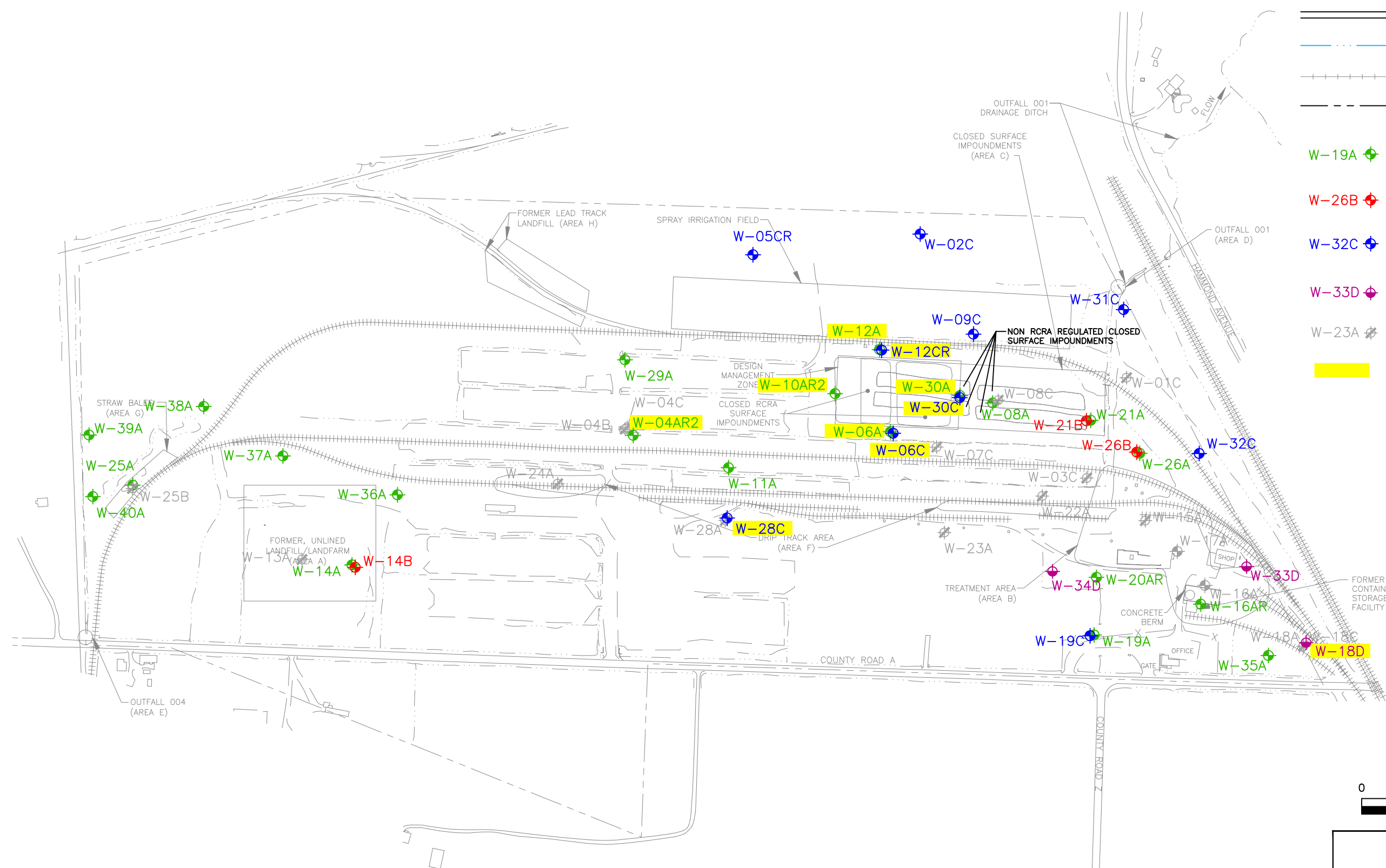
- U** Indicates compound was not detected
- J** Indicates an estimated value
- I** Indicates value is estimated maximum possible concentration
- S** Indicates ion suppression
- TEQ** = Toxicity Equivalent Quotient
- TEQs were calculated using zero for nondetected values
- TEF** = Toxicity Equivalent 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											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DRWN: KLC</td> <td>DATE: 04/27/22</td> </tr> <tr> <td>CHKD: AMG</td> <td>DATE: 04/27/22</td> </tr> <tr> <td>APPD: JSZ</td> <td>DATE: 05/16/22</td> </tr> <tr> <td>SCALE: AS SHOWN</td> <td></td> </tr> <tr> <td>ISSUE DATE:</td> <td></td> </tr> </table>	DRWN: KLC	DATE: 04/27/22	CHKD: AMG	DATE: 04/27/22	APPD: JSZ	DATE: 05/16/22	SCALE: AS SHOWN		ISSUE DATE:		 FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106
DRWN: KLC	DATE: 04/27/22										
CHKD: AMG	DATE: 04/27/22										
APPD: JSZ	DATE: 05/16/22										
SCALE: AS SHOWN											
ISSUE DATE:											
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN											
SITE MAP	PROJECT NO: 0M055622 DRAWING NUMBER FIGURE 1										





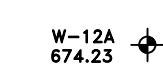
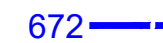
REFERENCE: WISCONSIN STATE PLANE COORDINATE SYSTEM.

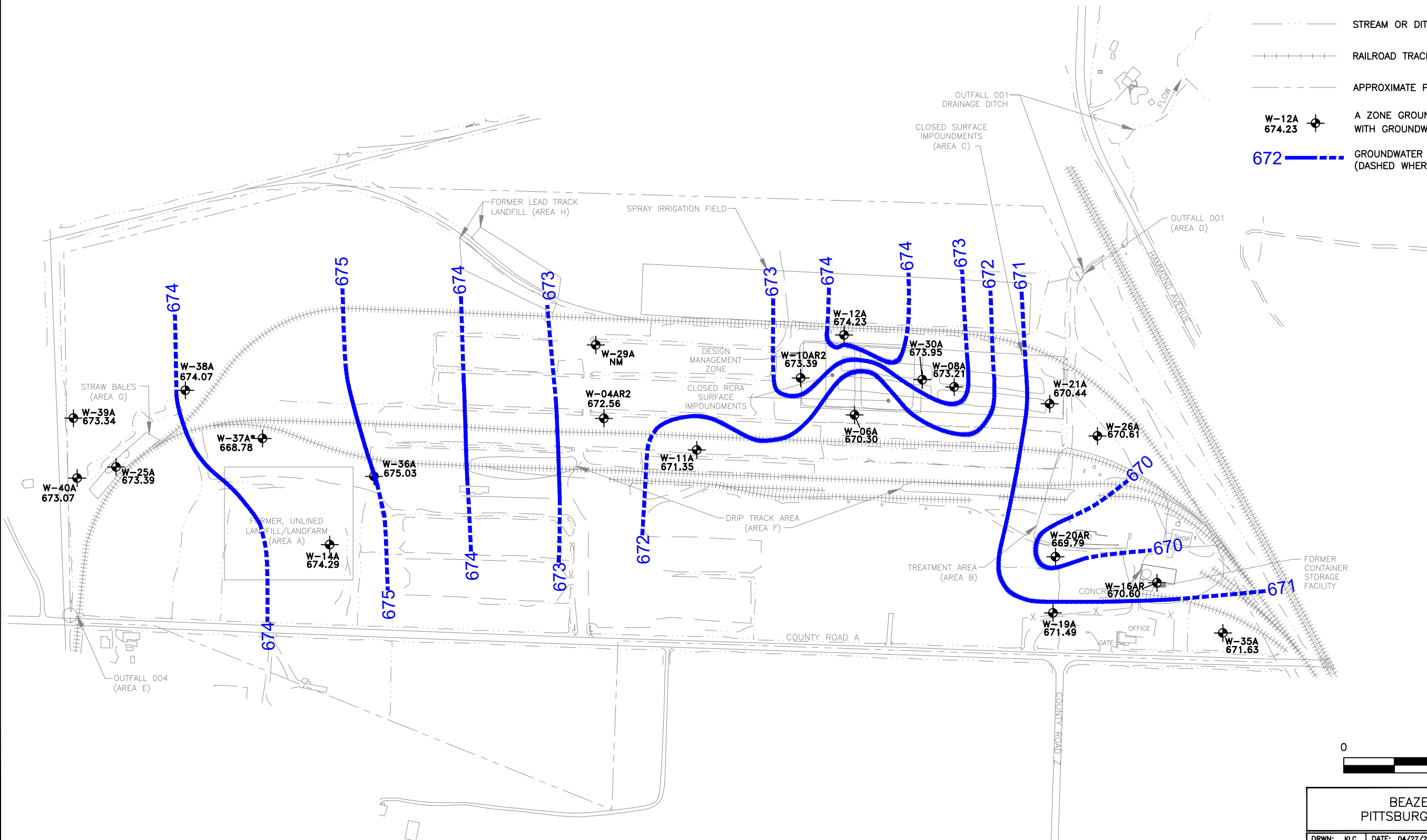
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REV #	DATE	DESCRIPTION	APPD



# LEGEND


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



c:\projects\beazer\_projects\superior\cadd\2022\annual\_report\Figure 2.dwg Last Saved By: Scanner 2/14/2023 9:58 AM Plotted By: Shelly Comer 2/22/2023 11:12 PM Scale: 1:1

REV #	DATE	DESCRIPTION	APPD

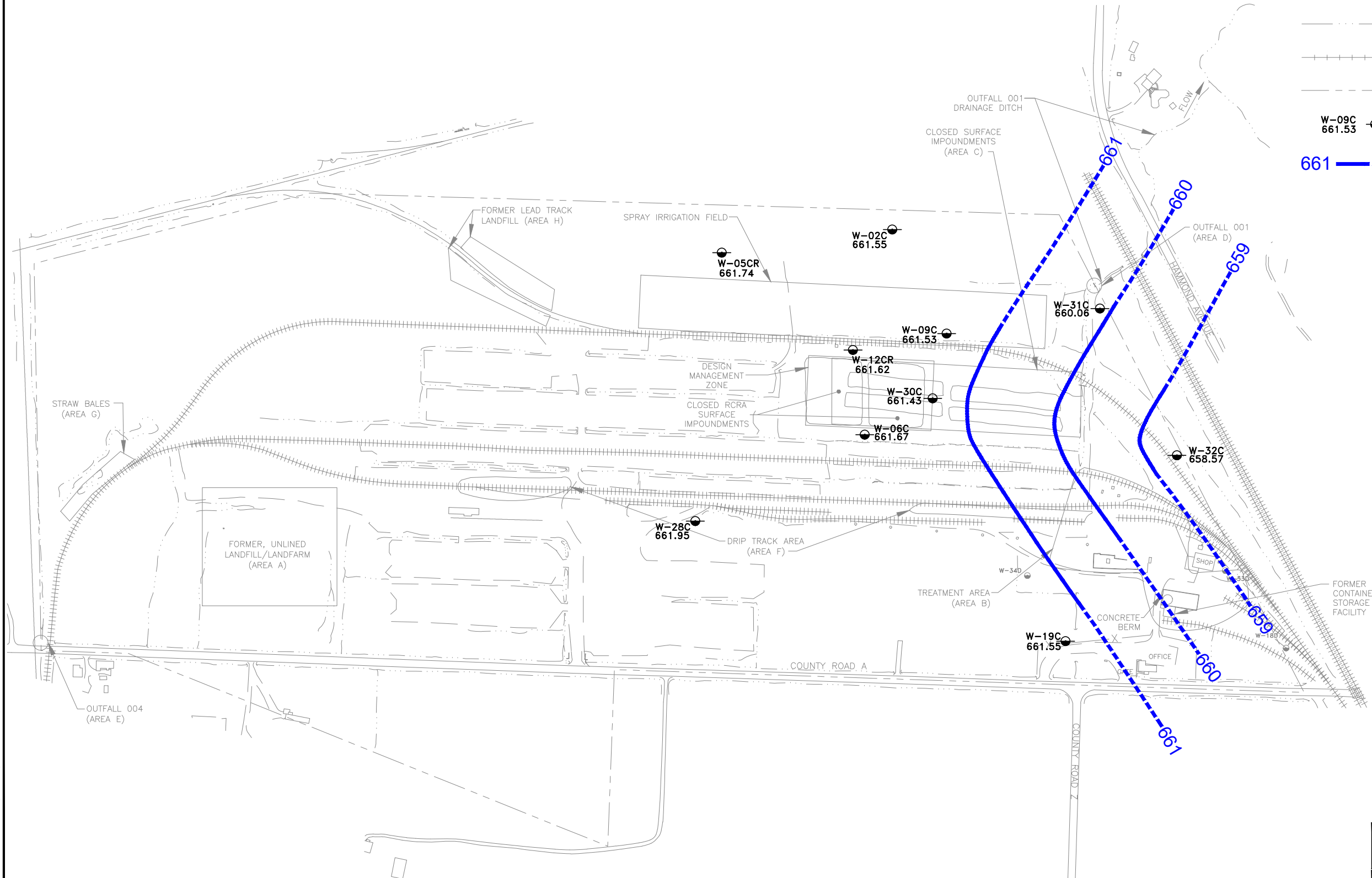
REFERENCE: WISCONSIN STATE PLANE COORDINATE SYSTEM.  
 BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).  
 ALL LOCATIONS ARE APPROXIMATE  
 \* WATER LEVEL MEASURED FOR W-37A WAS ANOMALOUSLY LOW BASED ON A COMPARISON TO HISTORICAL DATA FOR THIS WELL, AND WAS THEREFORE NOT USED FOR CONTOURING.

<b>BEAZER EAST, INC.</b> PITTSBURGH, PENNSYLVANIA			FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106
DRWN: KLC CHKD: RMW APPD: JSZ SCALE: AS SHOWN ISSUE DATE:	DATE: 04/27/22 DATE: 04/27/22 DATE: 05/16/22		PROJECT NO: OM055622 DRAWING NUMBER <b>FIGURE 2</b>
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			GROUNDWATER ELEVATION CONTOURS A-ZONE WELLS (APRIL 26, 2022)
0 300 600 FEET			

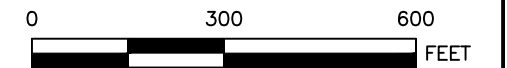


# LEGEND

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



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<b>BEAZER EAST, INC.</b> PITTSBURGH, PENNSYLVANIA	
DRWN: KLC    DATE: 04/27/22 CHKD: RMW    DATE: 04/27/22 APPD: JSZ    DATE: 05/16/22 SCALE: AS SHOWN ISSUE DATE:	 FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN	
GROUNDWATER ELEVATION CONTOURS C-ZONE WELLS (APRIL 26, 2022)	PROJECT NO: 0M055622 DRAWING NUMBER <b>FIGURE 3</b>

REFERENCE: WISCONSIN STATE PLANE 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

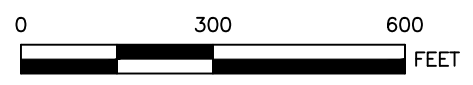


### LEGEND

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



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<b>BEAZER EAST, INC.</b> PITTSBURGH, PENNSYLVANIA			
DRWN: KLC CHKD: RMW APPD: JSZ SCALE: AS SHOWN ISSUE DATE:	DATE: 10/04/22 DATE: 10/04/22 DATE: 10/25/22		FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS A-ZONE WELLS (OCTOBER 3-4, 2022)			PROJECT NO: OM055622 DRAWING NUMBER <b>FIGURE 4</b>

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

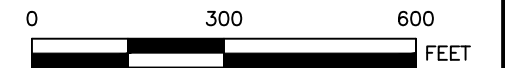
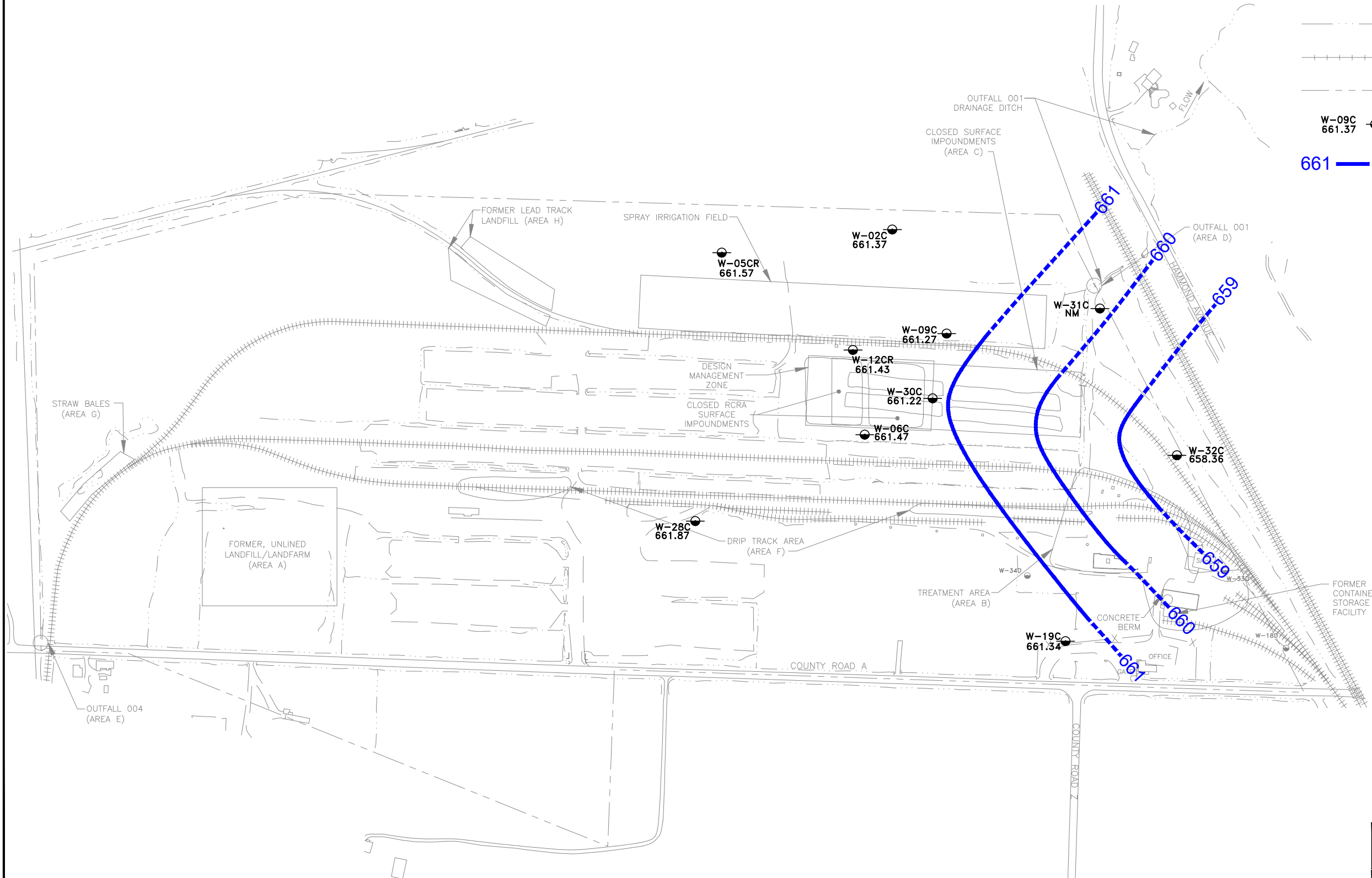
REV #	DATE	DESCRIPTION	APPD





# LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-09C  
661.37 C ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 661 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)
- NM = NOT MEASURED



BEAZER EAST, INC.  
PITTSBURGH, PENNSYLVANIA

DRWN: KLC	DATE: 10/04/22
CHKD: RMW	DATE: 10/04/22
APPD: JSZ	DATE: 10/25/22
SCALE: AS SHOWN	
ISSUE DATE:	



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

FORMER KOPPERS INC. FACILITY  
SUPERIOR, WISCONSIN

GROUNDWATER ELEVATION CONTOURS C-ZONE WELLS (OCTOBER 3-4, 2022)

PROJECT NO: 0M055622  
DRAWING NUMBER  
FIGURE 5

REFERENCE: WISCONSIN STATE PLANE 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

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W-12A		
Constituent	Apr-22	Oct-22
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.063 U	0.058 U
BENZO(B)FLUORANTHENE	0.052 U	0.11 U
CHRYSENE	0.044 U	0.088 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	3.83E-06	NA

W-12CR		
Constituent	Apr-22	Oct-22
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.076 U	0.058 U
BENZO(B)FLUORANTHENE	0.072 J	0.11 U
CHRYSENE	0.093 J	0.088 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	7.86E-07	NA

W-30A		
Constituent	Apr-22	Oct-22
BENZENE	0.82 U	13
BENZO(A)PYRENE	0.068 U	0.058 U
BENZO(B)FLUORANTHENE	0.056 U	0.11 U
CHRYSENE	0.047 U	0.088 U
NAPHTHALENE	1 J	19
2,3,7,8-TCDD TEQ (ND=0)	2.09E-05	NA

W-10AR2		
Constituent	Apr-22	Oct-22
BENZENE	9.4	19
BENZO(A)PYRENE	0.066 U	0.062 J
BENZO(B)FLUORANTHENE	0.13	0.25
CHRYSENE	0.22	0.22
NAPHTHALENE	1.5	3.6
2,3,7,8-TCDD TEQ (ND=0)	2.93E-07	NA

W-30C		
Constituent	Apr-22	Oct-22
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.067 U	0.053 U
BENZO(B)FLUORANTHENE	0.055 U	0.097 U
CHRYSENE	0.046 U	0.081 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	7.80E-08	NA

W-04AR2		
Constituent	Apr-22	Oct-22
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.51	0.061 J
BENZO(B)FLUORANTHENE	1.5	0.2
CHRYSENE	2.9	0.16 J
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	2.84E-06	NA

W-28C				
Constituent	Apr-22	Apr-22 Dup	Oct-22	Oct-22 Dup
BENZENE	0.41 U	0.41 U	0.41 U	0.41 U
BENZO(A)PYRENE	0.066 U	0.068 U	0.058 U	0.055 U
BENZO(B)FLUORANTHENE	0.054 U	0.055 U	0.11 U	0.1 U
CHRYSENE	0.046 U	0.047 U	0.088 U	0.084 U
NAPHTHALENE	0.43 U	0.43 U	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	9.20E-08	6.30E-07	NA	NA

W-06A		
Constituent	Apr-22	Oct-22
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.063 U	0.058 U
BENZO(B)FLUORANTHENE	0.052 U	0.11 U
CHRYSENE	0.044 U	0.088 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	1.95E-06	NA

W-06C		
Constituent	Apr-22	Oct-22
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.062 U	0.055 U
BENZO(B)FLUORANTHENE	0.051 U	0.1 U
CHRYSENE	0.043 U	0.084 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	1.30E-07	NA

W-18D		
Constituent	Apr-22	Oct-22
BENZENE	NA	NA
BENZO(A)PYRENE	0.066 U	0.053 U
BENZO(B)FLUORANTHENE	0.054 U	0.097 U
CHRYSENE	0.046 U	0.081 U
NAPHTHALENE	0.21 U	0.059 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

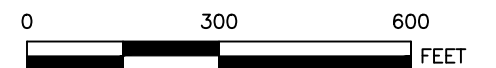
Constituent	WDNR PAL	WDNR ES
BENZENE	0.5	5
BENZO(A)PYRENE	0.02	0.2
BENZO(B)FLUORANTHENE	0.02	0.2
CHRYSENE	0.02	0.2
NAPHTHALENE	10	100
2,3,7,8-TCDD TEQ (ND=0)	0.000003	0.00003

- EXCEEDS WDNR PAL
- EXCEEDS WDNR ES

- 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



BEAZER EAST, INC.  
PITTSBURGH, PENNSYLVANIA

DRWN: KLC	DATE: 12/15/22
CHKD: TSA	DATE: 12/15/22
APPD: AMG	DATE: 01/05/23
SCALE: AS SHOWN	
ISSUE DATE:	



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

FORMER KOPPERS INC. FACILITY  
SUPERIOR, WISCONSIN

APRIL AND OCTOBER 2022  
CONSTITUENTS OF INTEREST

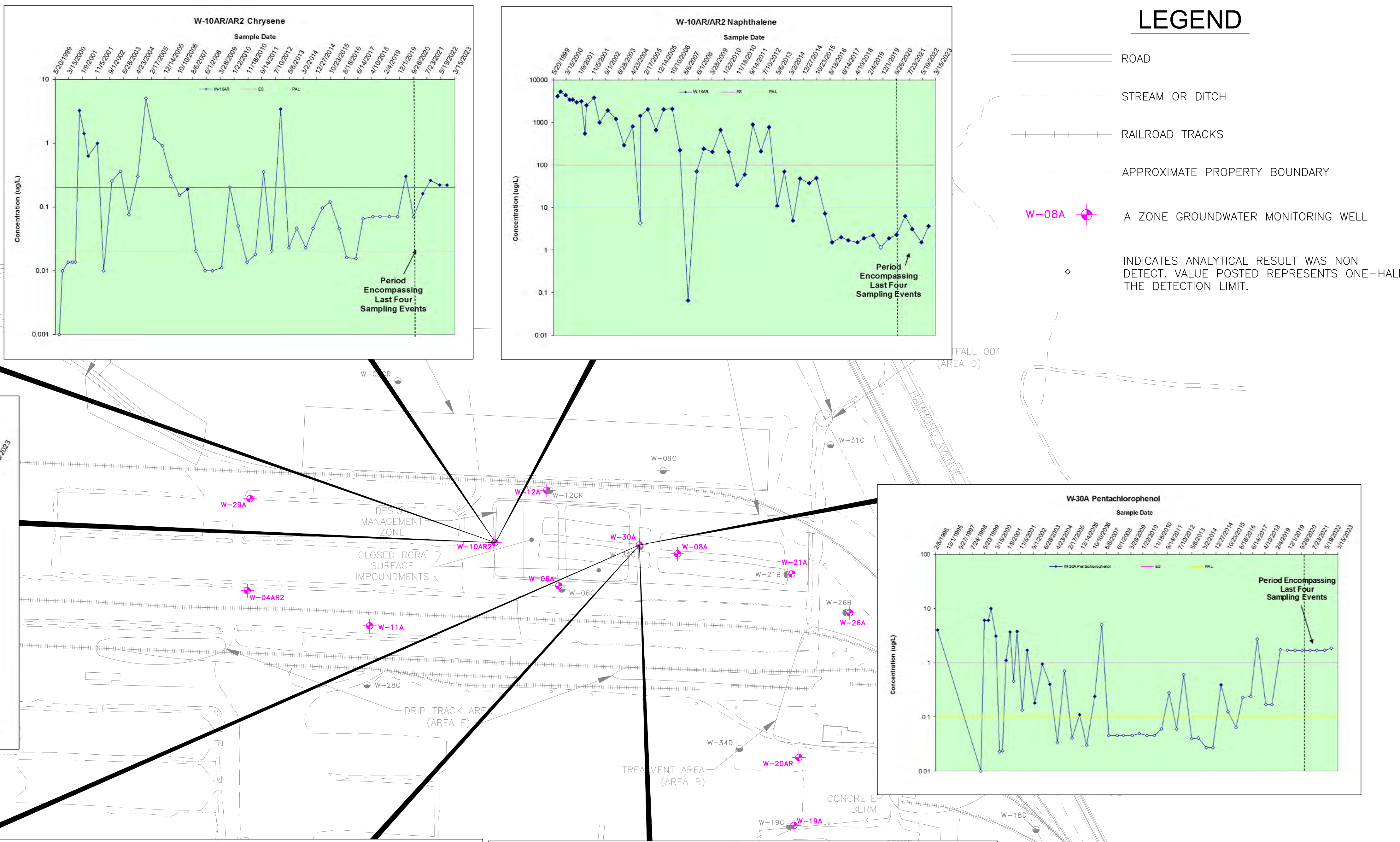
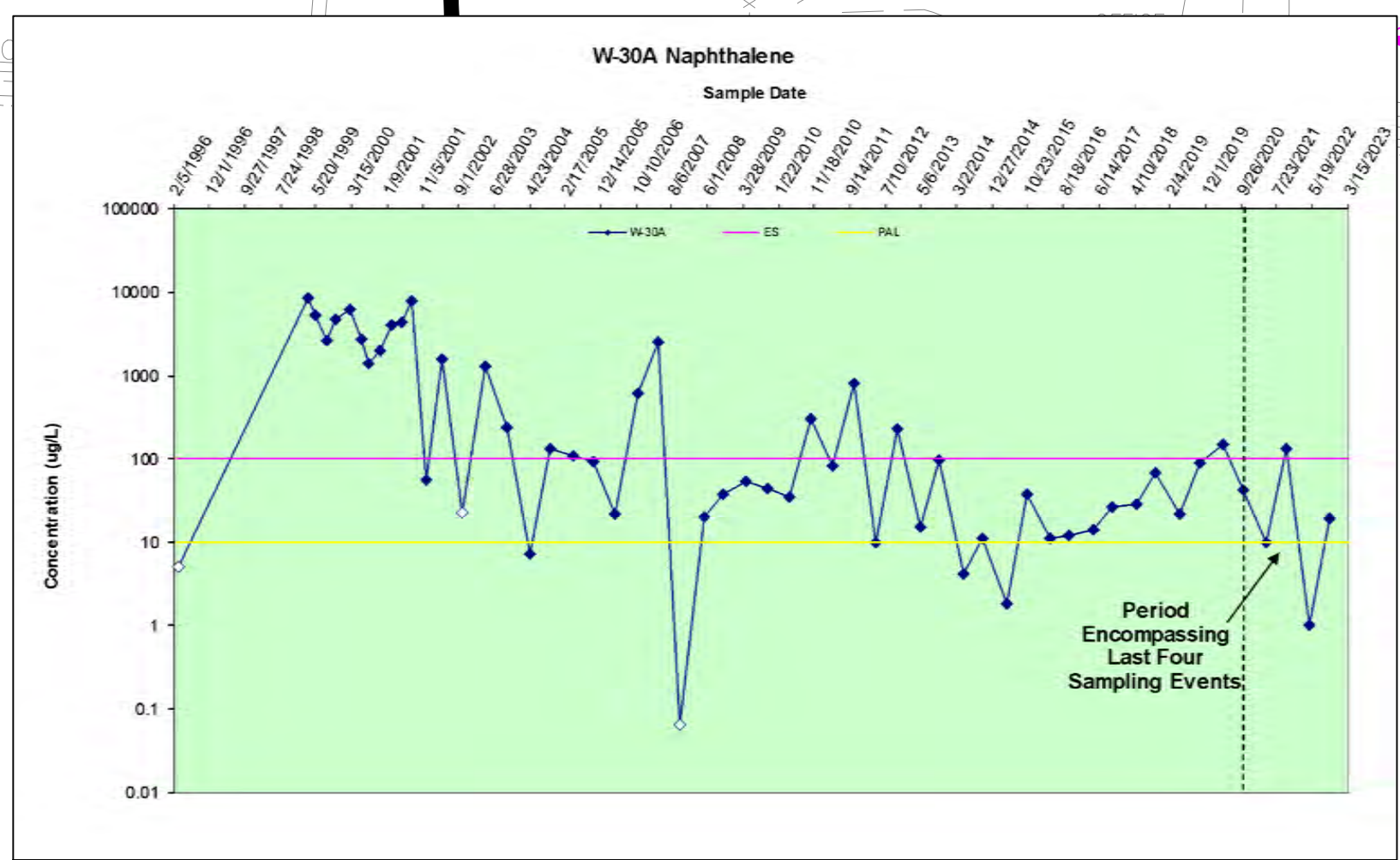
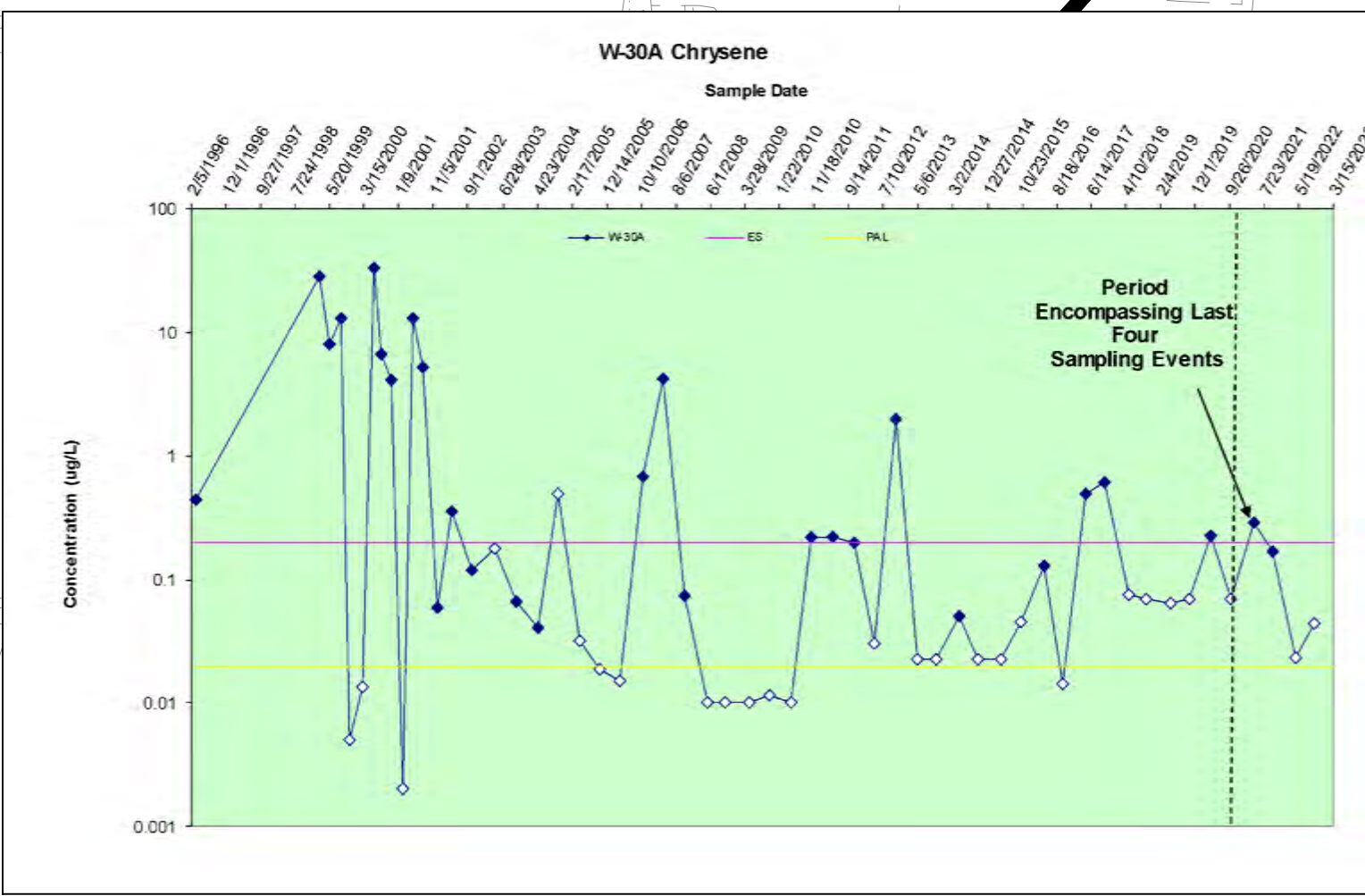
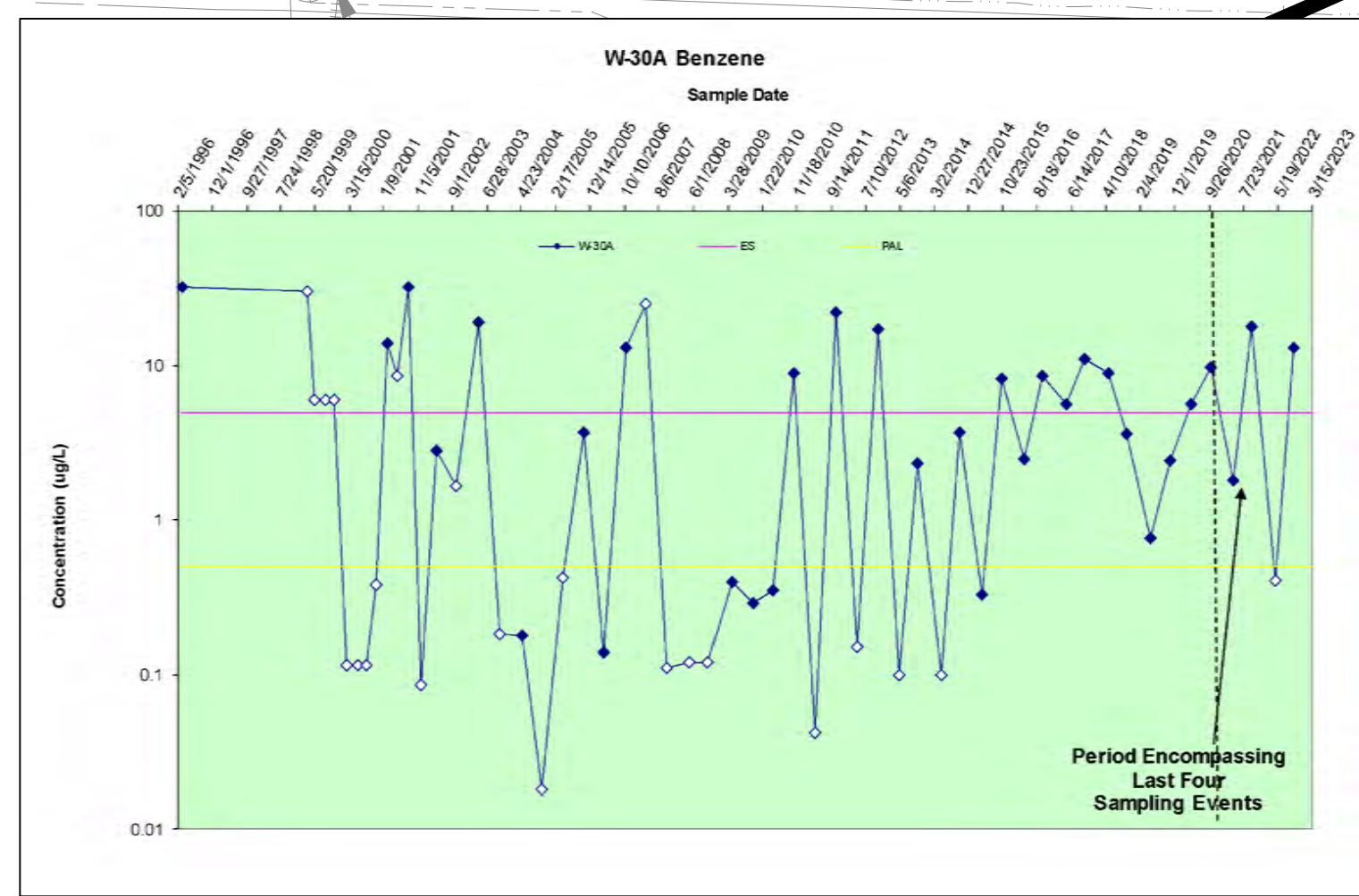
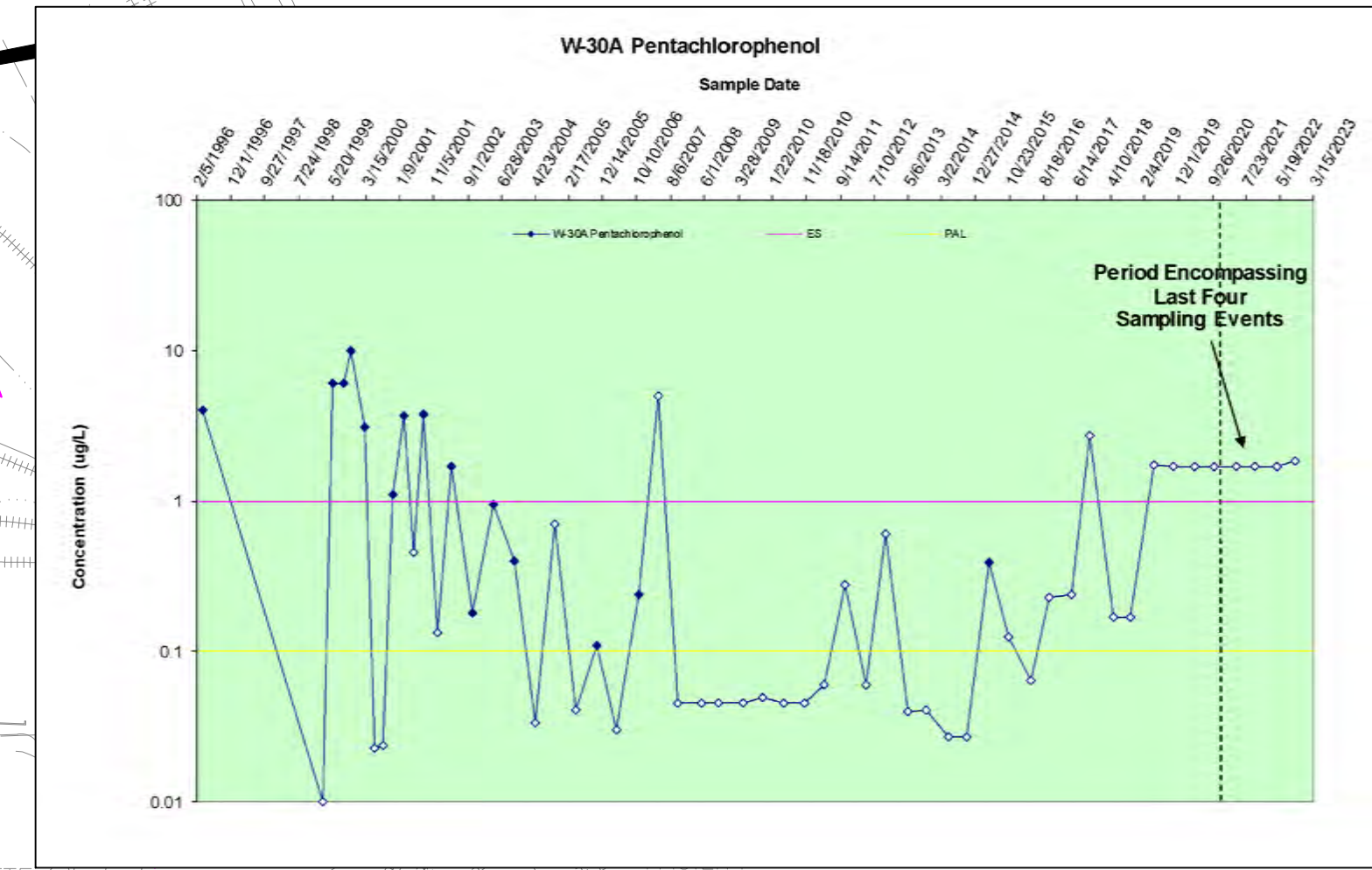
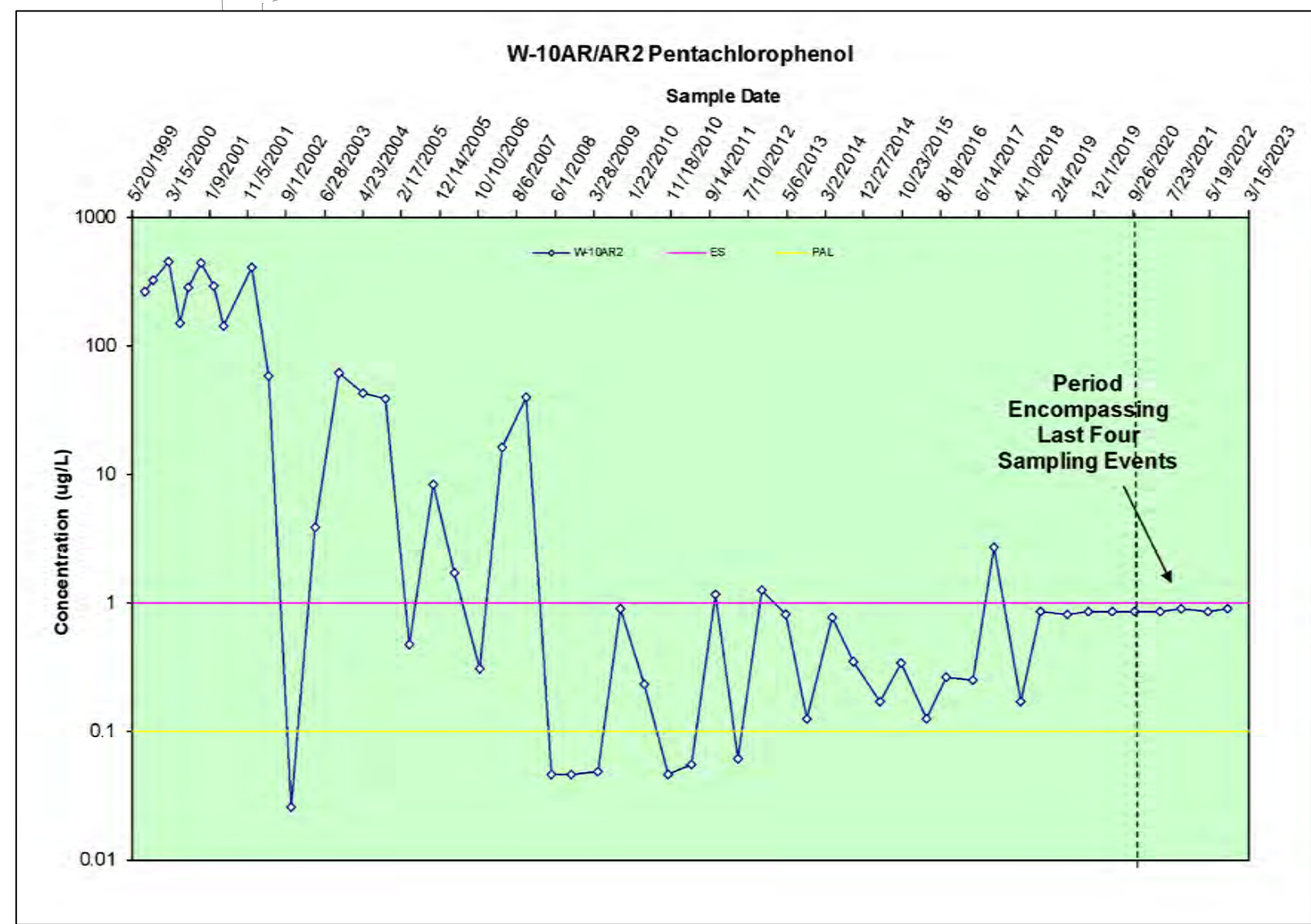
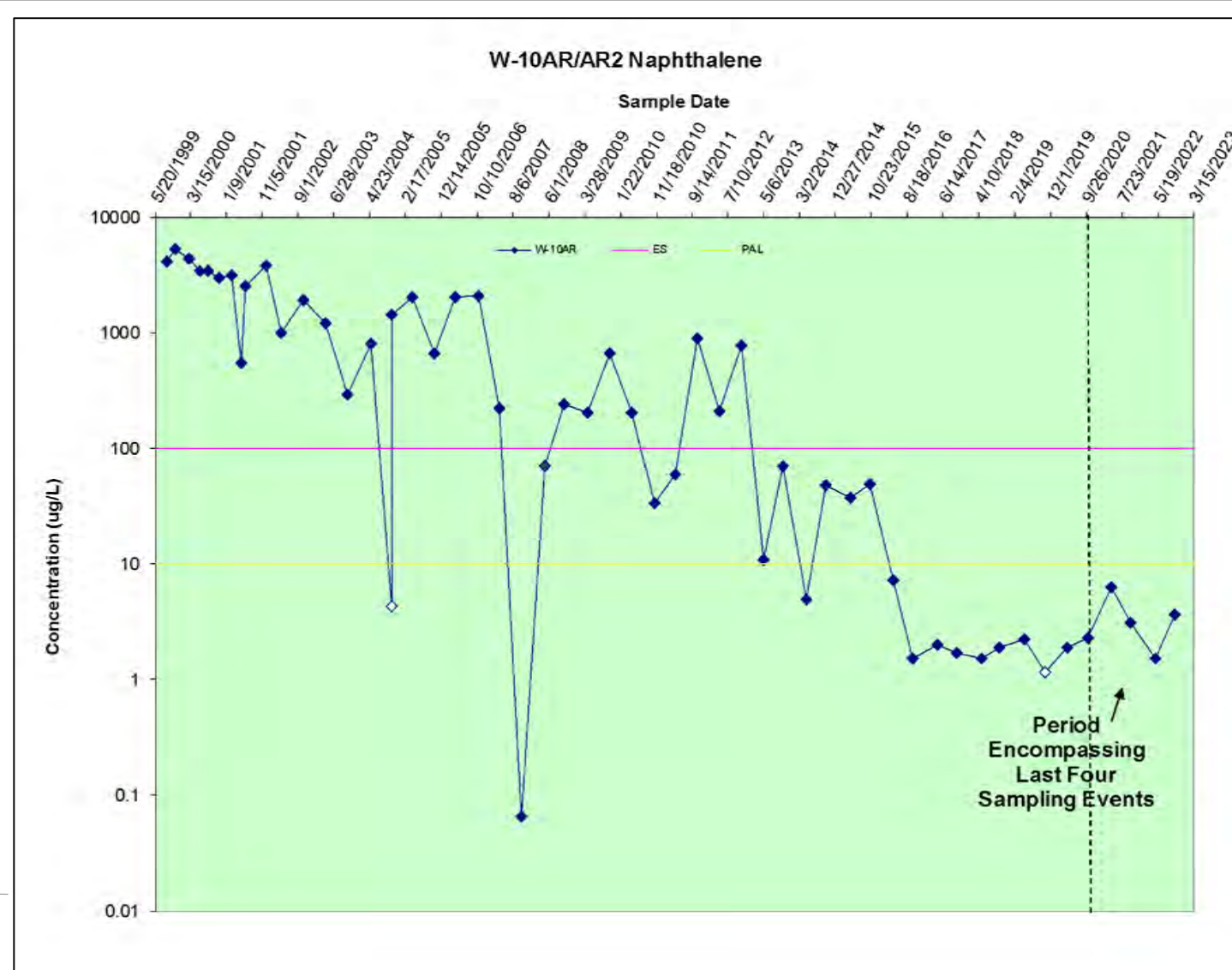
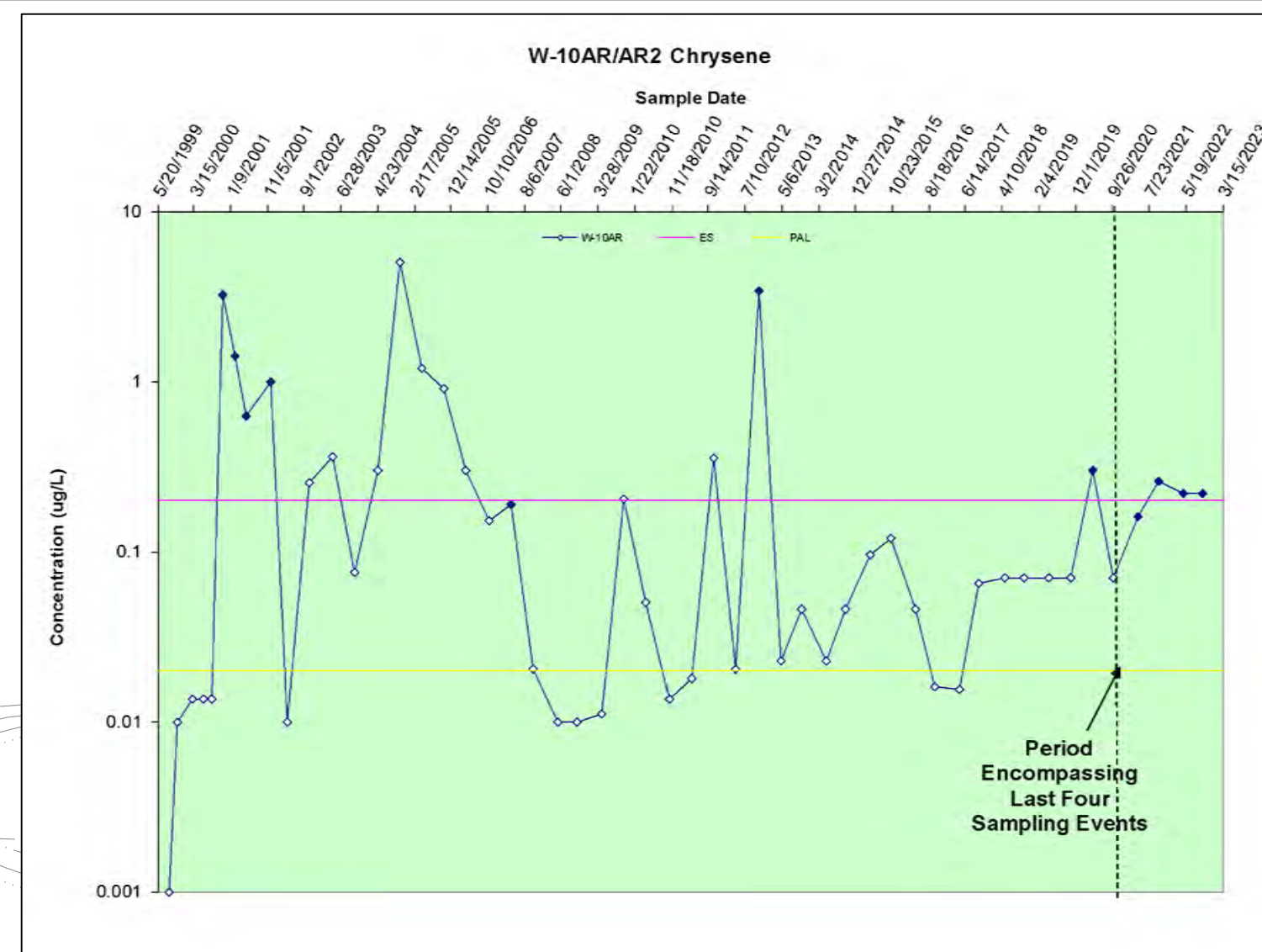
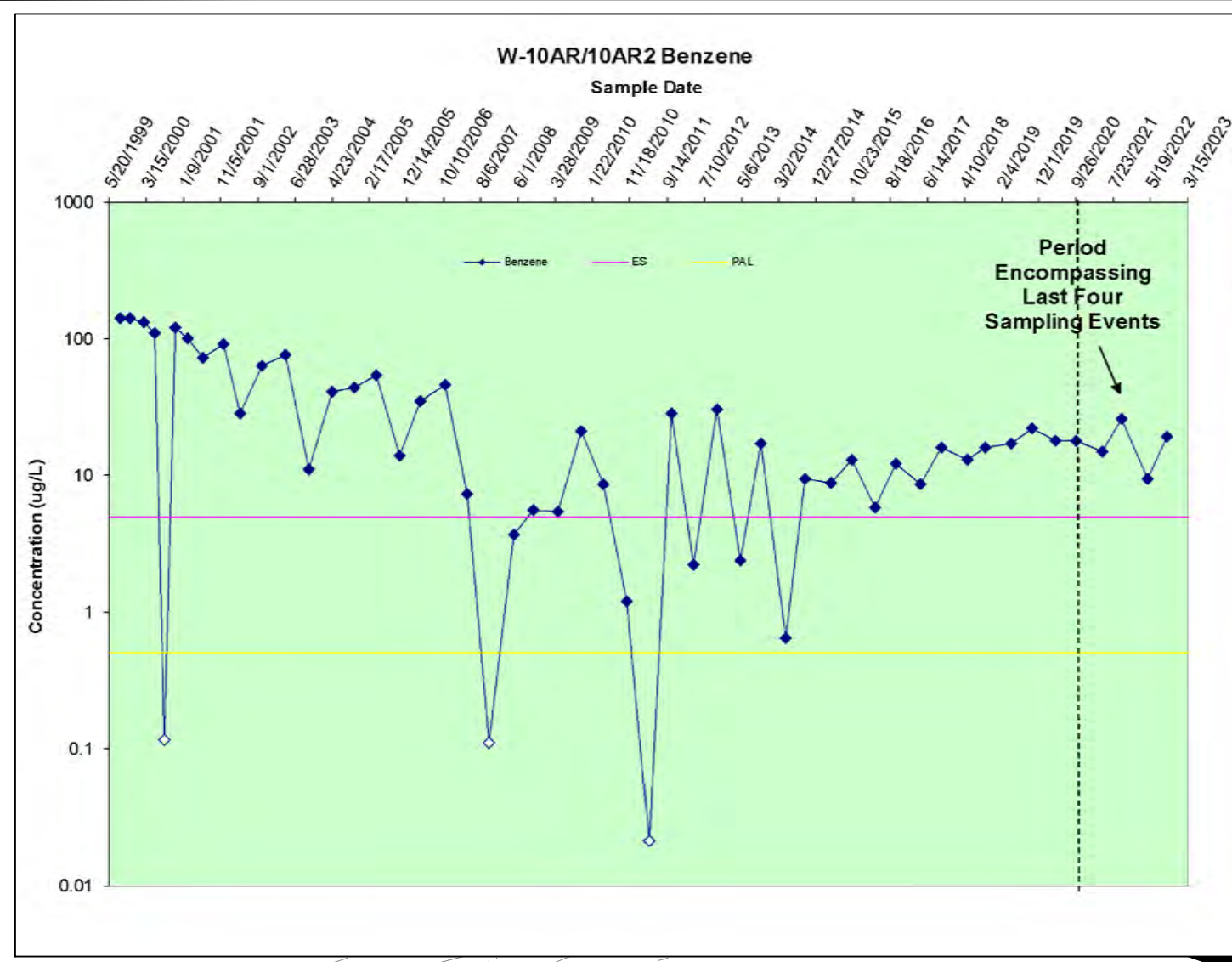
PROJECT NO: 0M055622  
DRAWING NUMBER  
FIGURE 6

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REV #	DATE	DESCRIPTION	APPD

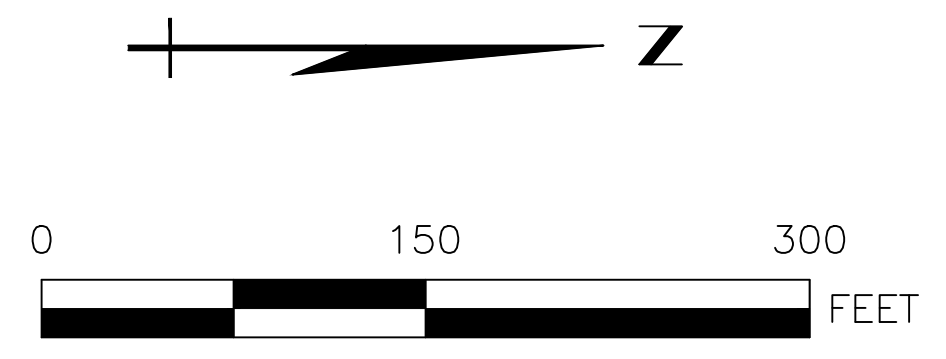
REFERENCE: WISCONSIN STATE PLANE COORDINATE SYSTEM.

c:\projects\beazer\_projects\superior\2022\annual\_report\figure\_7.dwg Last Saved By: Scomer 12/15/2022 9:37 AM Plotted By: Shelly Corner 2/14/2023 9:56 AM Scale: 1:1



### LEGEND

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



**BEAZER EAST, INC.**  
PITTSBURGH, PENNSYLVANIA

DRWN: KLC	DATE: 12/15/22		FIELD & TECHNICAL SERVICES, LLC
CHKD: TSA	DATE: 12/15/22		200 THIRD AVENUE
APPD: AMG	DATE: 01/05/23		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		

FORMER KOPPERS INC. FACILITY  
SUPERIOR, WISCONSIN

A-ZONE PARAMETER CONCENTRATION TRENDS OF BENZENE, CHRYSENE, NAPHTHALENE, PENTACHLOROPHENOL	PROJECT NO: OM055622 DRAWING NUMBER <b>FIGURE 7</b>
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REFERENCE: WISCONSIN STATE PLANE 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

**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.
- In an email from WDNR dated May 5, 2021, Beazer received a Conditional Close-Out (CCO) Letter that requested, among other items, that Beazer submit a Long-Term Care License Renewal Application. Via email dated July 9, 2021, WDNR extended the recommended deadline for a response to the CCO by 90 days (i.e. November 1, 2021). On November 1, 2021, Beazer responded to the items discussed in the CCO. Also included in the November 1, 2021 Response to CCO is a Wisconsin Long-Term Care License Renewal Application. On May 10, 2022, Beazer received a Notice of Incompleteness Letter for the Long-Term Care License Renewal Application from WDNR. Via email dated June 28, 2022, WDNR extended the recommended deadline for a response to the Notice of Incompleteness Letter by 90 days (i.e. October 10, 2022). On October 10, 2022, Beazer submitted a response to the WDNR regarding the May 10, 2022 Notice of Incompleteness letter and also submitted the revised Long-Term Care License Renewal Application.

## **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 (HSWA).
- 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. A summary of the completed well

abandonment, repair, and replacement activities was submitted to WDNR on March 18, 2005.

- 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.
- Since 2018, Beazer and USEPA have been working in conjunction with WDNR to develop a Focused Feasibility Study for the off-property portion of the Site, as part of a Great Lakes Legacy Act project. As part of those efforts, supplemental data gap investigations were completed along Crawford Creek and the Outfall 001 drainage ditch between May and September 2020. The investigation results were reported to WDNR on April 23, 2021. A draft Great Lakes Legacy Act Focused Feasibility Study was submitted to WDNR on September 30, 2022.

### **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.
- Supplemental data gap investigations (soil borings, soil sampling, temporary well installations, groundwater sampling, slug testing, surface water sampling, sediment coring, and sediment sampling) were completed along Crawford Creek and the Outfall 001 drainage ditch between May and September 2020, in accordance with a work plan and QAPP dated September 17, 2019, and subsequent addendum dated July 22, 2020. The investigation results were reported to WDNR on April 23, 2021. These investigations were a component of the Focused Feasibility Study being prepared by Beazer and USEPA as part of the Great Lakes Legacy Act project.

**APPENDIX B**  
**Field Data and Notes**





# LOW-FLOW GROUNDWATER WELL No.: W-04AR2

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-04AR2</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/28/2022 1131</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Brenden Arbaugh</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny, 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.71</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>14.05</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.34</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.7</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Centrifugal Pump</u>	Purge Start: <u>04/28/2022 1142</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/28/2022 1207</u>
Total Volume Removed (gals): <u>0.66</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Hanna H198703 Turbidity Meter 08604023	Yes	Geotech Bladder pump 161	No
Heron Water Level 200' 122003011FR	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
Initial	1142	100	Constant 7.40	+- 0.10 7.95	+- 3.000 % 0.781	+- 10 65.8	+- 10 % 15.30	+- 10 % 4.66	3.80	

### 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	1147	100	6.60	7.65	0.764	75.8	1.95	4.02	3.82	
2	1152	100	6.20	7.49	0.722	81.8	2.54	3.99	3.85	
3	1157	100	6.00	7.42	0.686	85.3	2.60	3.87	3.87	
4	1202	100	5.90	7.39	0.683	87.8	2.58	3.75	3.89	
5	1207	100	5.90	7.37	0.680	89.2	2.55	3.68	3.91	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample : SUPE-W-04AR2-042822

Sample Start time: 04/28/2022 1211

Sample Finish time: 04/28/2022 1314

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-06A

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-06A</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/27/2022 0744</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Brenden Arbaugh</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny, 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.49</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.15</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>9.66</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.6</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/27/2022 0808</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/27/2022 0833</u>
Total Volume Removed (gals): <u>0.66</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
YSI Pro DSS 20L105357	Yes	Geotech Bladder Pump 161	No
Hanna H198703 Turbidity Meter 08604023	No		
Heron Water Level 200' 122003011FR	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	0808	100	Constant 3.40	+- 0.10 6.00	+- 3.000 % 0.596	+- 10 158.2	+- 10 % 2.05	+- 10 % 3.22	3.51	

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	0813	100	2.90	6.36	0.491	179.1	1.67	2.03	3.58	
2	0818	100	2.90	6.44	0.394	180.0	1.53	1.88	3.65	
3	0823	100	2.90	6.45	0.383	179.9	1.52	1.72	3.71	
4	0828	100	2.80	6.48	0.380	180.3	1.50	1.66	3.76	
5	0833	100	2.80	6.50	0.377	181.0	1.49	1.70	3.80	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06A-042722

Sample Start time: 04/27/2022 0838

Sample Finish time: 04/27/2022 0948

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-06C

## SAMPLE COLLECTION RECORD

\*UNREADABLE\*

<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-06C</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/27/2022 0745</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Trevor Lowe</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>12.65</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>31.35</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.1</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/27/2022 1005</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/27/2022 1040</u>
Total Volume Removed (gals): <u>0.92</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
LaMotte 2020we Turbidity Meter 3005-0813	Yes	QED Bladder Pump 165	No
YSI 15M101116	Yes		
Heron Dipper T2 Water Level Meter 200' 1723-T2	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	1005	100	Constant 4.90	+- 0.10 7.30	+- 3.000 % 0.523	+- 10 109.5	+- 10 % 6.22	+- 10 % 25.30	12.65	

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1010	100	5.00	7.35	0.514	107.9	5.39	21.10	12.66	
2	1015	100	5.00	7.37	0.509	107.4	4.83	14.80	12.66	
3	1020	100	4.90	7.39	0.504	107.4	4.39	10.11	12.66	
4	1025	100	5.00	7.39	0.501	107.2	4.21	11.28	12.66	
5	1031	100	5.10	7.40	0.499	107.0	3.84	8.03	12.66	
6	1035	100	5.30	7.40	0.497	106.6	3.77	7.62	12.66	
7	1040	100	5.40	7.40	0.497	105.9	3.52	7.29	12.66	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling_001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling_001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling_001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06C-042722

Sample Start time: 04/27/2022 1043

Sample Finish time: 04/27/2022 1151

Comments:

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# LOW-FLOW GROUNDWATER WELL No.: W-10AR2

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-10AR2</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/28/2022 1318</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Brenden Arbaugh</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny, 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>4.20</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>17.49</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>13.29</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>2.2</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Centrifugal Pump</u>	Purge Start: <u>04/28/2022 1330</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/28/2022 1355</u>
Total Volume Removed (gals): <u>0.66</u>	

### Field Equipment

Field Equipment	Calibrated
YSI 556 MPS 10K101399	Yes
Heron Water Level 200' 122003011FR	No
Hanna H198703 Turbidity Meter 08604023	Yes

### Sampling Equipment

Sampling Equipment	Dedicated
Geotech Bladder pump 161	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
Initial	1330	100	10.30	7.57	0.776	58.2	6.29	8.12	4.22	

### 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
1	1335	100	6.70	6.93	0.819	33.4	1.19	7.30	4.24	
2	1340	100	6.50	6.84	0.825	8.8	1.11	7.05	4.28	
3	1345	100	6.40	6.80	0.828	0.7	1.01	6.89	4.30	
4	1350	100	6.40	6.79	0.830	-1.8	0.97	6.55	4.30	
5	1355	100	6.30	6.77	0.835	-2.9	0.95	6.40	4.32	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		Bottle Type	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-10AR2-042822  
 Equipment Blank :SUPE-EB-02-042822

Sample Start time: 04/28/2022 1400  
 Sample Finish time: 04/28/2022 1500

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-12A

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-12A</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/27/2022 1215</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Trevor Lowe</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.03</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.38</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.35</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.7</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/27/2022 1246</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/27/2022 1306</u>
Total Volume Removed (gals): <u>0.53</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
YSI 15M101116	Yes	QED Bladder Pump 165	No
LaMotte 2020we Turbidity Meter 3005-0813	Yes		
Heron Dipper T2 Water Level Meter 200' 1723-T2	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	1246	100	Constant 5.20	+- 0.10 7.35	+- 3.000 % 0.320	+- 10 33.1	+- 10 % 5.16	+- 10 % 6.46	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1251	100	5.30	7.28	0.312	37.6	5.10	5.72	4.05	
2	1256	100	5.60	7.23	0.306	45.2	5.17	5.69	4.07	
3	1301	100	5.70	7.21	0.303	49.6	5.21	5.99	4.25	
4	1306	100	5.90	7.21	0.300	53.6	5.24	6.01	4.31	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling_001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling_001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling_001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12A-042722  
 Trip Blank :SUPE-TB-01-042722

Sample Start time: 04/27/2022 1306  
 Sample Finish time: 04/27/2022 1445

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-12CR

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-12CR</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/28/2022 0736</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Trevor Lowe</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.72</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>31.96</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.2</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/28/2022 0802</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/28/2022 0827</u>
Total Volume Removed (gals): <u>0.66</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
YSI 15M101116	Yes	Bladder Pump 156	No
LaMotte 3005-0813	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	0802	100	6.84	8.12	0.987	-124.7	12.00	4.92	15.72	

### 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	0807	100	6.69	8.09	0.976	-127.4	9.23	3.79	15.71	
2	0812	100	7.07	8.28	0.973	-124.7	9.31	3.42	15.70	
3	0817	100	7.06	8.27	0.973	-127.8	9.53	3.15	15.71	
4	0822	100	6.76	8.33	0.973	-130.4	9.73	3.21	15.71	
5	0827	100	6.67	8.34	0.973	-131.7	9.91	3.17	15.71	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12CR-042822

Sample Start time: 04/28/2022 0828

Sample Finish time: 04/28/2022 1036

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-18D

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-18D</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/28/2022 0744</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Brenden Arbaugh</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny, 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>46.15</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>155.65</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>101.6</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/28/2022 0759</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/28/2022 0824</u>
Total Volume Removed (gals): <u>0.66</u>	

### Field Equipment

Field Equipment	Calibrated
Hanna H198703 Turbidity Meter 08604023	Yes
Heron Water Level 200' 122003011FR	No
YSI 556 MPS 10K101399	Yes

### Sampling Equipment

Sampling Equipment	Dedicated
Geotech Bladder pump 161	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
Initial	0759	100	6.70	10.65	0.359	24.7	6.55	5.02	46.18	

### 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
1	0804	100	6.20	11.18	0.391	-3.6	1.50	4.72	46.20	
2	0809	100	6.20	11.20	0.396	-7.0	1.38	4.70	46.21	
3	0814	100	6.20	11.21	0.400	-13.0	1.36	4.65	46.22	
4	0819	100	6.20	11.22	0.401	-16.7	1.35	4.59	46.23	
5	0824	100	6.10	11.22	0.403	-19.2	1.32	4.50	46.25	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TACHI	8270D_SVOC+Naphth (Chicago) (250ml)	8270D_SVOC+naphtha (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-18D-042822

Sample Start time: 04/28/2022 0829

Sample Finish time: 04/28/2022 1007

Comments: \_\_\_\_\_





# LOW-FLOW GROUNDWATER WELL No.: W-28C

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-28C</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/27/2022 1309</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Brenden Arbaugh</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny, 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>14.37</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>45.38</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>31.01</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.1</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/27/2022 1324</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/27/2022 1349</u>
Total Volume Removed (gals): <u>0.66</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Hanna H198703 Turbidity Meter 08604023	No	Geotech Bladder Pump 161	No
Heron Water Level 200' 122003011FR	No		
YSI Pro DSS 20L105357	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
Initial	1324	100	Constant 8.16	+- 0.10 10.20	+- 3.000 % 0.824	+- 10 -116.7	+- 10 % 11.86	+- 10 % 9.51	14.40	

### 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	1329	100	8.04	8.93	0.829	-176.1	3.82	5.99	14.41	
2	1334	100	8.01	9.08	0.832	-178.2	3.76	4.71	14.42	
3	1339	100	8.05	9.11	0.834	-179.0	3.68	4.46	14.43	
4	1344	100	8.06	9.13	0.831	-180.8	3.66	4.40	14.44	
5	1349	100	8.08	9.12	0.830	-182.0	3.65	4.33	14.46	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		Bottle Type	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

<u>Normal Sample :SUPE-W-28C-042722</u>	<u>Sample Start time: 04/27/2022 1354</u>
<u>Equipment Blank :SUPE-EB-01-042722</u>	<u>Sample Finish time: 04/27/2022 1503</u>
<u>Blind Duplicate :SUPE-M-99A-042722</u>	

**Comments:** \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-30A

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-30A</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/28/2022 1301</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Trevor Lowe</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.75</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>12.71</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>9.96</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.6</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/28/2022 1324</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/28/2022 1349</u>
Total Volume Removed (gals): <u>0.66</u>	

### Field Equipment

Field Equipment	Calibrated
LaMotte 3005-0813	Yes
YSI 15M101116	Yes

### Sampling Equipment

Sampling Equipment	Dedicated
Bladder Pump 156	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
Initial	1324	100	6.56	9.85	1.023	-85.9	7.57	11.52	3.31	

### 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
1	1329	100	6.42	9.38	1.028	-84.1	7.32	9.87	3.40	
2	1334	100	6.30	8.32	1.031	-56.2	5.54	9.70	3.48	
3	1339	100	6.22	8.23	1.033	-52.4	5.34	10.00	3.58	
4	1344	100	6.18	8.22	1.035	-52.0	5.31	10.32	3.63	
5	1349	100	6.10	8.19	1.035	-49.4	5.27	10.77	3.70	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling 001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30A-042822

Sample Start time: 04/28/2022 1351

Sample Finish time: 04/28/2022 1501

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-30C

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-30C</u>
<b>Project Name:</b> <u>Superior 2022 1SA Sampling</u>	<b>Date:</b> <u>04/28/2022 1037</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Trevor Lowe</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Sunny 30s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.45</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>48.89</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>33.44</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.5</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>04/28/2022 1100</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>04/28/2022 1143</u>
Total Volume Removed (gals): <u>1.14</u>	

### Field Equipment

Field Equipment	Calibrated
LaMotte 3005-0813	Yes
YSI 15M101116	Yes

### Sampling Equipment

Sampling Equipment	Dedicated
Bladder Pump 156	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
Initial	1100	100	7.89	9.96	0.587	-135.6	7.00	84.00	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
1	1105	100	8.13	9.98	0.575	-137.2	7.67	66.00	15.45	
2	1123	100	8.76	9.24	0.565	-130.1	7.63	63.90	15.43	
3	1128	100	8.89	9.15	0.574	-127.1	5.04	51.10	15.41	
4	1133	100	8.91	9.11	0.578	-125.3	5.25	31.50	15.39	
5	1138	100	8.86	9.06	0.591	-125.3	5.30	30.50	15.39	
6	1143	100	8.89	9.01	0.591	-120.4	5.34	29.50	15.39	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 1SA Sampling_001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 1SA Sampling_001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans (Knoxville) (1L)	8290_Dioxins/Furans (Knoxville) (1L)	2	2	1 liter amber glass	None	Superior 2022 1SA Sampling_001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30C-042822

Sample Start time: 04/28/2022 1147

Sample Finish time: 04/28/2022 1259

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-04AR2

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-04AR2</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/05/2022 1847</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Dusk 50s</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>14.06</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.28</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.7</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/05/2022 1859</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/05/2022 1920</u>
Total Volume Removed (gals): <u>0.83</u>	

### Field Equipment

Field Equipment	Calibrated
LaMotte 2020we 5271-0515	Yes
YSI PRO DSS 20L105357	Yes
Heron water level 12FF2205078HB	No

### Sampling Equipment

Sampling Equipment	Dedicated
Geotech portable bladder pump	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	1859	150	Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %	4.00	

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1904	150	12.50	7.31	1.075	-9.8	0.60	4.01	4.27	
2	1909	150	12.70	7.26	1.073	-23.9	0.50	4.06	4.48	
3	1914	150	12.80	7.23	1.071	-38.9	0.48	3.52	4.61	
4	1917	150	12.90	7.25	1.066	-46.5	0.48	3.83	4.79	
5	1920	150	12.90	7.20	1.062	-42.9	0.50	3.67	4.81	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 2SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 2SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 2SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample : SUPE-W-04AR2-100522

Sample Start time: 10/05/2022 1925

Equipment Blank : SUPE-EB2-100522

Sample Finish time: 10/05/2022 1940

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-06A

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-06A</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/05/2022 0815</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Cloudy 50s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>8.90</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.21</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>4.31</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>0.7</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/05/2022 0836</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/05/2022 0903</u>
Total Volume Removed (gals): <u>0.43</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Dipper T2 Water Level Meter 200' 12FF2205078HB	No	Geotech Portable Bladder Pump 037	No
Lamotte 2020we Turbidity Meter 5271-0515	Yes		
YSI Pro DSS 20L105357	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	0836	70	Constant 11.30	+- 0.10 6.86	+- 3.000 % 0.918	+- 10 47.5	+- 10 % 1.41	+- 10 % 4.48	9.22	

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant 11.30	+- 0.10 6.81	+- 3.000 % 0.912	+- 10 22.2	+- 10 % 0.73	+- 10 % 4.99	9.32	
1	0841	60	11.30	6.81	0.912	22.2	0.73	4.99	9.32	
2	0846	60	11.50	6.82	0.883	11.4	0.63	5.53	9.48	
3	0851	60	11.70	6.85	0.831	9.9	0.63	5.01	9.64	
4	0855	60	11.80	6.85	0.800	8.4	0.62	2.71	9.78	
5	0900	60	11.80	6.85	0.784	5.9	0.61	2.53	9.94	
6	0903	60	11.80	6.85	0.791	5.2	0.61	2.48	10.00	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 2SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 2SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 2SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06A-100522

Sample Start time: 10/05/2022 0905

Sample Finish time: 10/05/2022 1023

Comments: \_\_\_\_\_



**SAMPLE COLLECTION RECORD**

**\*UNREADABLE\***

<b>Client:</b> Beazer East, Inc.	<b>Well ID:</b> W-06C
<b>Project Name:</b> Superior 2022 2SA Sampling	<b>Date:</b> 10/05/2022 1037
<b>Project Number:</b> OM-0556-22-091	<b>Technician:</b> Marie Ferrick
<b>Location:</b> Superior, WI	<b>Weather Conditions:</b> 60s/ sunny

**WATER LEVEL DATA**

a.) Depth To Groundwater: <u>12.75</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>44.01</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>31.26</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.1</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

**WATER PURGE DATA**

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/05/2022 1037</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/05/2022 1058</u>
Total Volume Removed (gals): <u>0.76</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Dipper T2 Water Level Meter 200' 12FF2205078HB	No	Geotech Portable Bladder Pump 037	No
YSI Pro DSS 20L105357	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	1037	125	10.00	7.85	0.659	-109.7	1.38	2.19	12.75	

**PURGE VALUES**

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+/- 0.10	+/- 3.000 %	+/- 10	+/- 10 %	+/- 10 %		
1	1042	125	9.20	7.60	0.659	-156.7	1.01	1.89	12.78	
2	1047	140	9.20	7.58	0.658	-154.6	1.07	1.82	12.75	
3	1052	140	9.00	7.56	0.658	-164.2	0.50	1.54	12.75	
4	1055	140	9.00	7.55	0.659	-170.0	0.48	1.55	12.75	
5	1058	140	9.00	7.55	0.658	-172.6	0.52	1.51	12.75	

**SAMPLE COLLECTION INFORMATION**

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 2SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 2SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 2SA Sampling 001

**SAMPLE IDENTIFICATION(S)**

Normal Sample :SUPE-W-06C-100522  
MS/MSD Blank :SUPE-MS/MSD-100522

Sample Start time: 10/05/2022 1059  
Sample Finish time: 10/05/2022 1159

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-10AR2

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-10AR2</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/06/2022 1320</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Cloudy 50s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>9.63</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>17.52</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>7.89</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.3</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/06/2022 1324</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/06/2022 1345</u>
Total Volume Removed (gals): <u>0.42</u>	

**Field Equipment** **Calibrated** **Sampling Equipment** **Dedicated**

### PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-10AR2-100622  
 Equipment Blank :SUPE-EB3-100622

Sample Start time: 10/06/2022 1348  
 Sample Finish time: 10/06/2022 1412

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-12A

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-12A</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/05/2022 1208</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>60s/ sunny</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>5.80</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.35</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>7.55</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.2</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/05/2022 1226</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/05/2022 1256</u>
Total Volume Removed (gals): <u>0.45</u>	

### Field Equipment

Field Equipment	Calibrated
YSI Pro DSS 20L105357	Yes
Lamotte 2020we Turbidity Meter 5271-0515	Yes
Heron Dipper T2 Water Level Meter 200' 12FF2205078HB	No

### Sampling Equipment

Sampling Equipment	Dedicated
Geotech Portable Bladder Pump 037	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	1226	90	13.90	7.49	0.837	-22.5	1.25	4.51	6.31	

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
1	1231	90	13.60	7.14	0.761	-4.6	1.27	3.52	6.39	
2	1236	50	13.80	7.04	0.796	3.9	1.80	3.90	6.66	
3	1241	50	14.20	6.98	0.657	6.6	2.21	3.79	6.85	
4	1246	50	14.20	6.92	0.635	12.3	2.25	3.69	6.99	
5	1251	50	14.40	6.88	0.629	16.8	2.12	3.58	7.12	
6	1256	50	14.30	6.86	0.630	20.0	2.06	3.54	7.29	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 2SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 2SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 2SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12A-100522

Sample Start time: 10/05/2022 1300

Sample Finish time: 10/05/2022 1339

Comments: \_\_\_\_\_





# LOW-FLOW GROUNDWATER WELL No.: W-12CR

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-12CR</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/06/2022 0906</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>Cloudy 50s</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.98</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>31.70</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.2</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/06/2022 0915</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/06/2022 0945</u>
Total Volume Removed (gals): <u>0.85</u>	

**Field Equipment** **Calibrated** **Sampling Equipment** **Dedicated**

### PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12CR-100622

Sample Start time: 10/06/2022 0950

Sample Finish time: 10/06/2022 1040

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-18D

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-18D</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/06/2022 1445</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>50s/cloudy</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>47.42</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>154.38</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>100.8</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/06/2022 1446</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/06/2022 1516</u>
Total Volume Removed (gals): <u>0.22</u>	

**Field Equipment** **Calibrated** **Sampling Equipment** **Dedicated**

### PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-18D-100622

Sample Start time: 10/06/2022 1524

Sample Finish time: 10/06/2022 1552

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-28C

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-28C</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/05/2022 1724</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>60s/sunny</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.29</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>45.40</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>30.11</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>4.9</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/05/2022 1725</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/05/2022 1748</u>
Total Volume Removed (gals): <u>0.99</u>	

### Field Equipment

Field Equipment	Calibrated
YSI pro DSS 20L105357	No
LaMotte 2020we 5271-0515	No
Heron Water Level	No

### Sampling Equipment

Sampling Equipment	Dedicated
Geotech portable bladder pump 037	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 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
Initial	1723	50	Constant 11.70	+- 0.10 7.78	+- 3.000 % 0.927	+- 10 31.2	+- 10 % 1.87	+- 10 % 5.25	15.29	

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (mS/cm)	Eh/ORP (mV)	Dissolved O2 (ma/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1728	150	10.60	7.69	0.938	0.0	0.73	3.70	15.29	
2	1733	150	9.50	7.61	0.925	-119.9	0.39	3.03	15.29	
3	1738	150	9.50	7.60	0.926	-129.1	0.37	1.79	15.29	
4	1743	150	9.40	7.58	0.923	-132.7	0.34	1.65	15.29	
5	1748	150	9.20	7.58	0.924	-139.0	0.35	1.74	15.29	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 2SA Sampling 001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 2SA Sampling 001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 2SA Sampling 001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-28C-100522  
 Blind Duplicate :SUPE-M-099A-100522

Sample Start time: 10/05/2022 1751  
 Sample Finish time: 10/05/2022 1833

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-30A

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-30A</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/06/2022 1058</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>50s/cloudy</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>6.62</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>12.71</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>6.09</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.0</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/06/2022 1123</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/06/2022 1148</u>
Total Volume Removed (gals): <u>0.17</u>	

**Field Equipment** **Calibrated** **Sampling Equipment** **Dedicated**

### PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30A-100622

Sample Start time: 10/06/2022 1151

Sample Finish time: 10/06/2022 1245

Comments: \_\_\_\_\_



# LOW-FLOW GROUNDWATER WELL No.: W-30C

## SAMPLE COLLECTION RECORD



<b>Client:</b> <u>Beazer East, Inc.</u>	<b>Well ID:</b> <u>W-30C</u>
<b>Project Name:</b> <u>Superior 2022 2SA Sampling</u>	<b>Date:</b> <u>10/04/2022 1642</u>
<b>Project Number:</b> <u>OM-0556-22-091</u>	<b>Technician:</b> <u>Marie Ferrick</u>
<b>Location:</b> <u>Superior, WI</u>	<b>Weather Conditions:</b> <u>60s / overcast</u>

### WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.71</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>48.46</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.75</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.3</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

### WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/04/2022 1757</u>
Conductivity Unit: <u>mS/cm</u>	Purge End: <u>10/04/2022 1828</u>
Total Volume Removed (gals): <u>0.31</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Lamont's 2020 we5217	No	Geotech Bladder Pump	No
YSI Pro DSS 20L105357	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
Initial	1757	25	Constant 11.80	+- 0.10 7.42	+- 3.000 % 0.521	+- 10 57.6	+- 10 % 3.73	+- 10 % 34.41	15.72	

### 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	1802	25	11.70	7.37	0.517	67.0	3.50	35.50	15.72	
2	1808	40	11.70	7.36	0.514	73.3	3.38	34.30	15.72	
3	1813	40	11.70	7.36	0.514	76.8	3.29	34.10	15.72	
4	1818	40	11.60	7.36	0.516	78.6	3.08	34.30	15.72	
5	1823	40	11.40	7.36	0.519	79.4	3.15	33.10	15.72	
6	1828	40	11.40	7.36	0.522	79.1	3.10	32.80	15.72	

### SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle Qty		BottleType	Preservative	Program
			Req.	Collected			
TABUF	8260C_VOA+naphtha (Buffalo)	8260C_VOA+naphtha (Buffalo)	3	3	40 ml glass vial	HCL	Superior 2022 2SA Sampling_001
TACHI	8270D_SVOC (less naphtha) (Chicago) (250ml)	8270D_SVOC (less naphtha) (Chicago) (250ml)	2	2	250 ml amber bottle	None	Superior 2022 2SA Sampling_001
TABUF	8270D_LL_PCP (Buffalo) (1L)	8270D_LL_PCP (Buffalo) (1L)	2	2	1 liter amber bottle	None	Superior 2022 2SA Sampling_001

### SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30C-100422  
 Equipment Blank :SUPE-EB1-100422

Sample Start time: 10/04/2022 1832  
 Sample Finish time: 10/04/2022 1902

Comments: \_\_\_\_\_

## **APPENDIX C**

### **Analytical Data**

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

# FTS, LLC

**DATE:** May 23, 2022

**FROM:** Kendra Chintella

**SUBJECT:** Superior Groundwater

**SAMPLE DELIVERY GROUP (SDG):** 480-197333-1

**SAMPLES:** SUPE-W-06A-042722, SUPE-W-28C-042722, SUPE-EB-01-042722, SUPE-M-99A-042722(W-28C), SUPE-W-06C-042722, SUPE-W-12A-042722, SUPE-TB-01-042722

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

**LABORATORY:** Eurofins 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: None
- Surrogate Recoveries  
Noncompliance: None
- Matrix Spike/Matrix Spike Duplicate  
Noncompliance: None
- Laboratory Control Sample  
Noncompliance: The LCSD recovery of 2-chloronaphthalene and 1-methylnaphthalene fell below the recovery limits. The RPDs of 1,2,4-trichlorobenzene, 1,3-dichlorobenzene, 1-methylnaphthalene, 2-chloronaphthalene, 2-methylnaphthalene, acenaphthene, hexachlorobutadiene, hexachlorocyclopentadiene, and hexachloroethane were above the recovery limits. No action was taken on this basis.

## ANALYTICAL REPORT

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

Laboratory Job ID: 480-197333-1

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:  
5/19/2022 9:17:52 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 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.





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# Definitions/Glossary

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

Job ID: 480-197333-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

## 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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Case Narrative

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

Job ID: 480-197333-1

## Job ID: 480-197333-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-197333-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/28/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.4° C, 1.8° C, 2.9° C and 3.2° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Methods 8270D, 8270D LL: The continuing calibration verification (CCV) analyzed in batch 480-624252 was outside the method criteria for the following analyte(s): 2,4,6-Tribromophenol (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8270D, 8270D LL: The laboratory control sample (LCS) for preparation batch 480-624194 and analytical batch 480-624252 recovered outside control limits for the following surrogate: 2,4,6-Tribromophenol. This surrogate is biased high and no detections were found for associated analytes in the following affected samples: SUPE-W-06A-042722, SUPE-W-28C-042722, SUPE-EB-01-042722, SUPE-M-99A-042722, SUPE-W-06C-042722 and SUPE-W-12A-042722. Therefore, the data has been reported.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-657032 was outside the method criteria for the following analyte(s): Hexachlorocyclopentadiene and 2,4,6-Tribromophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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 LCSD associated with preparation batch 500-654410 and analytical batch 500-657032 had 2 analytes outside control limits: 2-Chloronaphthalene and 1-Methylnaphthalene. These results have been reported and qualified.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 500-654410 and analytical batch 500-657032 recovered outside control limits for the following analytes: 1,2,4-Trichlorobenzene, 1,3-Dichlorobenzene, 2-Chloronaphthalene, 2-Methylnaphthalene, Acenaphthene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane and 1-Methylnaphthalene.

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: 480-197333-1

**Client Sample ID: SUPE-W-06A-042722** **Lab Sample ID: 480-197333-1**

No Detections.

**Client Sample ID: SUPE-W-28C-042722** **Lab Sample ID: 480-197333-2**

No Detections.

**Client Sample ID: SUPE-EB-01-042722** **Lab Sample ID: 480-197333-3**

No Detections.

**Client Sample ID: SUPE-M-99A-042722** **Lab Sample ID: 480-197333-4**

No Detections.

**Client Sample ID: SUPE-W-06C-042722** **Lab Sample ID: 480-197333-5**

No Detections.

**Client Sample ID: SUPE-W-12A-042722** **Lab Sample ID: 480-197333-6**

No Detections.

**Client Sample ID: SUPE-TB-01-042722** **Lab Sample ID: 480-197333-7**

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo



# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06A-042722**

**Lab Sample ID: 480-197333-1**

Date Collected: 04/27/22 08:38

Matrix: Water

Date Received: 04/28/22 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			05/06/22 15:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/06/22 15:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 15:48	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 15:48	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 15:48	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 15:48	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 15:48	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 15:48	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 15:48	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 15:48	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 15:48	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 15:48	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 15:48	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 15:48	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		77 - 120		05/06/22 15:48	1
4-Bromofluorobenzene (Surr)	111		73 - 120		05/06/22 15:48	1
Dibromofluoromethane (Surr)	108		75 - 123		05/06/22 15:48	1
Toluene-d8 (Surr)	110		80 - 120		05/06/22 15:48	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		05/02/22 15:33	05/03/22 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	140		24 - 146	05/02/22 15:33	05/03/22 14:37	1
2-Fluorobiphenyl	96		37 - 120	05/02/22 15:33	05/03/22 14:37	1
2-Fluorophenol (Surr)	43		10 - 120	05/02/22 15:33	05/03/22 14:37	1
Nitrobenzene-d5 (Surr)	83		26 - 120	05/02/22 15:33	05/03/22 14:37	1
Phenol-d5 (Surr)	27		11 - 120	05/02/22 15:33	05/03/22 14:37	1
p-Terphenyl-d14	103		64 - 127	05/02/22 15:33	05/03/22 14:37	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	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 13:26	1
1,2-Dichlorobenzene	ND		1.3	0.16	ug/L		05/02/22 16:07	05/17/22 13:26	1
1,3-Dichlorobenzene	ND	*1	1.3	0.13	ug/L		05/02/22 16:07	05/17/22 13:26	1
1,4-Dichlorobenzene	ND		1.3	0.13	ug/L		05/02/22 16:07	05/17/22 13:26	1
bis(chloroisopropyl) ether	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,4,5-Trichlorophenol	ND		6.4	1.6	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,4,6-Trichlorophenol	ND		3.2	0.46	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,4-Dichlorophenol	ND		6.4	1.7	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,4-Dimethylphenol	ND		6.4	1.2	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,4-Dinitrophenol	ND		13	5.5	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,4-Dinitrotoluene	ND		0.64	0.16	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,6-Dinitrotoluene	ND		0.64	0.047	ug/L		05/02/22 16:07	05/17/22 13:26	1
2-Chloronaphthalene	ND	*- *1	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 13:26	1
2-Chlorophenol	ND		3.2	0.36	ug/L		05/02/22 16:07	05/17/22 13:26	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06A-042722**

**Lab Sample ID: 480-197333-1**

Date Collected: 04/27/22 08:38

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND	*1	1.3	0.042	ug/L		05/02/22 16:07	05/17/22 13:26	1
2-Methylphenol	ND		1.3	0.20	ug/L		05/02/22 16:07	05/17/22 13:26	1
2-Nitroaniline	ND		3.2	0.82	ug/L		05/02/22 16:07	05/17/22 13:26	1
2-Nitrophenol	ND		6.4	1.6	ug/L		05/02/22 16:07	05/17/22 13:26	1
3 & 4 Methylphenol	ND		1.3	0.29	ug/L		05/02/22 16:07	05/17/22 13:26	1
3,3'-Dichlorobenzidine	ND		3.2	1.1	ug/L		05/02/22 16:07	05/17/22 13:26	1
3-Nitroaniline	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 13:26	1
4,6-Dinitro-2-methylphenol	ND		13	3.8	ug/L		05/02/22 16:07	05/17/22 13:26	1
4-Bromophenyl phenyl ether	ND		3.2	0.35	ug/L		05/02/22 16:07	05/17/22 13:26	1
4-Chloro-3-methylphenol	ND		6.4	1.5	ug/L		05/02/22 16:07	05/17/22 13:26	1
4-Chloroaniline	ND		6.4	1.3	ug/L		05/02/22 16:07	05/17/22 13:26	1
4-Chlorophenyl phenyl ether	ND		3.2	0.41	ug/L		05/02/22 16:07	05/17/22 13:26	1
4-Nitroaniline	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 13:26	1
4-Nitrophenol	ND		13	4.8	ug/L		05/02/22 16:07	05/17/22 13:26	1
Acenaphthene	ND	*1	0.64	0.20	ug/L		05/02/22 16:07	05/17/22 13:26	1
Acenaphthylene	ND		0.64	0.17	ug/L		05/02/22 16:07	05/17/22 13:26	1
Anthracene	ND		0.64	0.21	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzo[a]anthracene	ND		0.13	0.036	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzo[a]pyrene	ND		0.13	0.063	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzo[b]fluoranthene	ND		0.13	0.052	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzo[g,h,i]perylene	ND		0.64	0.24	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzo[k]fluoranthene	ND		0.13	0.041	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzoic acid	ND		13	3.7	ug/L		05/02/22 16:07	05/17/22 13:26	1
Benzyl alcohol	ND		13	3.9	ug/L		05/02/22 16:07	05/17/22 13:26	1
Bis(2-chloroethoxy)methane	ND		1.3	0.18	ug/L		05/02/22 16:07	05/17/22 13:26	1
Bis(2-chloroethyl)ether	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 13:26	1
Bis(2-ethylhexyl) phthalate	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 13:26	1
Butyl benzyl phthalate	ND		1.3	0.31	ug/L		05/02/22 16:07	05/17/22 13:26	1
Chrysene	ND		0.13	0.044	ug/L		05/02/22 16:07	05/17/22 13:26	1
Dibenz(a,h)anthracene	ND		0.19	0.033	ug/L		05/02/22 16:07	05/17/22 13:26	1
Dibenzofuran	ND		1.3	0.17	ug/L		05/02/22 16:07	05/17/22 13:26	1
Diethyl phthalate	ND		3.2	0.23	ug/L		05/02/22 16:07	05/17/22 13:26	1
Dimethyl phthalate	ND		3.2	0.20	ug/L		05/02/22 16:07	05/17/22 13:26	1
Di-n-butyl phthalate	ND		3.2	0.47	ug/L		05/02/22 16:07	05/17/22 13:26	1
Di-n-octyl phthalate	ND		6.4	0.67	ug/L		05/02/22 16:07	05/17/22 13:26	1
Fluoranthene	ND		0.64	0.29	ug/L		05/02/22 16:07	05/17/22 13:26	1
Fluorene	ND		0.64	0.16	ug/L		05/02/22 16:07	05/17/22 13:26	1
Hexachlorobenzene	ND		0.32	0.051	ug/L		05/02/22 16:07	05/17/22 13:26	1
Hexachlorobutadiene	ND	*1	3.2	0.33	ug/L		05/02/22 16:07	05/17/22 13:26	1
Hexachlorocyclopentadiene	ND	*1	13	4.1	ug/L		05/02/22 16:07	05/17/22 13:26	1
Hexachloroethane	ND	*1	3.2	0.38	ug/L		05/02/22 16:07	05/17/22 13:26	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.048	ug/L		05/02/22 16:07	05/17/22 13:26	1
Isophorone	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 13:26	1
Nitrobenzene	ND		0.64	0.29	ug/L		05/02/22 16:07	05/17/22 13:26	1
N-Nitrosodi-n-propylamine	ND		0.32	0.098	ug/L		05/02/22 16:07	05/17/22 13:26	1
N-Nitrosodiphenylamine	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 13:26	1
Phenanthrene	ND		0.64	0.19	ug/L		05/02/22 16:07	05/17/22 13:26	1
Phenol	ND		3.2	0.43	ug/L		05/02/22 16:07	05/17/22 13:26	1
Pyrene	ND		0.64	0.27	ug/L		05/02/22 16:07	05/17/22 13:26	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06A-042722**

**Lab Sample ID: 480-197333-1**

Date Collected: 04/27/22 08:38

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		3.2	0.48	ug/L		05/02/22 16:07	05/17/22 13:26	1
2,3,5,6-Tetrachlorophenol	ND		6.4	2.4	ug/L		05/02/22 16:07	05/17/22 13:26	1
1-Methylnaphthalene	ND	*- *1	1.3	0.19	ug/L		05/02/22 16:07	05/17/22 13:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	54		27 - 110	05/02/22 16:07	05/17/22 13:26	1
Phenol-d5 (Surr)	30		20 - 110	05/02/22 16:07	05/17/22 13:26	1
Nitrobenzene-d5 (Surr)	63		36 - 120	05/02/22 16:07	05/17/22 13:26	1
2-Fluorobiphenyl	69		34 - 110	05/02/22 16:07	05/17/22 13:26	1
2,4,6-Tribromophenol (Surr)	118		40 - 145	05/02/22 16:07	05/17/22 13:26	1
Terphenyl-d14 (Surr)	116		40 - 145	05/02/22 16:07	05/17/22 13:26	1

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

Date Collected: 04/27/22 13:54

Matrix: Water

Date Received: 04/28/22 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			05/06/22 16:11	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/06/22 16:11	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 16:11	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 16:11	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 16:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 16:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 16:11	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 16:11	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 16:11	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 16:11	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 16:11	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 16:11	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 16:11	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 16:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 16:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		77 - 120		05/06/22 16:11	1
4-Bromofluorobenzene (Surr)	114		73 - 120		05/06/22 16:11	1
Dibromofluoromethane (Surr)	109		75 - 123		05/06/22 16:11	1
Toluene-d8 (Surr)	111		80 - 120		05/06/22 16:11	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		05/02/22 15:33	05/03/22 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	128		24 - 146	05/02/22 15:33	05/03/22 15:04	1
2-Fluorobiphenyl	96		37 - 120	05/02/22 15:33	05/03/22 15:04	1
2-Fluorophenol (Surr)	44		10 - 120	05/02/22 15:33	05/03/22 15:04	1
Nitrobenzene-d5 (Surr)	79		26 - 120	05/02/22 15:33	05/03/22 15:04	1
Phenol-d5 (Surr)	28		11 - 120	05/02/22 15:33	05/03/22 15:04	1
p-Terphenyl-d14	102		64 - 127	05/02/22 15:33	05/03/22 15:04	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

Date Collected: 04/27/22 13:54

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*1	1.3	0.16	ug/L		05/02/22 16:07	05/17/22 13:50	1
1,2-Dichlorobenzene	ND		1.3	0.17	ug/L		05/02/22 16:07	05/17/22 13:50	1
1,3-Dichlorobenzene	ND	*1	1.3	0.14	ug/L		05/02/22 16:07	05/17/22 13:50	1
1,4-Dichlorobenzene	ND		1.3	0.14	ug/L		05/02/22 16:07	05/17/22 13:50	1
bis(chloroisopropyl) ether	ND		1.3	0.25	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,4,5-Trichlorophenol	ND		6.7	1.7	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,4,6-Trichlorophenol	ND		3.4	0.48	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,4-Dichlorophenol	ND		6.7	1.7	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,4-Dimethylphenol	ND		6.7	1.2	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,4-Dinitrophenol	ND		13	5.8	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,4-Dinitrotoluene	ND		0.67	0.16	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,6-Dinitrotoluene	ND		0.67	0.049	ug/L		05/02/22 16:07	05/17/22 13:50	1
2-Chloronaphthalene	ND	*- *1	1.3	0.16	ug/L		05/02/22 16:07	05/17/22 13:50	1
2-Chlorophenol	ND		3.4	0.37	ug/L		05/02/22 16:07	05/17/22 13:50	1
2-Methylnaphthalene	ND	*1	1.3	0.044	ug/L		05/02/22 16:07	05/17/22 13:50	1
2-Methylphenol	ND		1.3	0.20	ug/L		05/02/22 16:07	05/17/22 13:50	1
2-Nitroaniline	ND		3.4	0.86	ug/L		05/02/22 16:07	05/17/22 13:50	1
2-Nitrophenol	ND		6.7	1.7	ug/L		05/02/22 16:07	05/17/22 13:50	1
3 & 4 Methylphenol	ND		1.3	0.30	ug/L		05/02/22 16:07	05/17/22 13:50	1
3,3'-Dichlorobenzidine	ND		3.4	1.1	ug/L		05/02/22 16:07	05/17/22 13:50	1
3-Nitroaniline	ND		6.7	1.2	ug/L		05/02/22 16:07	05/17/22 13:50	1
4,6-Dinitro-2-methylphenol	ND		13	4.0	ug/L		05/02/22 16:07	05/17/22 13:50	1
4-Bromophenyl phenyl ether	ND		3.4	0.36	ug/L		05/02/22 16:07	05/17/22 13:50	1
4-Chloro-3-methylphenol	ND		6.7	1.5	ug/L		05/02/22 16:07	05/17/22 13:50	1
4-Chloroaniline	ND		6.7	1.4	ug/L		05/02/22 16:07	05/17/22 13:50	1
4-Chlorophenyl phenyl ether	ND		3.4	0.43	ug/L		05/02/22 16:07	05/17/22 13:50	1
4-Nitroaniline	ND		6.7	1.1	ug/L		05/02/22 16:07	05/17/22 13:50	1
4-Nitrophenol	ND		13	5.0	ug/L		05/02/22 16:07	05/17/22 13:50	1
Acenaphthene	ND	*1	0.67	0.21	ug/L		05/02/22 16:07	05/17/22 13:50	1
Acenaphthylene	ND		0.67	0.18	ug/L		05/02/22 16:07	05/17/22 13:50	1
Anthracene	ND		0.67	0.22	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzo[a]anthracene	ND		0.13	0.038	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzo[a]pyrene	ND		0.13	0.066	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzo[b]fluoranthene	ND		0.13	0.054	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzo[g,h,i]perylene	ND		0.67	0.25	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzo[k]fluoranthene	ND		0.13	0.043	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzoic acid	ND		13	3.9	ug/L		05/02/22 16:07	05/17/22 13:50	1
Benzyl alcohol	ND		13	4.1	ug/L		05/02/22 16:07	05/17/22 13:50	1
Bis(2-chloroethoxy)methane	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 13:50	1
Bis(2-chloroethyl)ether	ND		1.3	0.20	ug/L		05/02/22 16:07	05/17/22 13:50	1
Bis(2-ethylhexyl) phthalate	ND		6.7	1.1	ug/L		05/02/22 16:07	05/17/22 13:50	1
Butyl benzyl phthalate	ND		1.3	0.32	ug/L		05/02/22 16:07	05/17/22 13:50	1
Chrysene	ND		0.13	0.046	ug/L		05/02/22 16:07	05/17/22 13:50	1
Dibenz(a,h)anthracene	ND		0.20	0.034	ug/L		05/02/22 16:07	05/17/22 13:50	1
Dibenzofuran	ND		1.3	0.18	ug/L		05/02/22 16:07	05/17/22 13:50	1
Diethyl phthalate	ND		3.4	0.24	ug/L		05/02/22 16:07	05/17/22 13:50	1
Dimethyl phthalate	ND		3.4	0.21	ug/L		05/02/22 16:07	05/17/22 13:50	1
Di-n-butyl phthalate	ND		3.4	0.49	ug/L		05/02/22 16:07	05/17/22 13:50	1
Di-n-octyl phthalate	ND		6.7	0.70	ug/L		05/02/22 16:07	05/17/22 13:50	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

Date Collected: 04/27/22 13:54

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.67	0.30	ug/L		05/02/22 16:07	05/17/22 13:50	1
Fluorene	ND		0.67	0.16	ug/L		05/02/22 16:07	05/17/22 13:50	1
Hexachlorobenzene	ND		0.34	0.053	ug/L		05/02/22 16:07	05/17/22 13:50	1
Hexachlorobutadiene	ND	*1	3.4	0.35	ug/L		05/02/22 16:07	05/17/22 13:50	1
Hexachlorocyclopentadiene	ND	*1	13	4.3	ug/L		05/02/22 16:07	05/17/22 13:50	1
Hexachloroethane	ND	*1	3.4	0.40	ug/L		05/02/22 16:07	05/17/22 13:50	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.050	ug/L		05/02/22 16:07	05/17/22 13:50	1
Isophorone	ND		1.3	0.25	ug/L		05/02/22 16:07	05/17/22 13:50	1
Nitrobenzene	ND		0.67	0.30	ug/L		05/02/22 16:07	05/17/22 13:50	1
N-Nitrosodi-n-propylamine	ND		0.34	0.10	ug/L		05/02/22 16:07	05/17/22 13:50	1
N-Nitrosodiphenylamine	ND		1.3	0.25	ug/L		05/02/22 16:07	05/17/22 13:50	1
Phenanthrene	ND		0.67	0.20	ug/L		05/02/22 16:07	05/17/22 13:50	1
Phenol	ND		3.4	0.45	ug/L		05/02/22 16:07	05/17/22 13:50	1
Pyrene	ND		0.67	0.29	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,3,4,6-Tetrachlorophenol	ND		3.4	0.50	ug/L		05/02/22 16:07	05/17/22 13:50	1
2,3,5,6-Tetrachlorophenol	ND		6.7	2.6	ug/L		05/02/22 16:07	05/17/22 13:50	1
1-Methylnaphthalene	ND	*- *1	1.3	0.20	ug/L		05/02/22 16:07	05/17/22 13:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	59		27 - 110				05/02/22 16:07	05/17/22 13:50	1
Phenol-d5 (Surr)	33		20 - 110				05/02/22 16:07	05/17/22 13:50	1
Nitrobenzene-d5 (Surr)	66		36 - 120				05/02/22 16:07	05/17/22 13:50	1
2-Fluorobiphenyl	69		34 - 110				05/02/22 16:07	05/17/22 13:50	1
2,4,6-Tribromophenol (Surr)	118		40 - 145				05/02/22 16:07	05/17/22 13:50	1
Terphenyl-d14 (Surr)	113		40 - 145				05/02/22 16:07	05/17/22 13:50	1

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

Date Collected: 04/27/22 15:10

Matrix: Water

Date Received: 04/28/22 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			05/06/22 16:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/06/22 16:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 16:34	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 16:34	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 16:34	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 16:34	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 16:34	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 16:34	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 16:34	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 16:34	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 16:34	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 16:34	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 16:34	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 16:34	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		77 - 120					05/06/22 16:34	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

Date Collected: 04/27/22 15:10

Matrix: Water

Date Received: 04/28/22 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		73 - 120		05/06/22 16:34	1
Dibromofluoromethane (Surr)	106		75 - 123		05/06/22 16:34	1
Toluene-d8 (Surr)	111		80 - 120		05/06/22 16:34	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		05/02/22 15:33	05/03/22 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	108		24 - 146	05/02/22 15:33	05/03/22 15:32	1
2-Fluorobiphenyl	95		37 - 120	05/02/22 15:33	05/03/22 15:32	1
2-Fluorophenol (Surr)	43		10 - 120	05/02/22 15:33	05/03/22 15:32	1
Nitrobenzene-d5 (Surr)	81		26 - 120	05/02/22 15:33	05/03/22 15:32	1
Phenol-d5 (Surr)	28		11 - 120	05/02/22 15:33	05/03/22 15:32	1
p-Terphenyl-d14	105		64 - 127	05/02/22 15:33	05/03/22 15:32	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	1.3	0.16	ug/L		05/02/22 16:07	05/17/22 14:14	1
1,2-Dichlorobenzene	ND		1.3	0.16	ug/L		05/02/22 16:07	05/17/22 14:14	1
1,3-Dichlorobenzene	ND	*1	1.3	0.14	ug/L		05/02/22 16:07	05/17/22 14:14	1
1,4-Dichlorobenzene	ND		1.3	0.14	ug/L		05/02/22 16:07	05/17/22 14:14	1
bis(chloroisopropyl) ether	ND		1.3	0.25	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,4,5-Trichlorophenol	ND		6.6	1.7	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,4,6-Trichlorophenol	ND		3.3	0.47	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,4-Dichlorophenol	ND		6.6	1.7	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,4-Dimethylphenol	ND		6.6	1.2	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,4-Dinitrophenol	ND		13	5.7	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,4-Dinitrotoluene	ND		0.66	0.16	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,6-Dinitrotoluene	ND		0.66	0.049	ug/L		05/02/22 16:07	05/17/22 14:14	1
2-Chloronaphthalene	ND	*- *1	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 14:14	1
2-Chlorophenol	ND		3.3	0.37	ug/L		05/02/22 16:07	05/17/22 14:14	1
2-Methylnaphthalene	ND	*1	1.3	0.043	ug/L		05/02/22 16:07	05/17/22 14:14	1
2-Methylphenol	ND		1.3	0.20	ug/L		05/02/22 16:07	05/17/22 14:14	1
2-Nitroaniline	ND		3.3	0.85	ug/L		05/02/22 16:07	05/17/22 14:14	1
2-Nitrophenol	ND		6.6	1.6	ug/L		05/02/22 16:07	05/17/22 14:14	1
3 & 4 Methylphenol	ND		1.3	0.30	ug/L		05/02/22 16:07	05/17/22 14:14	1
3,3'-Dichlorobenzidine	ND		3.3	1.1	ug/L		05/02/22 16:07	05/17/22 14:14	1
3-Nitroaniline	ND		6.6	1.2	ug/L		05/02/22 16:07	05/17/22 14:14	1
4,6-Dinitro-2-methylphenol	ND		13	3.9	ug/L		05/02/22 16:07	05/17/22 14:14	1
4-Bromophenyl phenyl ether	ND		3.3	0.36	ug/L		05/02/22 16:07	05/17/22 14:14	1
4-Chloro-3-methylphenol	ND		6.6	1.5	ug/L		05/02/22 16:07	05/17/22 14:14	1
4-Chloroaniline	ND		6.6	1.3	ug/L		05/02/22 16:07	05/17/22 14:14	1
4-Chlorophenyl phenyl ether	ND		3.3	0.42	ug/L		05/02/22 16:07	05/17/22 14:14	1
4-Nitroaniline	ND		6.6	1.1	ug/L		05/02/22 16:07	05/17/22 14:14	1
4-Nitrophenol	ND		13	4.9	ug/L		05/02/22 16:07	05/17/22 14:14	1
Acenaphthene	ND	*1	0.66	0.20	ug/L		05/02/22 16:07	05/17/22 14:14	1
Acenaphthylene	ND		0.66	0.18	ug/L		05/02/22 16:07	05/17/22 14:14	1
Anthracene	ND		0.66	0.22	ug/L		05/02/22 16:07	05/17/22 14:14	1
Benzo[a]anthracene	ND		0.13	0.037	ug/L		05/02/22 16:07	05/17/22 14:14	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

Date Collected: 04/27/22 15:10

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.13	0.065	ug/L		05/02/22 16:07	05/17/22 14:14	1
Benzo[b]fluoranthene	ND		0.13	0.053	ug/L		05/02/22 16:07	05/17/22 14:14	1
Benzo[g,h,i]perylene	ND		0.66	0.25	ug/L		05/02/22 16:07	05/17/22 14:14	1
Benzo[k]fluoranthene	ND		0.13	0.042	ug/L		05/02/22 16:07	05/17/22 14:14	1
Benzoic acid	ND		13	3.8	ug/L		05/02/22 16:07	05/17/22 14:14	1
Benzyl alcohol	ND		13	4.0	ug/L		05/02/22 16:07	05/17/22 14:14	1
Bis(2-chloroethoxy)methane	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 14:14	1
Bis(2-chloroethyl)ether	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 14:14	1
Bis(2-ethylhexyl) phthalate	ND		6.6	1.1	ug/L		05/02/22 16:07	05/17/22 14:14	1
Butyl benzyl phthalate	ND		1.3	0.32	ug/L		05/02/22 16:07	05/17/22 14:14	1
Chrysene	ND		0.13	0.045	ug/L		05/02/22 16:07	05/17/22 14:14	1
Dibenz(a,h)anthracene	ND		0.20	0.033	ug/L		05/02/22 16:07	05/17/22 14:14	1
Dibenzofuran	ND		1.3	0.17	ug/L		05/02/22 16:07	05/17/22 14:14	1
Diethyl phthalate	ND		3.3	0.24	ug/L		05/02/22 16:07	05/17/22 14:14	1
Dimethyl phthalate	ND		3.3	0.21	ug/L		05/02/22 16:07	05/17/22 14:14	1
Di-n-butyl phthalate	ND		3.3	0.48	ug/L		05/02/22 16:07	05/17/22 14:14	1
Di-n-octyl phthalate	ND		6.6	0.69	ug/L		05/02/22 16:07	05/17/22 14:14	1
Fluoranthene	ND		0.66	0.30	ug/L		05/02/22 16:07	05/17/22 14:14	1
Fluorene	ND		0.66	0.16	ug/L		05/02/22 16:07	05/17/22 14:14	1
Hexachlorobenzene	ND		0.33	0.052	ug/L		05/02/22 16:07	05/17/22 14:14	1
Hexachlorobutadiene	ND	*1	3.3	0.34	ug/L		05/02/22 16:07	05/17/22 14:14	1
Hexachlorocyclopentadiene	ND	*1	13	4.2	ug/L		05/02/22 16:07	05/17/22 14:14	1
Hexachloroethane	ND	*1	3.3	0.39	ug/L		05/02/22 16:07	05/17/22 14:14	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.049	ug/L		05/02/22 16:07	05/17/22 14:14	1
Isophorone	ND		1.3	0.25	ug/L		05/02/22 16:07	05/17/22 14:14	1
Nitrobenzene	ND		0.66	0.30	ug/L		05/02/22 16:07	05/17/22 14:14	1
N-Nitrosodi-n-propylamine	ND		0.33	0.10	ug/L		05/02/22 16:07	05/17/22 14:14	1
N-Nitrosodiphenylamine	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 14:14	1
Phenanthrene	ND		0.66	0.20	ug/L		05/02/22 16:07	05/17/22 14:14	1
Phenol	ND		3.3	0.44	ug/L		05/02/22 16:07	05/17/22 14:14	1
Pyrene	ND		0.66	0.28	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,3,4,6-Tetrachlorophenol	ND		3.3	0.49	ug/L		05/02/22 16:07	05/17/22 14:14	1
2,3,5,6-Tetrachlorophenol	ND		6.6	2.5	ug/L		05/02/22 16:07	05/17/22 14:14	1
1-Methylnaphthalene	ND	*- *1	1.3	0.20	ug/L		05/02/22 16:07	05/17/22 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	57		27 - 110	05/02/22 16:07	05/17/22 14:14	1
Phenol-d5 (Surr)	33		20 - 110	05/02/22 16:07	05/17/22 14:14	1
Nitrobenzene-d5 (Surr)	73		36 - 120	05/02/22 16:07	05/17/22 14:14	1
2-Fluorobiphenyl	80		34 - 110	05/02/22 16:07	05/17/22 14:14	1
2,4,6-Tribromophenol (Surr)	116		40 - 145	05/02/22 16:07	05/17/22 14:14	1
Terphenyl-d14 (Surr)	118		40 - 145	05/02/22 16:07	05/17/22 14:14	1

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

Date Collected: 04/27/22 22:00

Matrix: Water

Date Received: 04/28/22 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			05/06/22 16:58	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

Date Collected: 04/27/22 22:00

Matrix: Water

Date Received: 04/28/22 10:00

## 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			05/06/22 16:58	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 16:58	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 16:58	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 16:58	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 16:58	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 16:58	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 16:58	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 16:58	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 16:58	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 16:58	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 16:58	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 16:58	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 16:58	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 16:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		77 - 120		05/06/22 16:58	1
4-Bromofluorobenzene (Surr)	109		73 - 120		05/06/22 16:58	1
Dibromofluoromethane (Surr)	108		75 - 123		05/06/22 16:58	1
Toluene-d8 (Surr)	113		80 - 120		05/06/22 16:58	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		05/02/22 15:33	05/03/22 14:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	126		24 - 146	05/02/22 15:33	05/03/22 14:09	1
2-Fluorobiphenyl	93		37 - 120	05/02/22 15:33	05/03/22 14:09	1
2-Fluorophenol (Surr)	46		10 - 120	05/02/22 15:33	05/03/22 14:09	1
Nitrobenzene-d5 (Surr)	80		26 - 120	05/02/22 15:33	05/03/22 14:09	1
Phenol-d5 (Surr)	28		11 - 120	05/02/22 15:33	05/03/22 14:09	1
p-Terphenyl-d14	102		64 - 127	05/02/22 15:33	05/03/22 14:09	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	1.4	0.16	ug/L		05/02/22 16:07	05/17/22 14:38	1
1,2-Dichlorobenzene	ND		1.4	0.17	ug/L		05/02/22 16:07	05/17/22 14:38	1
1,3-Dichlorobenzene	ND	*1	1.4	0.14	ug/L		05/02/22 16:07	05/17/22 14:38	1
1,4-Dichlorobenzene	ND		1.4	0.14	ug/L		05/02/22 16:07	05/17/22 14:38	1
bis(chloroisopropyl) ether	ND		1.4	0.26	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,4,5-Trichlorophenol	ND		6.9	1.8	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,4,6-Trichlorophenol	ND		3.4	0.49	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,4-Dichlorophenol	ND		6.9	1.8	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,4-Dimethylphenol	ND		6.9	1.2	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,4-Dinitrophenol	ND		14	5.9	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,4-Dinitrotoluene	ND		0.69	0.17	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,6-Dinitrotoluene	ND		0.69	0.051	ug/L		05/02/22 16:07	05/17/22 14:38	1
2-Chloronaphthalene	ND	*- *1	1.4	0.16	ug/L		05/02/22 16:07	05/17/22 14:38	1
2-Chlorophenol	ND		3.4	0.38	ug/L		05/02/22 16:07	05/17/22 14:38	1
2-Methylnaphthalene	ND	*1	1.4	0.045	ug/L		05/02/22 16:07	05/17/22 14:38	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

**Date Collected: 04/27/22 22:00**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		1.4	0.21	ug/L		05/02/22 16:07	05/17/22 14:38	1
2-Nitroaniline	ND		3.4	0.88	ug/L		05/02/22 16:07	05/17/22 14:38	1
2-Nitrophenol	ND		6.9	1.7	ug/L		05/02/22 16:07	05/17/22 14:38	1
3 & 4 Methylphenol	ND		1.4	0.31	ug/L		05/02/22 16:07	05/17/22 14:38	1
3,3'-Dichlorobenzidine	ND		3.4	1.2	ug/L		05/02/22 16:07	05/17/22 14:38	1
3-Nitroaniline	ND		6.9	1.2	ug/L		05/02/22 16:07	05/17/22 14:38	1
4,6-Dinitro-2-methylphenol	ND		14	4.1	ug/L		05/02/22 16:07	05/17/22 14:38	1
4-Bromophenyl phenyl ether	ND		3.4	0.37	ug/L		05/02/22 16:07	05/17/22 14:38	1
4-Chloro-3-methylphenol	ND		6.9	1.6	ug/L		05/02/22 16:07	05/17/22 14:38	1
4-Chloroaniline	ND		6.9	1.4	ug/L		05/02/22 16:07	05/17/22 14:38	1
4-Chlorophenyl phenyl ether	ND		3.4	0.44	ug/L		05/02/22 16:07	05/17/22 14:38	1
4-Nitroaniline	ND		6.9	1.1	ug/L		05/02/22 16:07	05/17/22 14:38	1
4-Nitrophenol	ND		14	5.1	ug/L		05/02/22 16:07	05/17/22 14:38	1
Acenaphthene	ND	*1	0.69	0.21	ug/L		05/02/22 16:07	05/17/22 14:38	1
Acenaphthylene	ND		0.69	0.18	ug/L		05/02/22 16:07	05/17/22 14:38	1
Anthracene	ND		0.69	0.23	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzo[a]anthracene	ND		0.14	0.039	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzo[a]pyrene	ND		0.14	0.068	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzo[b]fluoranthene	ND		0.14	0.055	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzo[g,h,i]perylene	ND		0.69	0.26	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzo[k]fluoranthene	ND		0.14	0.044	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzoic acid	ND		14	4.0	ug/L		05/02/22 16:07	05/17/22 14:38	1
Benzyl alcohol	ND		14	4.1	ug/L		05/02/22 16:07	05/17/22 14:38	1
Bis(2-chloroethoxy)methane	ND		1.4	0.20	ug/L		05/02/22 16:07	05/17/22 14:38	1
Bis(2-chloroethyl)ether	ND		1.4	0.20	ug/L		05/02/22 16:07	05/17/22 14:38	1
Bis(2-ethylhexyl) phthalate	ND		6.9	1.2	ug/L		05/02/22 16:07	05/17/22 14:38	1
Butyl benzyl phthalate	ND		1.4	0.33	ug/L		05/02/22 16:07	05/17/22 14:38	1
Chrysene	ND		0.14	0.047	ug/L		05/02/22 16:07	05/17/22 14:38	1
Dibenz(a,h)anthracene	ND		0.21	0.035	ug/L		05/02/22 16:07	05/17/22 14:38	1
Dibenzofuran	ND		1.4	0.18	ug/L		05/02/22 16:07	05/17/22 14:38	1
Diethyl phthalate	ND		3.4	0.25	ug/L		05/02/22 16:07	05/17/22 14:38	1
Dimethyl phthalate	ND		3.4	0.22	ug/L		05/02/22 16:07	05/17/22 14:38	1
Di-n-butyl phthalate	ND		3.4	0.50	ug/L		05/02/22 16:07	05/17/22 14:38	1
Di-n-octyl phthalate	ND		6.9	0.72	ug/L		05/02/22 16:07	05/17/22 14:38	1
Fluoranthene	ND		0.69	0.31	ug/L		05/02/22 16:07	05/17/22 14:38	1
Fluorene	ND		0.69	0.17	ug/L		05/02/22 16:07	05/17/22 14:38	1
Hexachlorobenzene	ND		0.34	0.055	ug/L		05/02/22 16:07	05/17/22 14:38	1
Hexachlorobutadiene	ND	*1	3.4	0.35	ug/L		05/02/22 16:07	05/17/22 14:38	1
Hexachlorocyclopentadiene	ND	*1	14	4.4	ug/L		05/02/22 16:07	05/17/22 14:38	1
Hexachloroethane	ND	*1	3.4	0.41	ug/L		05/02/22 16:07	05/17/22 14:38	1
Indeno[1,2,3-cd]pyrene	ND		0.14	0.051	ug/L		05/02/22 16:07	05/17/22 14:38	1
Isophorone	ND		1.4	0.26	ug/L		05/02/22 16:07	05/17/22 14:38	1
Nitrobenzene	ND		0.69	0.31	ug/L		05/02/22 16:07	05/17/22 14:38	1
N-Nitrosodi-n-propylamine	ND		0.34	0.11	ug/L		05/02/22 16:07	05/17/22 14:38	1
N-Nitrosodiphenylamine	ND		1.4	0.25	ug/L		05/02/22 16:07	05/17/22 14:38	1
Phenanthrene	ND		0.69	0.21	ug/L		05/02/22 16:07	05/17/22 14:38	1
Phenol	ND		3.4	0.46	ug/L		05/02/22 16:07	05/17/22 14:38	1
Pyrene	ND		0.69	0.29	ug/L		05/02/22 16:07	05/17/22 14:38	1
2,3,4,6-Tetrachlorophenol	ND		3.4	0.51	ug/L		05/02/22 16:07	05/17/22 14:38	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

Date Collected: 04/27/22 22:00

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,5,6-Tetrachlorophenol	ND		6.9	2.6	ug/L		05/02/22 16:07	05/17/22 14:38	1
1-Methylnaphthalene	ND	*- *1	1.4	0.21	ug/L		05/02/22 16:07	05/17/22 14:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	58		27 - 110				05/02/22 16:07	05/17/22 14:38	1
Phenol-d5 (Surr)	31		20 - 110				05/02/22 16:07	05/17/22 14:38	1
Nitrobenzene-d5 (Surr)	69		36 - 120				05/02/22 16:07	05/17/22 14:38	1
2-Fluorobiphenyl	76		34 - 110				05/02/22 16:07	05/17/22 14:38	1
2,4,6-Tribromophenol (Surr)	112		40 - 145				05/02/22 16:07	05/17/22 14:38	1
Terphenyl-d14 (Surr)	112		40 - 145				05/02/22 16:07	05/17/22 14:38	1

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

Date Collected: 04/27/22 10:43

Matrix: Water

Date Received: 04/28/22 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			05/06/22 17:21	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/06/22 17:21	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 17:21	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 17:21	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 17:21	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 17:21	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 17:21	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 17:21	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 17:21	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 17:21	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 17:21	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 17:21	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 17:21	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 17:21	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 17:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		77 - 120					05/06/22 17:21	1
4-Bromofluorobenzene (Surr)	107		73 - 120					05/06/22 17:21	1
Dibromofluoromethane (Surr)	105		75 - 123					05/06/22 17:21	1
Toluene-d8 (Surr)	113		80 - 120					05/06/22 17:21	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		05/02/22 15:33	05/03/22 16:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	132		24 - 146				05/02/22 15:33	05/03/22 16:00	1
2-Fluorobiphenyl	84		37 - 120				05/02/22 15:33	05/03/22 16:00	1
2-Fluorophenol (Surr)	36		10 - 120				05/02/22 15:33	05/03/22 16:00	1
Nitrobenzene-d5 (Surr)	68		26 - 120				05/02/22 15:33	05/03/22 16:00	1
Phenol-d5 (Surr)	24		11 - 120				05/02/22 15:33	05/03/22 16:00	1
p-Terphenyl-d14	79		64 - 127				05/02/22 15:33	05/03/22 16:00	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

**Date Collected: 04/27/22 10:43**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	*1	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 15:02	1
1,2-Dichlorobenzene	ND		1.3	0.15	ug/L		05/02/22 16:07	05/17/22 15:02	1
1,3-Dichlorobenzene	ND	*1	1.3	0.13	ug/L		05/02/22 16:07	05/17/22 15:02	1
1,4-Dichlorobenzene	ND		1.3	0.13	ug/L		05/02/22 16:07	05/17/22 15:02	1
bis(chloroisopropyl) ether	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,4,5-Trichlorophenol	ND		6.3	1.6	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,4,6-Trichlorophenol	ND		3.1	0.45	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,4-Dichlorophenol	ND		6.3	1.6	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,4-Dimethylphenol	ND		6.3	1.1	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,4-Dinitrophenol	ND		13	5.4	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,4-Dinitrotoluene	ND		0.63	0.15	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,6-Dinitrotoluene	ND		0.63	0.046	ug/L		05/02/22 16:07	05/17/22 15:02	1
2-Chloronaphthalene	ND	*- *1	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 15:02	1
2-Chlorophenol	ND		3.1	0.35	ug/L		05/02/22 16:07	05/17/22 15:02	1
2-Methylnaphthalene	ND	*1	1.3	0.041	ug/L		05/02/22 16:07	05/17/22 15:02	1
2-Methylphenol	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 15:02	1
2-Nitroaniline	ND		3.1	0.81	ug/L		05/02/22 16:07	05/17/22 15:02	1
2-Nitrophenol	ND		6.3	1.6	ug/L		05/02/22 16:07	05/17/22 15:02	1
3 & 4 Methylphenol	ND		1.3	0.28	ug/L		05/02/22 16:07	05/17/22 15:02	1
3,3'-Dichlorobenzidine	ND		3.1	1.1	ug/L		05/02/22 16:07	05/17/22 15:02	1
3-Nitroaniline	ND		6.3	1.1	ug/L		05/02/22 16:07	05/17/22 15:02	1
4,6-Dinitro-2-methylphenol	ND		13	3.7	ug/L		05/02/22 16:07	05/17/22 15:02	1
4-Bromophenyl phenyl ether	ND		3.1	0.34	ug/L		05/02/22 16:07	05/17/22 15:02	1
4-Chloro-3-methylphenol	ND		6.3	1.4	ug/L		05/02/22 16:07	05/17/22 15:02	1
4-Chloroaniline	ND		6.3	1.3	ug/L		05/02/22 16:07	05/17/22 15:02	1
4-Chlorophenyl phenyl ether	ND		3.1	0.40	ug/L		05/02/22 16:07	05/17/22 15:02	1
4-Nitroaniline	ND		6.3	1.0	ug/L		05/02/22 16:07	05/17/22 15:02	1
4-Nitrophenol	ND		13	4.7	ug/L		05/02/22 16:07	05/17/22 15:02	1
Acenaphthene	ND	*1	0.63	0.19	ug/L		05/02/22 16:07	05/17/22 15:02	1
Acenaphthylene	ND		0.63	0.17	ug/L		05/02/22 16:07	05/17/22 15:02	1
Anthracene	ND		0.63	0.21	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzo[a]anthracene	ND		0.13	0.036	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzo[a]pyrene	ND		0.13	0.062	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzo[b]fluoranthene	ND		0.13	0.051	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzo[g,h,i]perylene	ND		0.63	0.24	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzo[k]fluoranthene	ND		0.13	0.040	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzoic acid	ND		13	3.6	ug/L		05/02/22 16:07	05/17/22 15:02	1
Benzyl alcohol	ND		13	3.8	ug/L		05/02/22 16:07	05/17/22 15:02	1
Bis(2-chloroethoxy)methane	ND		1.3	0.18	ug/L		05/02/22 16:07	05/17/22 15:02	1
Bis(2-chloroethyl)ether	ND		1.3	0.18	ug/L		05/02/22 16:07	05/17/22 15:02	1
Bis(2-ethylhexyl) phthalate	ND		6.3	1.1	ug/L		05/02/22 16:07	05/17/22 15:02	1
Butyl benzyl phthalate	ND		1.3	0.30	ug/L		05/02/22 16:07	05/17/22 15:02	1
Chrysene	ND		0.13	0.043	ug/L		05/02/22 16:07	05/17/22 15:02	1
Dibenz(a,h)anthracene	ND		0.19	0.032	ug/L		05/02/22 16:07	05/17/22 15:02	1
Dibenzofuran	ND		1.3	0.16	ug/L		05/02/22 16:07	05/17/22 15:02	1
Diethyl phthalate	ND		3.1	0.23	ug/L		05/02/22 16:07	05/17/22 15:02	1
Dimethyl phthalate	ND		3.1	0.20	ug/L		05/02/22 16:07	05/17/22 15:02	1
Di-n-butyl phthalate	ND		3.1	0.46	ug/L		05/02/22 16:07	05/17/22 15:02	1
Di-n-octyl phthalate	ND		6.3	0.66	ug/L		05/02/22 16:07	05/17/22 15:02	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

Date Collected: 04/27/22 10:43

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.63	0.29	ug/L		05/02/22 16:07	05/17/22 15:02	1
Fluorene	ND		0.63	0.15	ug/L		05/02/22 16:07	05/17/22 15:02	1
Hexachlorobenzene	ND		0.31	0.050	ug/L		05/02/22 16:07	05/17/22 15:02	1
Hexachlorobutadiene	ND	*1	3.1	0.32	ug/L		05/02/22 16:07	05/17/22 15:02	1
Hexachlorocyclopentadiene	ND	*1	13	4.0	ug/L		05/02/22 16:07	05/17/22 15:02	1
Hexachloroethane	ND	*1	3.1	0.38	ug/L		05/02/22 16:07	05/17/22 15:02	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.047	ug/L		05/02/22 16:07	05/17/22 15:02	1
Isophorone	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 15:02	1
Nitrobenzene	ND		0.63	0.28	ug/L		05/02/22 16:07	05/17/22 15:02	1
N-Nitrosodi-n-propylamine	ND		0.31	0.097	ug/L		05/02/22 16:07	05/17/22 15:02	1
N-Nitrosodiphenylamine	ND		1.3	0.23	ug/L		05/02/22 16:07	05/17/22 15:02	1
Phenanthrene	ND		0.63	0.19	ug/L		05/02/22 16:07	05/17/22 15:02	1
Phenol	ND		3.1	0.42	ug/L		05/02/22 16:07	05/17/22 15:02	1
Pyrene	ND		0.63	0.27	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,3,4,6-Tetrachlorophenol	ND		3.1	0.47	ug/L		05/02/22 16:07	05/17/22 15:02	1
2,3,5,6-Tetrachlorophenol	ND		6.3	2.4	ug/L		05/02/22 16:07	05/17/22 15:02	1
1-Methylnaphthalene	ND	*- *1	1.3	0.19	ug/L		05/02/22 16:07	05/17/22 15:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	47		27 - 110				05/02/22 16:07	05/17/22 15:02	1
Phenol-d5 (Surr)	28		20 - 110				05/02/22 16:07	05/17/22 15:02	1
Nitrobenzene-d5 (Surr)	57		36 - 120				05/02/22 16:07	05/17/22 15:02	1
2-Fluorobiphenyl	66		34 - 110				05/02/22 16:07	05/17/22 15:02	1
2,4,6-Tribromophenol (Surr)	119		40 - 145				05/02/22 16:07	05/17/22 15:02	1
Terphenyl-d14 (Surr)	104		40 - 145				05/02/22 16:07	05/17/22 15:02	1

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

Date Collected: 04/27/22 13:06

Matrix: Water

Date Received: 04/28/22 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			05/06/22 17:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/06/22 17:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 17:43	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 17:43	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 17:43	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 17:43	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 17:43	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 17:43	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 17:43	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 17:43	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 17:43	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 17:43	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 17:43	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 17:43	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 17:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		77 - 120					05/06/22 17:43	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

Date Collected: 04/27/22 13:06

Matrix: Water

Date Received: 04/28/22 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		73 - 120		05/06/22 17:43	1
Dibromofluoromethane (Surr)	104		75 - 123		05/06/22 17:43	1
Toluene-d8 (Surr)	111		80 - 120		05/06/22 17:43	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		05/02/22 15:33	05/03/22 16:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	143		24 - 146	05/02/22 15:33	05/03/22 16:27	1
2-Fluorobiphenyl	92		37 - 120	05/02/22 15:33	05/03/22 16:27	1
2-Fluorophenol (Surr)	45		10 - 120	05/02/22 15:33	05/03/22 16:27	1
Nitrobenzene-d5 (Surr)	76		26 - 120	05/02/22 15:33	05/03/22 16:27	1
Phenol-d5 (Surr)	29		11 - 120	05/02/22 15:33	05/03/22 16:27	1
p-Terphenyl-d14	85		64 - 127	05/02/22 15:33	05/03/22 16:27	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	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 15:26	1
1,2-Dichlorobenzene	ND		1.3	0.16	ug/L		05/02/22 16:07	05/17/22 15:26	1
1,3-Dichlorobenzene	ND	*1	1.3	0.13	ug/L		05/02/22 16:07	05/17/22 15:26	1
1,4-Dichlorobenzene	ND		1.3	0.13	ug/L		05/02/22 16:07	05/17/22 15:26	1
bis(chloroisopropyl) ether	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,4,5-Trichlorophenol	ND		6.4	1.6	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,4,6-Trichlorophenol	ND		3.2	0.46	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,4-Dichlorophenol	ND		6.4	1.7	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,4-Dimethylphenol	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,4-Dinitrophenol	ND		13	5.5	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,4-Dinitrotoluene	ND		0.64	0.16	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,6-Dinitrotoluene	ND		0.64	0.047	ug/L		05/02/22 16:07	05/17/22 15:26	1
2-Chloronaphthalene	ND	*- *1	1.3	0.15	ug/L		05/02/22 16:07	05/17/22 15:26	1
2-Chlorophenol	ND		3.2	0.36	ug/L		05/02/22 16:07	05/17/22 15:26	1
2-Methylnaphthalene	ND	*1	1.3	0.042	ug/L		05/02/22 16:07	05/17/22 15:26	1
2-Methylphenol	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 15:26	1
2-Nitroaniline	ND		3.2	0.82	ug/L		05/02/22 16:07	05/17/22 15:26	1
2-Nitrophenol	ND		6.4	1.6	ug/L		05/02/22 16:07	05/17/22 15:26	1
3 & 4 Methylphenol	ND		1.3	0.29	ug/L		05/02/22 16:07	05/17/22 15:26	1
3,3'-Dichlorobenzidine	ND		3.2	1.1	ug/L		05/02/22 16:07	05/17/22 15:26	1
3-Nitroaniline	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 15:26	1
4,6-Dinitro-2-methylphenol	ND		13	3.8	ug/L		05/02/22 16:07	05/17/22 15:26	1
4-Bromophenyl phenyl ether	ND		3.2	0.34	ug/L		05/02/22 16:07	05/17/22 15:26	1
4-Chloro-3-methylphenol	ND		6.4	1.5	ug/L		05/02/22 16:07	05/17/22 15:26	1
4-Chloroaniline	ND		6.4	1.3	ug/L		05/02/22 16:07	05/17/22 15:26	1
4-Chlorophenyl phenyl ether	ND		3.2	0.41	ug/L		05/02/22 16:07	05/17/22 15:26	1
4-Nitroaniline	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 15:26	1
4-Nitrophenol	ND		13	4.7	ug/L		05/02/22 16:07	05/17/22 15:26	1
Acenaphthene	ND	*1	0.64	0.20	ug/L		05/02/22 16:07	05/17/22 15:26	1
Acenaphthylene	ND		0.64	0.17	ug/L		05/02/22 16:07	05/17/22 15:26	1
Anthracene	ND		0.64	0.21	ug/L		05/02/22 16:07	05/17/22 15:26	1
Benzo[a]anthracene	ND		0.13	0.036	ug/L		05/02/22 16:07	05/17/22 15:26	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

Date Collected: 04/27/22 13:06

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.13	0.063	ug/L		05/02/22 16:07	05/17/22 15:26	1
Benzo[b]fluoranthene	ND		0.13	0.052	ug/L		05/02/22 16:07	05/17/22 15:26	1
Benzo[g,h,i]perylene	ND		0.64	0.24	ug/L		05/02/22 16:07	05/17/22 15:26	1
Benzo[k]fluoranthene	ND		0.13	0.041	ug/L		05/02/22 16:07	05/17/22 15:26	1
Benzoic acid	ND		13	3.7	ug/L		05/02/22 16:07	05/17/22 15:26	1
Benzyl alcohol	ND		13	3.9	ug/L		05/02/22 16:07	05/17/22 15:26	1
Bis(2-chloroethoxy)methane	ND		1.3	0.18	ug/L		05/02/22 16:07	05/17/22 15:26	1
Bis(2-chloroethyl)ether	ND		1.3	0.19	ug/L		05/02/22 16:07	05/17/22 15:26	1
Bis(2-ethylhexyl) phthalate	ND		6.4	1.1	ug/L		05/02/22 16:07	05/17/22 15:26	1
Butyl benzyl phthalate	ND		1.3	0.31	ug/L		05/02/22 16:07	05/17/22 15:26	1
Chrysene	ND		0.13	0.044	ug/L		05/02/22 16:07	05/17/22 15:26	1
Dibenz(a,h)anthracene	ND		0.19	0.032	ug/L		05/02/22 16:07	05/17/22 15:26	1
Dibenzofuran	ND		1.3	0.17	ug/L		05/02/22 16:07	05/17/22 15:26	1
Diethyl phthalate	ND		3.2	0.23	ug/L		05/02/22 16:07	05/17/22 15:26	1
Dimethyl phthalate	ND		3.2	0.20	ug/L		05/02/22 16:07	05/17/22 15:26	1
Di-n-butyl phthalate	ND		3.2	0.47	ug/L		05/02/22 16:07	05/17/22 15:26	1
Di-n-octyl phthalate	ND		6.4	0.67	ug/L		05/02/22 16:07	05/17/22 15:26	1
Fluoranthene	ND		0.64	0.29	ug/L		05/02/22 16:07	05/17/22 15:26	1
Fluorene	ND		0.64	0.16	ug/L		05/02/22 16:07	05/17/22 15:26	1
Hexachlorobenzene	ND		0.32	0.051	ug/L		05/02/22 16:07	05/17/22 15:26	1
Hexachlorobutadiene	ND	*1	3.2	0.33	ug/L		05/02/22 16:07	05/17/22 15:26	1
Hexachlorocyclopentadiene	ND	*1	13	4.1	ug/L		05/02/22 16:07	05/17/22 15:26	1
Hexachloroethane	ND	*1	3.2	0.38	ug/L		05/02/22 16:07	05/17/22 15:26	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.048	ug/L		05/02/22 16:07	05/17/22 15:26	1
Isophorone	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 15:26	1
Nitrobenzene	ND		0.64	0.29	ug/L		05/02/22 16:07	05/17/22 15:26	1
N-Nitrosodi-n-propylamine	ND		0.32	0.098	ug/L		05/02/22 16:07	05/17/22 15:26	1
N-Nitrosodiphenylamine	ND		1.3	0.24	ug/L		05/02/22 16:07	05/17/22 15:26	1
Phenanthrene	ND		0.64	0.19	ug/L		05/02/22 16:07	05/17/22 15:26	1
Phenol	ND		3.2	0.43	ug/L		05/02/22 16:07	05/17/22 15:26	1
Pyrene	ND		0.64	0.27	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,3,4,6-Tetrachlorophenol	ND		3.2	0.48	ug/L		05/02/22 16:07	05/17/22 15:26	1
2,3,5,6-Tetrachlorophenol	ND		6.4	2.4	ug/L		05/02/22 16:07	05/17/22 15:26	1
1-Methylnaphthalene	ND	*- *1	1.3	0.19	ug/L		05/02/22 16:07	05/17/22 15:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	51		27 - 110	05/02/22 16:07	05/17/22 15:26	1
Phenol-d5 (Surr)	31		20 - 110	05/02/22 16:07	05/17/22 15:26	1
Nitrobenzene-d5 (Surr)	61		36 - 120	05/02/22 16:07	05/17/22 15:26	1
2-Fluorobiphenyl	71		34 - 110	05/02/22 16:07	05/17/22 15:26	1
2,4,6-Tribromophenol (Surr)	121		40 - 145	05/02/22 16:07	05/17/22 15:26	1
Terphenyl-d14 (Surr)	105		40 - 145	05/02/22 16:07	05/17/22 15:26	1

**Client Sample ID: SUPE-TB-01-042722**

**Lab Sample ID: 480-197333-7**

Date Collected: 04/27/22 15:23

Matrix: Water

Date Received: 04/28/22 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			05/06/22 18:06	1

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# Client Sample Results

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-TB-01-042722**

**Lab Sample ID: 480-197333-7**

Date Collected: 04/27/22 15:23

Matrix: Water

Date Received: 04/28/22 10:00

**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			05/06/22 18:06	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 18:06	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 18:06	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 18:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 18:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 18:06	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 18:06	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 18:06	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 18:06	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 18:06	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 18:06	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 18:06	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 18:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 - 120		05/06/22 18:06	1
4-Bromofluorobenzene (Surr)	106		73 - 120		05/06/22 18:06	1
Dibromofluoromethane (Surr)	104		75 - 123		05/06/22 18:06	1
Toluene-d8 (Surr)	114		80 - 120		05/06/22 18:06	1

# Surrogate Summary

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

Job ID: 480-197333-1

## 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)
480-197333-1	SUPE-W-06A-042722	115	111	108	110
480-197333-2	SUPE-W-28C-042722	114	114	109	111
480-197333-3	SUPE-EB-01-042722	110	103	106	111
480-197333-4	SUPE-M-99A-042722	115	109	108	113
480-197333-5	SUPE-W-06C-042722	104	107	105	113
480-197333-6	SUPE-W-12A-042722	111	111	104	111
480-197333-7	SUPE-TB-01-042722	106	106	104	114
LCS 480-624853/5	Lab Control Sample	105	109	108	112
MB 480-624853/7	Method Blank	111	112	114	110

### 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)					
		2FP (27-110)	PHL (20-110)	NBZ (36-120)	FBP (34-110)	TBP (40-145)	TPHL (40-145)
480-197333-1	SUPE-W-06A-042722	54	30	63	69	118	116
480-197333-2	SUPE-W-28C-042722	59	33	66	69	118	113
480-197333-3	SUPE-EB-01-042722	57	33	73	80	116	118
480-197333-4	SUPE-M-99A-042722	58	31	69	76	112	112
480-197333-5	SUPE-W-06C-042722	47	28	57	66	119	104
480-197333-6	SUPE-W-12A-042722	51	31	61	71	121	105
LCS 500-654410/2-A	Lab Control Sample	93	60	74	71	138	104
LCS 500-654410/3-A	Lab Control Sample Dup	80	52	65	62	129	97
MB 500-654410/1-A	Method Blank	81	50	65	59	99	109

### Surrogate Legend

2FP = 2-Fluorophenol (Surr)  
 PHL = Phenol-d5 (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 FBP = 2-Fluorobiphenyl  
 TBP = 2,4,6-Tribromophenol (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)
480-197333-1	SUPE-W-06A-042722	140	96	43	83	27	103
480-197333-2	SUPE-W-28C-042722	128	96	44	79	28	102
480-197333-3	SUPE-EB-01-042722	108	95	43	81	28	105
480-197333-4	SUPE-M-99A-042722	126	93	46	80	28	102
480-197333-4 MS	SUPE-M-99A-042722	143	93	41	75	28	92

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# Surrogate Summary

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

Job ID: 480-197333-1

**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)
480-197333-4 MSD	SUPE-M-99A-042722	142	95	43	80	29	91
480-197333-5	SUPE-W-06C-042722	132	84	36	68	24	79
480-197333-6	SUPE-W-12A-042722	143	92	45	76	29	85
LCS 480-624194/2-A	Lab Control Sample	156 S1+	98	48	81	32	113
MB 480-624194/1-A	Method Blank	113	88	42	72	27	98

## 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: 480-197333-1

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

**Lab Sample ID: MB 480-624853/7**  
**Matrix: Water**  
**Analysis Batch: 624853**

**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			05/06/22 12:37	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/06/22 12:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/06/22 12:37	1
Benzene	ND		1.0	0.41	ug/L			05/06/22 12:37	1
Chloromethane	ND		1.0	0.35	ug/L			05/06/22 12:37	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/06/22 12:37	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/06/22 12:37	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/06/22 12:37	1
Naphthalene	ND		1.0	0.43	ug/L			05/06/22 12:37	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/06/22 12:37	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/06/22 12:37	1
o-Xylene	ND		1.0	0.76	ug/L			05/06/22 12:37	1
Styrene	ND		1.0	0.73	ug/L			05/06/22 12:37	1
Toluene	ND		1.0	0.51	ug/L			05/06/22 12:37	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/06/22 12:37	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	111		77 - 120		05/06/22 12:37	1
4-Bromofluorobenzene (Surr)	112		73 - 120		05/06/22 12:37	1
Dibromofluoromethane (Surr)	114		75 - 123		05/06/22 12:37	1
Toluene-d8 (Surr)	110		80 - 120		05/06/22 12:37	1

**Lab Sample ID: LCS 480-624853/5**  
**Matrix: Water**  
**Analysis Batch: 624853**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trimethylbenzene	25.0	25.8		ug/L		103	76 - 121
1,3,5-Trimethylbenzene	25.0	25.9		ug/L		104	77 - 121
Benzene	25.0	24.7		ug/L		99	71 - 124
Chloromethane	25.0	25.9		ug/L		104	68 - 124
Ethylbenzene	25.0	24.8		ug/L		99	77 - 123
Methyl tert-butyl ether	25.0	25.0		ug/L		100	77 - 120
m-Xylene & p-Xylene	25.0	25.3		ug/L		101	76 - 122
Naphthalene	25.0	25.7		ug/L		103	66 - 125
n-Butylbenzene	25.0	25.6		ug/L		102	71 - 128
N-Propylbenzene	25.0	24.8		ug/L		99	75 - 127
o-Xylene	25.0	25.5		ug/L		102	76 - 122
Styrene	25.0	25.4		ug/L		102	80 - 120
Toluene	25.0	24.6		ug/L		98	80 - 122
Xylenes, Total	50.0	50.8		ug/L		102	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	105		77 - 120
4-Bromofluorobenzene (Surr)	109		73 - 120
Dibromofluoromethane (Surr)	108		75 - 123
Toluene-d8 (Surr)	112		80 - 120

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# QC Sample Results

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

Job ID: 480-197333-1

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

**Lab Sample ID: MB 500-654410/1-A**  
**Matrix: Water**  
**Analysis Batch: 657032**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 654410**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		1.6	0.19	ug/L		05/02/22 16:07	05/17/22 09:50	1
1,2-Dichlorobenzene	ND		1.6	0.20	ug/L		05/02/22 16:07	05/17/22 09:50	1
1,3-Dichlorobenzene	ND		1.6	0.17	ug/L		05/02/22 16:07	05/17/22 09:50	1
1,4-Dichlorobenzene	ND		1.6	0.17	ug/L		05/02/22 16:07	05/17/22 09:50	1
bis(chloroisopropyl) ether	ND		1.6	0.30	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,4,5-Trichlorophenol	ND		8.0	2.1	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,4,6-Trichlorophenol	ND		4.0	0.57	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,4-Dichlorophenol	ND		8.0	2.1	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,4-Dimethylphenol	ND		8.0	1.4	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,4-Dinitrophenol	ND		16	6.9	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,4-Dinitrotoluene	ND		0.80	0.20	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,6-Dinitrotoluene	ND		0.80	0.059	ug/L		05/02/22 16:07	05/17/22 09:50	1
2-Chloronaphthalene	ND		1.6	0.19	ug/L		05/02/22 16:07	05/17/22 09:50	1
2-Chlorophenol	ND		4.0	0.45	ug/L		05/02/22 16:07	05/17/22 09:50	1
2-Methylnaphthalene	ND		1.6	0.052	ug/L		05/02/22 16:07	05/17/22 09:50	1
2-Methylphenol	ND		1.6	0.24	ug/L		05/02/22 16:07	05/17/22 09:50	1
2-Nitroaniline	ND		4.0	1.0	ug/L		05/02/22 16:07	05/17/22 09:50	1
2-Nitrophenol	ND		8.0	2.0	ug/L		05/02/22 16:07	05/17/22 09:50	1
3 & 4 Methylphenol	ND		1.6	0.36	ug/L		05/02/22 16:07	05/17/22 09:50	1
3,3'-Dichlorobenzidine	ND		4.0	1.4	ug/L		05/02/22 16:07	05/17/22 09:50	1
3-Nitroaniline	ND		8.0	1.4	ug/L		05/02/22 16:07	05/17/22 09:50	1
4,6-Dinitro-2-methylphenol	ND		16	4.7	ug/L		05/02/22 16:07	05/17/22 09:50	1
4-Bromophenyl phenyl ether	ND		4.0	0.43	ug/L		05/02/22 16:07	05/17/22 09:50	1
4-Chloro-3-methylphenol	ND		8.0	1.8	ug/L		05/02/22 16:07	05/17/22 09:50	1
4-Chloroaniline	ND		8.0	1.6	ug/L		05/02/22 16:07	05/17/22 09:50	1
4-Chlorophenyl phenyl ether	ND		4.0	0.51	ug/L		05/02/22 16:07	05/17/22 09:50	1
4-Nitroaniline	ND		8.0	1.3	ug/L		05/02/22 16:07	05/17/22 09:50	1
4-Nitrophenol	ND		16	5.9	ug/L		05/02/22 16:07	05/17/22 09:50	1
Acenaphthene	ND		0.80	0.25	ug/L		05/02/22 16:07	05/17/22 09:50	1
Acenaphthylene	ND		0.80	0.21	ug/L		05/02/22 16:07	05/17/22 09:50	1
Anthracene	ND		0.80	0.27	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzo[a]anthracene	ND		0.16	0.045	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzo[a]pyrene	ND		0.16	0.079	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzo[b]fluoranthene	ND		0.16	0.065	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzo[g,h,i]perylene	ND		0.80	0.30	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzo[k]fluoranthene	ND		0.16	0.051	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzoic acid	ND		16	4.6	ug/L		05/02/22 16:07	05/17/22 09:50	1
Benzyl alcohol	ND		16	4.8	ug/L		05/02/22 16:07	05/17/22 09:50	1
Bis(2-chloroethoxy)methane	ND		1.6	0.23	ug/L		05/02/22 16:07	05/17/22 09:50	1
Bis(2-chloroethyl)ether	ND		1.6	0.23	ug/L		05/02/22 16:07	05/17/22 09:50	1
Bis(2-ethylhexyl) phthalate	ND		8.0	1.4	ug/L		05/02/22 16:07	05/17/22 09:50	1
Butyl benzyl phthalate	ND		1.6	0.38	ug/L		05/02/22 16:07	05/17/22 09:50	1
Chrysene	ND		0.16	0.055	ug/L		05/02/22 16:07	05/17/22 09:50	1
Dibenz(a,h)anthracene	ND		0.24	0.041	ug/L		05/02/22 16:07	05/17/22 09:50	1
Dibenzofuran	ND		1.6	0.21	ug/L		05/02/22 16:07	05/17/22 09:50	1
Diethyl phthalate	ND		4.0	0.29	ug/L		05/02/22 16:07	05/17/22 09:50	1
Dimethyl phthalate	ND		4.0	0.25	ug/L		05/02/22 16:07	05/17/22 09:50	1
Di-n-butyl phthalate	ND		4.0	0.58	ug/L		05/02/22 16:07	05/17/22 09:50	1

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# QC Sample Results

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

Job ID: 480-197333-1

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

**Lab Sample ID: MB 500-654410/1-A**  
**Matrix: Water**  
**Analysis Batch: 657032**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 654410**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		8.0	0.84	ug/L		05/02/22 16:07	05/17/22 09:50	1
Fluoranthene	ND		0.80	0.36	ug/L		05/02/22 16:07	05/17/22 09:50	1
Fluorene	ND		0.80	0.20	ug/L		05/02/22 16:07	05/17/22 09:50	1
Hexachlorobenzene	ND		0.40	0.064	ug/L		05/02/22 16:07	05/17/22 09:50	1
Hexachlorobutadiene	ND		4.0	0.41	ug/L		05/02/22 16:07	05/17/22 09:50	1
Hexachlorocyclopentadiene	ND		16	5.1	ug/L		05/02/22 16:07	05/17/22 09:50	1
Hexachloroethane	ND		4.0	0.48	ug/L		05/02/22 16:07	05/17/22 09:50	1
Indeno[1,2,3-cd]pyrene	ND		0.16	0.060	ug/L		05/02/22 16:07	05/17/22 09:50	1
Isophorone	ND		1.6	0.30	ug/L		05/02/22 16:07	05/17/22 09:50	1
Nitrobenzene	ND		0.80	0.36	ug/L		05/02/22 16:07	05/17/22 09:50	1
N-Nitrosodi-n-propylamine	ND		0.40	0.12	ug/L		05/02/22 16:07	05/17/22 09:50	1
N-Nitrosodiphenylamine	ND		1.6	0.30	ug/L		05/02/22 16:07	05/17/22 09:50	1
Phenanthrene	ND		0.80	0.24	ug/L		05/02/22 16:07	05/17/22 09:50	1
Phenol	ND		4.0	0.54	ug/L		05/02/22 16:07	05/17/22 09:50	1
Pyrene	ND		0.80	0.34	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,3,4,6-Tetrachlorophenol	ND		4.0	0.60	ug/L		05/02/22 16:07	05/17/22 09:50	1
2,3,5,6-Tetrachlorophenol	ND		8.0	3.1	ug/L		05/02/22 16:07	05/17/22 09:50	1
1-Methylnaphthalene	ND		1.6	0.24	ug/L		05/02/22 16:07	05/17/22 09:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	81		27 - 110	05/02/22 16:07	05/17/22 09:50	1
Phenol-d5 (Surr)	50		20 - 110	05/02/22 16:07	05/17/22 09:50	1
Nitrobenzene-d5 (Surr)	65		36 - 120	05/02/22 16:07	05/17/22 09:50	1
2-Fluorobiphenyl	59		34 - 110	05/02/22 16:07	05/17/22 09:50	1
2,4,6-Tribromophenol (Surr)	99		40 - 145	05/02/22 16:07	05/17/22 09:50	1
Terphenyl-d14 (Surr)	109		40 - 145	05/02/22 16:07	05/17/22 09:50	1

**Lab Sample ID: LCS 500-654410/2-A**  
**Matrix: Water**  
**Analysis Batch: 657032**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 654410**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	32.0	12.0		ug/L		37	26 - 110
1,2-Dichlorobenzene	32.0	10.9		ug/L		34	26 - 110
1,3-Dichlorobenzene	32.0	9.86		ug/L		31	22 - 110
1,4-Dichlorobenzene	32.0	10.1		ug/L		32	23 - 110
bis(chloroisopropyl) ether	32.0	17.5		ug/L		55	38 - 140
2,4,5-Trichlorophenol	32.0	31.1		ug/L		97	63 - 124
2,4,6-Trichlorophenol	32.0	29.6		ug/L		93	62 - 121
2,4-Dichlorophenol	32.0	31.4		ug/L		98	58 - 120
2,4-Dimethylphenol	32.0	26.6		ug/L		83	51 - 115
2,4-Dinitrophenol	64.0	61.9		ug/L		97	37 - 130
2,4-Dinitrotoluene	32.0	31.8		ug/L		99	63 - 129
2,6-Dinitrotoluene	32.0	30.8		ug/L		96	63 - 129
2-Chloronaphthalene	32.0	14.7		ug/L		46	39 - 110
2-Chlorophenol	32.0	26.4		ug/L		82	59 - 110
2-Methylnaphthalene	32.0	14.2		ug/L		44	34 - 110
2-Methylphenol	32.0	27.4		ug/L		86	53 - 115

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# QC Sample Results

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

Job ID: 480-197333-1

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

**Lab Sample ID: LCS 500-654410/2-A**  
**Matrix: Water**  
**Analysis Batch: 657032**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 654410**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Nitroaniline	32.0	27.2		ug/L		85	59 - 138
2-Nitrophenol	32.0	28.0		ug/L		87	59 - 115
3 & 4 Methylphenol	32.0	26.5		ug/L		83	50 - 116
3,3'-Dichlorobenzidine	32.0	35.6		ug/L		111	60 - 132
3-Nitroaniline	32.0	26.2		ug/L		82	47 - 123
4,6-Dinitro-2-methylphenol	64.0	61.6		ug/L		96	50 - 129
4-Bromophenyl phenyl ether	32.0	28.4		ug/L		89	58 - 120
4-Chloro-3-methylphenol	32.0	31.1		ug/L		97	64 - 128
4-Chloroaniline	32.0	26.1		ug/L		82	35 - 128
4-Chlorophenyl phenyl ether	32.0	22.7		ug/L		71	48 - 116
4-Nitroaniline	32.0	25.0		ug/L		78	35 - 110
4-Nitrophenol	64.0	36.4		ug/L		57	20 - 110
Acenaphthene	32.0	18.3		ug/L		57	46 - 110
Acenaphthylene	32.0	19.1		ug/L		60	47 - 113
Anthracene	32.0	28.4		ug/L		89	67 - 118
Benzo[a]anthracene	32.0	28.7		ug/L		90	70 - 126
Benzo[a]pyrene	32.0	31.3		ug/L		98	70 - 135
Benzo[b]fluoranthene	32.0	30.0		ug/L		94	69 - 136
Benzo[g,h,i]perylene	32.0	31.9		ug/L		100	70 - 135
Benzo[k]fluoranthene	32.0	32.0		ug/L		100	70 - 133
Benzoic acid	64.0	41.9		ug/L		65	10 - 112
Benzyl alcohol	32.0	27.6		ug/L		86	46 - 132
Bis(2-chloroethoxy)methane	32.0	27.0		ug/L		84	59 - 118
Bis(2-chloroethyl)ether	32.0	24.0		ug/L		75	54 - 112
Bis(2-ethylhexyl) phthalate	32.0	26.5		ug/L		83	69 - 136
Butyl benzyl phthalate	32.0	26.1		ug/L		82	68 - 135
Chrysene	32.0	30.1		ug/L		94	68 - 129
Dibenz(a,h)anthracene	32.0	33.8		ug/L		106	70 - 134
Dibenzofuran	32.0	20.9		ug/L		65	51 - 110
Diethyl phthalate	32.0	28.6		ug/L		89	62 - 123
Dimethyl phthalate	32.0	29.6		ug/L		92	63 - 122
Di-n-butyl phthalate	32.0	27.9		ug/L		87	69 - 129
Di-n-octyl phthalate	32.0	30.3		ug/L		95	68 - 137
Fluoranthene	32.0	30.0		ug/L		94	68 - 126
Fluorene	32.0	22.7		ug/L		71	53 - 120
Hexachlorobenzene	32.0	33.3		ug/L		104	61 - 126
Hexachlorobutadiene	32.0	11.5		ug/L		36	20 - 100
Hexachlorocyclopentadiene	32.0	6.66	J	ug/L		21	10 - 105
Hexachloroethane	32.0	8.69		ug/L		27	20 - 100
Indeno[1,2,3-cd]pyrene	32.0	32.9		ug/L		103	65 - 133
Isophorone	32.0	26.1		ug/L		82	54 - 127
Nitrobenzene	32.0	22.1		ug/L		69	54 - 121
N-Nitrosodi-n-propylamine	32.0	24.8		ug/L		77	47 - 131
N-Nitrosodiphenylamine	32.0	27.6		ug/L		86	66 - 120
Phenanthrene	32.0	26.9		ug/L		84	65 - 120
Phenol	32.0	18.6		ug/L		58	33 - 100
Pyrene	32.0	28.4		ug/L		89	70 - 126
2,3,4,6-Tetrachlorophenol	32.0	34.9		ug/L		109	44 - 128
1-Methylnaphthalene	32.0	14.7		ug/L		46	38 - 110

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# QC Sample Results

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

Job ID: 480-197333-1

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

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	93		27 - 110
Phenol-d5 (Surr)	60		20 - 110
Nitrobenzene-d5 (Surr)	74		36 - 120
2-Fluorobiphenyl	71		34 - 110
2,4,6-Tribromophenol (Surr)	138		40 - 145
Terphenyl-d14 (Surr)	104		40 - 145

**Lab Sample ID: LCSD 500-654410/3-A**  
**Matrix: Water**  
**Analysis Batch: 657032**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 654410**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
1,2,4-Trichlorobenzene	32.0	9.26	*1	ug/L		29	26 - 110	26	20	
1,2-Dichlorobenzene	32.0	8.93		ug/L		28	26 - 110	20	20	
1,3-Dichlorobenzene	32.0	7.89	*1	ug/L		25	22 - 110	22	20	
1,4-Dichlorobenzene	32.0	8.28		ug/L		26	23 - 110	20	20	
bis(chloroisopropyl) ether	32.0	15.0		ug/L		47	38 - 140	15	20	
2,4,5-Trichlorophenol	32.0	28.6		ug/L		89	63 - 124	8	20	
2,4,6-Trichlorophenol	32.0	26.9		ug/L		84	62 - 121	10	20	
2,4-Dichlorophenol	32.0	27.9		ug/L		87	58 - 120	12	20	
2,4-Dimethylphenol	32.0	23.2		ug/L		72	51 - 115	14	20	
2,4-Dinitrophenol	64.0	57.8		ug/L		90	37 - 130	7	20	
2,4-Dinitrotoluene	32.0	29.9		ug/L		93	63 - 129	6	20	
2,6-Dinitrotoluene	32.0	28.7		ug/L		90	63 - 129	7	20	
2-Chloronaphthalene	32.0	11.4	*- *1	ug/L		36	39 - 110	25	20	
2-Chlorophenol	32.0	23.1		ug/L		72	59 - 110	13	20	
2-Methylnaphthalene	32.0	11.1	*1	ug/L		35	34 - 110	25	20	
2-Methylphenol	32.0	24.1		ug/L		75	53 - 115	13	20	
2-Nitroaniline	32.0	25.0		ug/L		78	59 - 138	8	20	
2-Nitrophenol	32.0	25.0		ug/L		78	59 - 115	11	20	
3 & 4 Methylphenol	32.0	23.7		ug/L		74	50 - 116	11	20	
3,3'-Dichlorobenzidine	32.0	33.5		ug/L		105	60 - 132	6	20	
3-Nitroaniline	32.0	24.7		ug/L		77	47 - 123	6	20	
4,6-Dinitro-2-methylphenol	64.0	58.6		ug/L		92	50 - 129	5	20	
4-Bromophenyl phenyl ether	32.0	24.8		ug/L		77	58 - 120	14	20	
4-Chloro-3-methylphenol	32.0	29.3		ug/L		91	64 - 128	6	20	
4-Chloroaniline	32.0	23.5		ug/L		73	35 - 128	11	20	
4-Chlorophenyl phenyl ether	32.0	18.8		ug/L		59	48 - 116	19	20	
4-Nitroaniline	32.0	23.9		ug/L		75	35 - 110	4	20	
4-Nitrophenol	64.0	32.5		ug/L		51	20 - 110	11	20	
Acenaphthene	32.0	14.8	*1	ug/L		46	46 - 110	21	20	
Acenaphthylene	32.0	15.9		ug/L		50	47 - 113	19	20	
Anthracene	32.0	27.1		ug/L		85	67 - 118	5	20	
Benzo[a]anthracene	32.0	26.9		ug/L		84	70 - 126	7	20	
Benzo[a]pyrene	32.0	30.2		ug/L		94	70 - 135	4	20	
Benzo[b]fluoranthene	32.0	28.5		ug/L		89	69 - 136	5	20	
Benzo[g,h,i]perylene	32.0	30.6		ug/L		96	70 - 135	4	20	
Benzo[k]fluoranthene	32.0	30.3		ug/L		95	70 - 133	6	20	
Benzoic acid	64.0	37.3		ug/L		58	10 - 112	11	20	
Benzyl alcohol	32.0	25.3		ug/L		79	46 - 132	9	20	
Bis(2-chloroethoxy)methane	32.0	24.7		ug/L		77	59 - 118	9	20	

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# QC Sample Results

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

Job ID: 480-197333-1

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

Lab Sample ID: LCSD 500-654410/3-A  
 Matrix: Water  
 Analysis Batch: 657032

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 654410

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bis(2-chloroethyl)ether	32.0	20.9		ug/L		65	54 - 112	14	20
Bis(2-ethylhexyl) phthalate	32.0	24.6		ug/L		77	69 - 136	7	20
Butyl benzyl phthalate	32.0	24.7		ug/L		77	68 - 135	5	20
Chrysene	32.0	28.2		ug/L		88	68 - 129	7	20
Dibenz(a,h)anthracene	32.0	32.3		ug/L		101	70 - 134	5	20
Dibenzofuran	32.0	17.6		ug/L		55	51 - 110	17	20
Diethyl phthalate	32.0	27.1		ug/L		85	62 - 123	5	20
Dimethyl phthalate	32.0	27.7		ug/L		87	63 - 122	7	20
Di-n-butyl phthalate	32.0	27.0		ug/L		85	69 - 129	3	20
Di-n-octyl phthalate	32.0	29.4		ug/L		92	68 - 137	3	20
Fluoranthene	32.0	28.6		ug/L		90	68 - 126	5	20
Fluorene	32.0	19.7		ug/L		62	53 - 120	14	20
Hexachlorobenzene	32.0	29.4		ug/L		92	61 - 126	12	20
Hexachlorobutadiene	32.0	8.19	*1	ug/L		26	20 - 100	34	20
Hexachlorocyclopentadiene	32.0	ND	*1	ug/L		14	10 - 105	41	20
Hexachloroethane	32.0	6.72	*1	ug/L		21	20 - 100	26	20
Indeno[1,2,3-cd]pyrene	32.0	30.5		ug/L		95	65 - 133	8	20
Isophorone	32.0	24.2		ug/L		76	54 - 127	8	20
Nitrobenzene	32.0	19.3		ug/L		60	54 - 121	13	20
N-Nitrosodi-n-propylamine	32.0	22.5		ug/L		70	47 - 131	10	20
N-Nitrosodiphenylamine	32.0	26.4		ug/L		82	66 - 120	5	20
Phenanthrene	32.0	25.3		ug/L		79	65 - 120	6	20
Phenol	32.0	16.0		ug/L		50	33 - 100	15	20
Pyrene	32.0	26.6		ug/L		83	70 - 126	7	20
2,3,4,6-Tetrachlorophenol	32.0	32.7		ug/L		102	44 - 128	6	20
1-Methylnaphthalene	32.0	11.4	*- *1	ug/L		36	38 - 110	25	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Fluorophenol (Surr)	80		27 - 110
Phenol-d5 (Surr)	52		20 - 110
Nitrobenzene-d5 (Surr)	65		36 - 120
2-Fluorobiphenyl	62		34 - 110
2,4,6-Tribromophenol (Surr)	129		40 - 145
Terphenyl-d14 (Surr)	97		40 - 145

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

Lab Sample ID: MB 480-624194/1-A  
 Matrix: Water  
 Analysis Batch: 624252

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 624194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		05/02/22 15:33	05/03/22 12:19	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	113		24 - 146	05/02/22 15:33	05/03/22 12:19	1
2-Fluorobiphenyl	88		37 - 120	05/02/22 15:33	05/03/22 12:19	1
2-Fluorophenol (Surr)	42		10 - 120	05/02/22 15:33	05/03/22 12:19	1

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# QC Sample Results

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

Job ID: 480-197333-1

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

**Lab Sample ID: MB 480-624194/1-A**  
**Matrix: Water**  
**Analysis Batch: 624252**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 624194**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5 (Surr)	72		26 - 120	05/02/22 15:33	05/03/22 12:19	1
Phenol-d5 (Surr)	27		11 - 120	05/02/22 15:33	05/03/22 12:19	1
p-Terphenyl-d14	98		64 - 127	05/02/22 15:33	05/03/22 12:19	1

**Lab Sample ID: LCS 480-624194/2-A**  
**Matrix: Water**  
**Analysis Batch: 624252**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 624194**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	156	S1+	24 - 146
2-Fluorobiphenyl	98		37 - 120
2-Fluorophenol (Surr)	48		10 - 120
Nitrobenzene-d5 (Surr)	81		26 - 120
Phenol-d5 (Surr)	32		11 - 120
p-Terphenyl-d14	113		64 - 127

**Lab Sample ID: 480-197333-4 MS**  
**Matrix: Water**  
**Analysis Batch: 624252**

**Client Sample ID: SUPE-M-99A-042722**  
**Prep Type: Total/NA**  
**Prep Batch: 624194**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	143		24 - 146
2-Fluorobiphenyl	93		37 - 120
2-Fluorophenol (Surr)	41		10 - 120
Nitrobenzene-d5 (Surr)	75		26 - 120
Phenol-d5 (Surr)	28		11 - 120
p-Terphenyl-d14	92		64 - 127

**Lab Sample ID: 480-197333-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 624252**

**Client Sample ID: SUPE-M-99A-042722**  
**Prep Type: Total/NA**  
**Prep Batch: 624194**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	142		24 - 146
2-Fluorobiphenyl	95		37 - 120
2-Fluorophenol (Surr)	43		10 - 120
Nitrobenzene-d5 (Surr)	80		26 - 120
Phenol-d5 (Surr)	29		11 - 120

# QC Sample Results

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

Job ID: 480-197333-1

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

Lab Sample ID: 480-197333-4 MSD  
Matrix: Water  
Analysis Batch: 624252

Client Sample ID: SUPE-M-99A-042722  
Prep Type: Total/NA  
Prep Batch: 624194

<i>Surrogate</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>p-Terphenyl-d14</i>	91		64 - 127

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# QC Association Summary

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

Job ID: 480-197333-1

## GC/MS VOA

### Analysis Batch: 624853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	8260C	
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	8260C	
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	8260C	
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	8260C	
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	8260C	
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	8260C	
480-197333-7	SUPE-TB-01-042722	Total/NA	Water	8260C	
MB 480-624853/7	Method Blank	Total/NA	Water	8260C	
LCS 480-624853/5	Lab Control Sample	Total/NA	Water	8260C	

## GC/MS Semi VOA

### Prep Batch: 624194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	3510C	
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	3510C	
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	3510C	
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	3510C	
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	3510C	
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	3510C	
MB 480-624194/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-624194/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-197333-4 MS	SUPE-M-99A-042722	Total/NA	Water	3510C	
480-197333-4 MSD	SUPE-M-99A-042722	Total/NA	Water	3510C	

### Analysis Batch: 624252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	8270D LL	624194
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	8270D LL	624194
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	8270D LL	624194
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	8270D LL	624194
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	8270D LL	624194
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	8270D LL	624194
MB 480-624194/1-A	Method Blank	Total/NA	Water	8270D LL	624194
LCS 480-624194/2-A	Lab Control Sample	Total/NA	Water	8270D LL	624194
480-197333-4 MS	SUPE-M-99A-042722	Total/NA	Water	8270D LL	624194
480-197333-4 MSD	SUPE-M-99A-042722	Total/NA	Water	8270D LL	624194

### Prep Batch: 654410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	3510C	
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	3510C	
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	3510C	
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	3510C	
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	3510C	
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	3510C	
MB 500-654410/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-654410/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-654410/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

# QC Association Summary

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

Job ID: 480-197333-1

## GC/MS Semi VOA

### Analysis Batch: 657032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	8270D	654410
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	8270D	654410
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	8270D	654410
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	8270D	654410
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	8270D	654410
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	8270D	654410
MB 500-654410/1-A	Method Blank	Total/NA	Water	8270D	654410
LCS 500-654410/2-A	Lab Control Sample	Total/NA	Water	8270D	654410
LCSD 500-654410/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	654410

# Lab Chronicle

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06A-042722**

**Lab Sample ID: 480-197333-1**

**Date Collected: 04/27/22 08:38**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 15:48	AXK	TAL BUF
Total/NA	Prep	3510C			654410	05/02/22 16:07	MJ	TAL CHI
Total/NA	Analysis	8270D		1	657032	05/17/22 13:26	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 14:37	PJQ	TAL BUF

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

**Date Collected: 04/27/22 13:54**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 16:11	AXK	TAL BUF
Total/NA	Prep	3510C			654410	05/02/22 16:07	MJ	TAL CHI
Total/NA	Analysis	8270D		1	657032	05/17/22 13:50	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 15:04	PJQ	TAL BUF

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

**Date Collected: 04/27/22 15:10**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 16:34	AXK	TAL BUF
Total/NA	Prep	3510C			654410	05/02/22 16:07	MJ	TAL CHI
Total/NA	Analysis	8270D		1	657032	05/17/22 14:14	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 15:32	PJQ	TAL BUF

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

**Date Collected: 04/27/22 22:00**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 16:58	AXK	TAL BUF
Total/NA	Prep	3510C			654410	05/02/22 16:07	MJ	TAL CHI
Total/NA	Analysis	8270D		1	657032	05/17/22 14:38	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 14:09	PJQ	TAL BUF

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

**Date Collected: 04/27/22 10:43**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 17:21	AXK	TAL BUF

Eurofins Buffalo



# Lab Chronicle

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

Job ID: 480-197333-1

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

**Date Collected: 04/27/22 10:43**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			654410	05/02/22 16:07	MJ	TAL CHI
Total/NA	Analysis	8270D		1	657032	05/17/22 15:02	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 16:00	PJQ	TAL BUF

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

**Date Collected: 04/27/22 13:06**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 17:43	AXK	TAL BUF
Total/NA	Prep	3510C			654410	05/02/22 16:07	MJ	TAL CHI
Total/NA	Analysis	8270D		1	657032	05/17/22 15:26	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 16:27	PJQ	TAL BUF

**Client Sample ID: SUPE-TB-01-042722**

**Lab Sample ID: 480-197333-7**

**Date Collected: 04/27/22 15:23**

**Matrix: Water**

**Date Received: 04/28/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	624853	05/06/22 18:06	AXK	TAL BUF

**Laboratory References:**

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins 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: 480-197333-1

## Laboratory: Eurofins Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998310390	08-31-22

## Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-22

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
8270D	3510C	Water	2,3,5,6-Tetrachlorophenol



# Method Summary

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

Job ID: 480-197333-1

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 Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

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

Job ID: 480-197333-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-197333-1	SUPE-W-06A-042722	Water	04/27/22 08:38	04/28/22 10:00
480-197333-2	SUPE-W-28C-042722	Water	04/27/22 13:54	04/28/22 10:00
480-197333-3	SUPE-EB-01-042722	Water	04/27/22 15:10	04/28/22 10:00
480-197333-4	SUPE-M-99A-042722	Water	04/27/22 22:00	04/28/22 10:00
480-197333-5	SUPE-W-06C-042722	Water	04/27/22 10:43	04/28/22 10:00
480-197333-6	SUPE-W-12A-042722	Water	04/27/22 13:06	04/28/22 10:00
480-197333-7	SUPE-TB-01-042722	Water	04/27/22 15:23	04/28/22 10:00

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**Eurofins Buffalo**

10 Hazelwood Drive  
Amherst, NY 14228-2298  
Phone: 716-691-2600 Fax: 716-691-7991

**Chain of Custody Record**



Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>				Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving				Phone:	Brown, Shali		480-71736.1
Company: TestAmerica Laboratories, Inc.				E-Mail:	Shali.Brown@et.eurofinsus.com	State of Origin: Wisconsin	Page: Page 1 of 1
Address: 5815 Middlebrook Pike, City: Knoxville State, Zip: TN, 37921 Phone: 865-291-3000(Tel) 865-584-4315(Fax) Email:				Due Date Requested: 5/18/2022	Accreditations Required (See note): State Program - Wisconsin		Job #: 480-197333-1
Project Name: Superior, WI Semiannual Groundwater Site:				TAT Requested (days):	Analysis Requested		Preservation Codes:
Project #: 18015916 SSOW#:				PO #:	<p>480-197333 Chain of Custody</p>		A - HCL B - NaOH Acetic Acid HSO4 OH Chlor Boric Acid Water TA A M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)
Sample Identification - Client ID (Lab ID)				WO #:			Total Number of cont
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)
Preservation Code:				Perform MS/MSD (Yes or No)	8290A/8290_P_Sep 17 Isomers + Totals	Special Instructions/Note:	
SUPE-W-06A-042722 (480-197333-1)				4/27/22	08:38 Central	Water	X
SUPE-W-28C-042722 (480-197333-2)				4/27/22	13:54 Central	Water	X
SUPE-EB-01-042722 (480-197333-3)				4/27/22	15:10 Central	Water	X
SUPE-M-99A-042722 (480-197333-4)				4/27/22	22:00 Central	Water	X
SUPE-W-06C-042722 (480-197333-5)				4/27/22	10:43 Central	Water	X
SUPE-W-12A-042722 (480-197333-6)				4/27/22	13:06 Central	Water	X
CUSTODY SEALS INTACT RECEIVED AT RT 0.5/CT 1.3c DND 4:30:22 160012 FAX# 1888 3870 4126 PDS							
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC 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 Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.							
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>Amber C. C. 0616</i>				Date/Time: 4/29/22 17:00	Company: TA	Received by: <i>[Signature]</i>	Date/Time: 4:30:22 10:00
Relinquished by:				Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:				Date/Time:	Company:	Received by:	Date/Time:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken														
1. Are the shipping containers intact?	/		/	<input type="checkbox"/> Containers, Broken	<div style="display: flex; justify-content: space-between;"> <span>Labeling Verified by: _____</span> <span>Date: _____</span> </div> <p>pH test strip lot number: _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Box 16A: pH Preservation</th> <th style="width: 50%;">Box 18A: Residual Chlorine</th> </tr> </thead> <tbody> <tr> <td>Preservative: _____</td> <td>_____</td> </tr> <tr> <td>Lot Number: _____</td> <td>_____</td> </tr> <tr> <td>Exp Date: _____</td> <td>_____</td> </tr> <tr> <td>Analyst: _____</td> <td>_____</td> </tr> <tr> <td>Date: _____</td> <td>_____</td> </tr> <tr> <td>Time: _____</td> <td>_____</td> </tr> </tbody> </table>	Box 16A: pH Preservation	Box 18A: Residual Chlorine	Preservative: _____	_____	Lot Number: _____	_____	Exp Date: _____	_____	Analyst: _____	_____	Date: _____	_____	Time: _____	_____
Box 16A: pH Preservation	Box 18A: Residual Chlorine																		
Preservative: _____	_____																		
Lot Number: _____	_____																		
Exp Date: _____	_____																		
Analyst: _____	_____																		
Date: _____	_____																		
Time: _____	_____																		
2. Were ambient air containers received intact?			/	<input type="checkbox"/> Checked in lab															
3. The coolers/containers custody seal if present, is it intact?	/			<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>SG11</u> Correction factor: <u>+0.5°C</u>	/			<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 type="checkbox"/> Containers, Broken															
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel															
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<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 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 type="checkbox"/> COC; No Date/Time; Client Contacted															
10. Was the sampler identified on the COC?	/		/	<input type="checkbox"/> Sampler Not Listed on COC															
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete															
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC															
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete															
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete															
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt															
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative															
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)															
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine															
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust															
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info															
Project #: _____ PM Instructions: _____																			

Sample Receiving Associate: Russell Date: 4:30:22

QA026R32.doc, 062719



**Eurofins Buffalo**

10 Hazelwood Drive  
Amherst, NY 14228-2298  
Phone 716-691-2600 Fax: 716-691-7991

**Chain of Custody Record**



Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab PM Brown Shali		Carrier Tracking No(s)		COC No: 480-71735 1				
Client Contact: Shipping/Receiving		Phone:	E-Mail Shali Brown@et.eurofinsus.com		State of Origin Wisconsin		Page Page 1 of 1				
Company Eurofins Environment Testing North Centr		Accreditations Required (See note) State Program - Wisconsin				Job #: 480-197333-1					
Address: 2417 Bond Street		Due Date Requested: 5/18/2022		<b>Analysis Requested</b>					<b>Preservation Codes</b>		
City: University Park		TAT Requested (days)									
State Zip IL, 60484		PO #:		Field Filtered Sample (Yes or No) <input type="checkbox"/> Perform MS/MSD (Yes or No) <input type="checkbox"/> 8270D/3510C_LVI (MOD) Semivolatiles, project list with n					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)		
Phone: 708-534-5200(Tel) 708-534-5211(Fax)		WO #: 480-197333 COC									
Project Name Superior WI Semiannual Groundwater		Project #: 18015916		Total Number of Containers					Other		
Site		SSOW#:									
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=comp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)</b>	<b>Field Filtered Sample (Yes or No)</b>		<b>Perform MS/MSD (Yes or No)</b>		<b>Special Instructions/Note</b>	
SUPE-W-06A-042722 (480-197333-1)		4/27/22	08 38 Central		Water		X			1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-28C-042722 (480-197333-2)		4/27/22	13 54 Central		Water		X			1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-EB-01 042722 (480-197333-3)		4/27/22	15 10 Central		Water		X			1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-M-99A-042722 (480-197333-4)		4/27/22	22 00 Central		Water		X			1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-06C-042722 (480-197333-5)		4/27/22	10 43 Central		Water		X			1	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-12A-042722 (480-197333-6)		4/27/22	13 06 Central		Water		X			1	Refer to PT-PM-WI-006 for Wisconsin Protocol
Note: Since laboratory accreditations are subject to change Eurofins Environment Testing Northeast, LLC 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 Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.											
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>					
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>Wm New</i>		Date/Time: <i>4/29/22 1700</i>		Company: <i>FA</i>		Received by: <i>Shella Dunley</i>		Date/Time: <i>4/30/22 0905</i>		Company: <i>ETA</i>	
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 <i>-0.7 → -0.6</i>					





# Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-197333-1

**Login Number: 197333**

**List Number: 1**

**Creator: Kolb, Chris M**

**List Source: Eurofins Buffalo**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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.	N/A	



# Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-197333-1

**Login Number: 197333**

**List Number: 3**

**Creator: Buckley, Paula M**

**List Source: Eurofins Chicago**

**List Creation: 04/30/22 11:33 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	-0.6 samples were not frozen
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 2, 2022

FROM: Kendra Chintella

SUBJECT: Superior Groundwater

SAMPLE DELIVERY GROUP (SDG): 480-197333-2

SAMPLES: SUPE-W-06A-042722, SUPE-W-28C-042722, SUPE-EB-01-042722, SUPE-M-99A-042722(W-28C), SUPE-W-06C-042722, SUPE-W-12A-042722

ANALYSES: Method 8290A (Dioxins/Furans)

LABORATORY: Eurofins 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-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, OCDD, OCDF, total HpCDF, total HxCDD, and total PeCDD were detected in the method blank. Results were detected in the method blank below the QL and results detected below the QL in samples were qualified not detected at the QL.
- Field Blank Contamination  
**Noncompliance:** 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, OCDD, OCDF, total HpCDF, total HxCDD, and total TCDF were detected in the equipment blank. Results were detected in the equipment blank below the QL and results detected below the QL in samples were qualified not detected at the QL.
- Field Duplicate Precision  
Noncompliance: See attached page for details.
- Surrogate Recoveries  
Noncompliance: None
- Laboratory Control Sample  
Noncompliance: None

**Field Duplicate Precision:**

FIELD DUPLICATE PRECISION					
ANALYTE	W-28C	QUAL	M-99A	QUAL	RPD
1,2,3,4,6,7,8-HpCDD	9.2	J	14	JI	41.38*
1,2,3,4,6,7,8-HpCDF	1.8	JI	1.8	J	0.00
1,2,3,4,7,8,9-HpCDF	0.59	JI	0.58	U	NC
1,2,3,4,7,8-HxCDD	1.2	JI	1.2	JI	0.00
1,2,3,6,7,8-HxCDD	0.57	J	0.66	JI	14.63
1,2,3,7,8,9-HxCDD	0.66	JIS	0.78	JS	16.67
1,2,3,7,8-PeCDD	0.17	U	0.49	J	NC
OCDD	98	J	79	J	21.47
OCDF	4.8	J	4.2	J	13.33
Total HpCDD	40	J	58	I	36.73*
Total HpCDF	5.7	JI	4.1	J	32.65*
Total HxCDD	4.6	JIS	6.9	JIS	40.00*
Total HxCDF	5.7	JIS	2	JI	96.10*
Total PeCDD	0.93	JI	1.6	JI	52.96*
Total PeCDF	0.61	JI	0.61	JI	0.00
Total TCDF	1.2	JI	0.2	U	NC

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

Laboratory Job ID: 480-197333-2

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:  
5/27/2022 6:17:23 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

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results through



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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 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.



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# Definitions/Glossary

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

Job ID: 480-197333-2

## 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.
S	Ion suppression

## 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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Case Narrative

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

Job ID: 480-197333-2

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**Job ID: 480-197333-2**

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**Laboratory: Eurofins Buffalo**

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**Narrative**

**Job Narrative**  
**480-197333-2**

**Comments**

No additional comments.

**Receipt**

The samples were received on 4/28/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.4° C, 1.8° C, 2.9° C and 3.2° C.

**Dioxin**

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

**Organic Prep**

Method 8290: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 140-61532. The method required MS/MSD were not performed due to insufficient sample received. As a result, the data may be rejected by the WDNR.

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: 480-197333-2

## Client Sample ID: SUPE-W-06A-042722

## Lab Sample ID: 480-197333-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	0.74	J I	47	0.18	pg/L	1		8290A	Total/NA
Total PeCDD	1.2	J I B	47	0.18	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	2.2	J B	47	0.15	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	3.4	J B	47	0.15	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	3.2	J I S B	47	0.14	pg/L	1		8290A	Total/NA
Total HxCDD	32	J I S B	47	0.15	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	78		47	1.9	pg/L	1		8290A	Total/NA
Total HpCDD	290		47	1.9	pg/L	1		8290A	Total/NA
OCDD	620	B	94	0.21	pg/L	1		8290A	Total/NA
Total TCDF	2.3	J I	9.4	0.28	pg/L	1		8290A	Total/NA
Total PeCDF	12	J I	47	0.23	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.4	J I	47	0.70	pg/L	1		8290A	Total/NA
Total HxCDF	37	J I	47	0.74	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	9.7	J B	47	0.66	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	1.8	J I B	47	0.94	pg/L	1		8290A	Total/NA
Total HpCDF	39	J I B	47	0.80	pg/L	1		8290A	Total/NA
OCDF	34	J B	94	0.10	pg/L	1		8290A	Total/NA

## Client Sample ID: SUPE-W-28C-042722

## Lab Sample ID: 480-197333-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	0.93	J I B	50	0.17	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.2	J I B	50	0.20	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	0.57	J B	50	0.21	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.66	J I S B	50	0.19	pg/L	1		8290A	Total/NA
Total HxCDD	4.6	J I S B	50	0.20	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	9.2	J	50	1.5	pg/L	1		8290A	Total/NA
Total HpCDD	40	J	50	1.5	pg/L	1		8290A	Total/NA
OCDD	98	J B	100	0.32	pg/L	1		8290A	Total/NA
Total TCDF	1.2	J I	10	0.27	pg/L	1		8290A	Total/NA
Total PeCDF	0.61	J I	50	0.20	pg/L	1		8290A	Total/NA
Total HxCDF	5.7	J I S	50	0.32	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	1.8	J I B	50	0.13	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.59	J I B	50	0.18	pg/L	1		8290A	Total/NA
Total HpCDF	5.7	J I B	50	0.16	pg/L	1		8290A	Total/NA
OCDF	4.8	J B	100	0.12	pg/L	1		8290A	Total/NA

## Client Sample ID: SUPE-EB-01-042722

## Lab Sample ID: 480-197333-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	1.5	J I B	48	0.20	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	0.42	J B	48	0.19	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.50	J B	48	0.18	pg/L	1		8290A	Total/NA
Total HxCDD	3.2	J I B	48	0.19	pg/L	1		8290A	Total/NA
OCDD	3.3	J I B	96	0.28	pg/L	1		8290A	Total/NA
Total TCDF	2.2	J	9.6	0.25	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	0.95	J B	48	0.22	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	0.84	J I B	48	0.26	pg/L	1		8290A	Total/NA
Total HpCDF	1.8	J I B	48	0.24	pg/L	1		8290A	Total/NA
OCDF	1.2	J I B	96	0.22	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

# Detection Summary

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

Job ID: 480-197333-2

## Client Sample ID: SUPE-M-99A-042722

## Lab Sample ID: 480-197333-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	0.49	J	49	0.23	pg/L	1		8290A	Total/NA
Total PeCDD	1.6	J   B	49	0.23	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.2	J   B	49	0.39	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	0.66	J   B	49	0.37	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.78	J S B	49	0.35	pg/L	1		8290A	Total/NA
Total HxCDD	6.9	J S   B	49	0.37	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	14	J   I	49	0.86	pg/L	1		8290A	Total/NA
Total HpCDD	58	I	49	0.86	pg/L	1		8290A	Total/NA
OCDD	79	J B	98	0.24	pg/L	1		8290A	Total/NA
Total PeCDF	0.61	J   I	49	0.17	pg/L	1		8290A	Total/NA
Total HxCDF	2.0	J   I	49	0.55	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	1.8	J B	49	0.43	pg/L	1		8290A	Total/NA
Total HpCDF	4.1	J B	49	0.51	pg/L	1		8290A	Total/NA
OCDF	4.2	J B	98	0.49	pg/L	1		8290A	Total/NA

## Client Sample ID: SUPE-W-06C-042722

## Lab Sample ID: 480-197333-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	1.4	J   B	47	0.24	pg/L	1		8290A	Total/NA
Total HxCDD	2.4	J   B	47	0.24	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	13	J   I	47	0.49	pg/L	1		8290A	Total/NA
Total HpCDD	36	J   I	47	0.49	pg/L	1		8290A	Total/NA
OCDD	64	J B	94	0.24	pg/L	1		8290A	Total/NA
Total TCDF	1.0	J   I	9.4	0.23	pg/L	1		8290A	Total/NA
Total PeCDF	1.6	J   I	47	0.25	pg/L	1		8290A	Total/NA
Total HxCDF	3.9	J   I	47	0.54	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	2.5	J   B	47	0.40	pg/L	1		8290A	Total/NA
Total HpCDF	5.2	J   B	47	0.46	pg/L	1		8290A	Total/NA
OCDF	5.7	J B	94	0.18	pg/L	1		8290A	Total/NA

## Client Sample ID: SUPE-W-12A-042722

## Lab Sample ID: 480-197333-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	1.4	J   I	9.6	0.34	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDD	0.98	J   I	48	0.36	pg/L	1		8290A	Total/NA
Total PeCDD	2.7	J   B	48	0.36	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	2.1	J   B	48	0.35	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	7.5	J B	48	0.30	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	2.8	J S B	48	0.30	pg/L	1		8290A	Total/NA
Total HxCDD	28	J S   B	48	0.32	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	73	I	48	1.3	pg/L	1		8290A	Total/NA
Total HpCDD	150	I	48	1.3	pg/L	1		8290A	Total/NA
OCDD	380	B	96	0.35	pg/L	1		8290A	Total/NA
2,3,7,8-TCDF	0.84	J	9.6	0.31	pg/L	1		8290A	Total/NA
Total TCDF	69	I	9.6	0.31	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.92	J	48	0.16	pg/L	1		8290A	Total/NA
2,3,4,7,8-PeCDF	1.6	J   I	48	0.19	pg/L	1		8290A	Total/NA
Total PeCDF	63	I	48	0.17	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	8.0	J	48	0.76	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	6.1	J   I	48	0.81	pg/L	1		8290A	Total/NA
Total HxCDF	110	S   I	48	0.87	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	18	J B	48	0.35	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

# Detection Summary

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-W-12A-042722 (Continued)**

**Lab Sample ID: 480-197333-6**

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8,9-HpCDF	2.9	J B	48	0.49	pg/L	1		8290A	Total/NA
Total HpCDF	60	B	48	0.42	pg/L	1		8290A	Total/NA
OCDF	27	J B	96	0.095	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

# Client Sample Results

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-W-06A-042722**

**Lab Sample ID: 480-197333-1**

Date Collected: 04/27/22 08:38

Matrix: Water

Date Received: 04/28/22 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		9.4	0.18	pg/L		05/10/22 09:09	05/24/22 17:21	1
Total TCDD	ND		9.4	0.18	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,7,8-PeCDD</b>	<b>0.74</b>	<b>J I</b>	47	0.18	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total PeCDD</b>	<b>1.2</b>	<b>J I B</b>	47	0.18	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>2.2</b>	<b>J B</b>	47	0.15	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>3.4</b>	<b>J B</b>	47	0.15	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>3.2</b>	<b>J I S B</b>	47	0.14	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total HxCDD</b>	<b>32</b>	<b>J I S B</b>	47	0.15	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,4,6,7,8-HpCDD</b>	<b>78</b>		47	1.9	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total HpCDD</b>	<b>290</b>		47	1.9	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>OCDD</b>	<b>620</b>	<b>B</b>	94	0.21	pg/L		05/10/22 09:09	05/24/22 17:21	1
2,3,7,8-TCDF	ND		9.4	0.28	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total TCDF</b>	<b>2.3</b>	<b>J I</b>	9.4	0.28	pg/L		05/10/22 09:09	05/24/22 17:21	1
1,2,3,7,8-PeCDF	ND		47	0.21	pg/L		05/10/22 09:09	05/24/22 17:21	1
2,3,4,7,8-PeCDF	ND		47	0.25	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total PeCDF</b>	<b>12</b>	<b>J I</b>	47	0.23	pg/L		05/10/22 09:09	05/24/22 17:21	1
1,2,3,4,7,8-HxCDF	ND		47	0.64	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,6,7,8-HxCDF</b>	<b>2.4</b>	<b>J I</b>	47	0.70	pg/L		05/10/22 09:09	05/24/22 17:21	1
2,3,4,6,7,8-HxCDF	ND		47	0.83	pg/L		05/10/22 09:09	05/24/22 17:21	1
1,2,3,7,8,9-HxCDF	ND		47	0.80	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total HxCDF</b>	<b>37</b>	<b>J I</b>	47	0.74	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>9.7</b>	<b>J B</b>	47	0.66	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>1,2,3,4,7,8,9-HpCDF</b>	<b>1.8</b>	<b>J I B</b>	47	0.94	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>Total HpCDF</b>	<b>39</b>	<b>J I B</b>	47	0.80	pg/L		05/10/22 09:09	05/24/22 17:21	1
<b>OCDF</b>	<b>34</b>	<b>J B</b>	94	0.10	pg/L		05/10/22 09:09	05/24/22 17:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	79		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,7,8-PeCDD	100		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,4,7,8-HxCDD	92		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,6,7,8-HxCDD	99		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-OCDD	88		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-2,3,7,8-TCDF	75		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,7,8-PeCDF	102		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-2,3,4,7,8-PeCDF	82		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,4,7,8-HxCDF	102		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,6,7,8-HxCDF	88		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-2,3,4,6,7,8-HxCDF	94		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,7,8,9-HxCDF	105		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,4,6,7,8-HpCDF	95		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-1,2,3,4,7,8,9-HpCDF	100		40 - 135	05/10/22 09:09	05/24/22 17:21	1
13C-OCDF	88		40 - 135	05/10/22 09:09	05/24/22 17:21	1

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

Date Collected: 04/27/22 13:54

Matrix: Water

Date Received: 04/28/22 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		10	0.20	pg/L		05/10/22 09:09	05/24/22 18:22	1

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# Client Sample Results

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

Date Collected: 04/27/22 13:54

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	ND		10	0.20	pg/L		05/10/22 09:09	05/24/22 18:22	1
1,2,3,7,8-PeCDD	ND		50	0.17	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total PeCDD</b>	<b>0.93</b>	<b>J I B</b>	50	0.17	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>1.2</b>	<b>J I B</b>	50	0.20	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.57</b>	<b>J B</b>	50	0.21	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>0.66</b>	<b>J I S B</b>	50	0.19	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total HxCDD</b>	<b>4.6</b>	<b>J I S B</b>	50	0.20	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>1,2,3,4,6,7,8-HpCDD</b>	<b>9.2</b>	<b>J</b>	50	1.5	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total HpCDD</b>	<b>40</b>	<b>J</b>	50	1.5	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>OCDD</b>	<b>98</b>	<b>J B</b>	100	0.32	pg/L		05/10/22 09:09	05/24/22 18:22	1
2,3,7,8-TCDF	ND		10	0.27	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total TCDF</b>	<b>1.2</b>	<b>J I</b>	10	0.27	pg/L		05/10/22 09:09	05/24/22 18:22	1
1,2,3,7,8-PeCDF	ND		50	0.20	pg/L		05/10/22 09:09	05/24/22 18:22	1
2,3,4,7,8-PeCDF	ND		50	0.21	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total PeCDF</b>	<b>0.61</b>	<b>J I</b>	50	0.20	pg/L		05/10/22 09:09	05/24/22 18:22	1
1,2,3,4,7,8-HxCDF	ND		50	0.26	pg/L		05/10/22 09:09	05/24/22 18:22	1
1,2,3,6,7,8-HxCDF	ND		50	0.30	pg/L		05/10/22 09:09	05/24/22 18:22	1
2,3,4,6,7,8-HxCDF	ND		50	0.34	pg/L		05/10/22 09:09	05/24/22 18:22	1
1,2,3,7,8,9-HxCDF	ND		50	0.36	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total HxCDF</b>	<b>5.7</b>	<b>J I S</b>	50	0.32	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>1.8</b>	<b>J I B</b>	50	0.13	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>1,2,3,4,7,8,9-HpCDF</b>	<b>0.59</b>	<b>J I B</b>	50	0.18	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>Total HpCDF</b>	<b>5.7</b>	<b>J I B</b>	50	0.16	pg/L		05/10/22 09:09	05/24/22 18:22	1
<b>OCDF</b>	<b>4.8</b>	<b>J B</b>	100	0.12	pg/L		05/10/22 09:09	05/24/22 18:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	78		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,7,8-PeCDD	98		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,4,7,8-HxCDD	94		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,6,7,8-HxCDD	102		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,4,6,7,8-HpCDD	113		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-OCDD	84		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-2,3,7,8-TCDF	79		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,7,8-PeCDF	97		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-2,3,4,7,8-PeCDF	85		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,4,7,8-HxCDF	110		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,6,7,8-HxCDF	97		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-2,3,4,6,7,8-HxCDF	101		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,7,8,9-HxCDF	105		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,4,6,7,8-HpCDF	106		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-1,2,3,4,7,8,9-HpCDF	116		40 - 135	05/10/22 09:09	05/24/22 18:22	1
13C-OCDF	92		40 - 135	05/10/22 09:09	05/24/22 18:22	1

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

Date Collected: 04/27/22 15:10

Matrix: Water

Date Received: 04/28/22 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	0.36	pg/L		05/10/22 09:09	05/24/22 23:22	1
Total TCDD	ND		9.6	0.36	pg/L		05/10/22 09:09	05/24/22 23:22	1

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# Client Sample Results

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

Date Collected: 04/27/22 15:10

Matrix: Water

Date Received: 04/28/22 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	0.24	pg/L		05/10/22 09:09	05/24/22 23:22	1
Total PeCDD	ND		48	0.24	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>1.5</b>	<b>J B</b>	48	0.20	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.42</b>	<b>J B</b>	48	0.19	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>0.50</b>	<b>J B</b>	48	0.18	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>Total HxCDD</b>	<b>3.2</b>	<b>J B</b>	48	0.19	pg/L		05/10/22 09:09	05/24/22 23:22	1
1,2,3,4,6,7,8-HpCDD	ND		48	1.7	pg/L		05/10/22 09:09	05/24/22 23:22	1
Total HpCDD	ND		48	1.7	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>OCDD</b>	<b>3.3</b>	<b>J B</b>	96	0.28	pg/L		05/10/22 09:09	05/24/22 23:22	1
2,3,7,8-TCDF	ND		9.6	0.25	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>Total TCDF</b>	<b>2.2</b>	<b>J</b>	9.6	0.25	pg/L		05/10/22 09:09	05/24/22 23:22	1
1,2,3,7,8-PeCDF	ND		48	0.26	pg/L		05/10/22 09:09	05/24/22 23:22	1
2,3,4,7,8-PeCDF	ND		48	0.28	pg/L		05/10/22 09:09	05/24/22 23:22	1
Total PeCDF	ND		48	0.28	pg/L		05/10/22 09:09	05/24/22 23:22	1
1,2,3,4,7,8-HxCDF	ND		48	0.39	pg/L		05/10/22 09:09	05/24/22 23:22	1
1,2,3,6,7,8-HxCDF	ND		48	0.38	pg/L		05/10/22 09:09	05/24/22 23:22	1
2,3,4,6,7,8-HxCDF	ND		48	0.42	pg/L		05/10/22 09:09	05/24/22 23:22	1
1,2,3,7,8,9-HxCDF	ND		48	0.47	pg/L		05/10/22 09:09	05/24/22 23:22	1
Total HxCDF	ND		48	0.47	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>0.95</b>	<b>J B</b>	48	0.22	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>1,2,3,4,7,8,9-HpCDF</b>	<b>0.84</b>	<b>J B</b>	48	0.26	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>Total HpCDF</b>	<b>1.8</b>	<b>J B</b>	48	0.24	pg/L		05/10/22 09:09	05/24/22 23:22	1
<b>OCDF</b>	<b>1.2</b>	<b>J B</b>	96	0.22	pg/L		05/10/22 09:09	05/24/22 23:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,7,8-PeCDD	84		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,4,7,8-HxCDD	89		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,6,7,8-HxCDD	99		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,4,6,7,8-HpCDD	98		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-OCDD	85		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-2,3,7,8-TCDF	73		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,7,8-PeCDF	84		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-2,3,4,7,8-PeCDF	72		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,4,7,8-HxCDF	91		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,6,7,8-HxCDF	90		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-2,3,4,6,7,8-HxCDF	100		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,7,8,9-HxCDF	99		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,4,6,7,8-HpCDF	81		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-1,2,3,4,7,8,9-HpCDF	106		40 - 135	05/10/22 09:09	05/24/22 23:22	1
13C-OCDF	90		40 - 135	05/10/22 09:09	05/24/22 23:22	1

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

Date Collected: 04/27/22 22:00

Matrix: Water

Date Received: 04/28/22 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		9.8	0.35	pg/L		05/10/22 09:09	05/25/22 00:22	1
Total TCDD	ND		9.8	0.35	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>1,2,3,7,8-PeCDD</b>	<b>0.49</b>	<b>J</b>	49	0.23	pg/L		05/10/22 09:09	05/25/22 00:22	1

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# Client Sample Results

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

Date Collected: 04/27/22 22:00

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total PeCDD</b>	<b>1.6</b>	<b>J I B</b>	49	0.23	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>1.2</b>	<b>J I B</b>	49	0.39	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.66</b>	<b>J I B</b>	49	0.37	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>0.78</b>	<b>J S B</b>	49	0.35	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>Total HxCDD</b>	<b>6.9</b>	<b>J S I B</b>	49	0.37	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>1,2,3,4,6,7,8-HpCDD</b>	<b>14</b>	<b>J I</b>	49	0.86	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>Total HpCDD</b>	<b>58</b>	<b>I</b>	49	0.86	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>OCDD</b>	<b>79</b>	<b>J B</b>	98	0.24	pg/L		05/10/22 09:09	05/25/22 00:22	1
2,3,7,8-TCDF	ND		9.8	0.20	pg/L		05/10/22 09:09	05/25/22 00:22	1
Total TCDF	ND		9.8	0.20	pg/L		05/10/22 09:09	05/25/22 00:22	1
1,2,3,7,8-PeCDF	ND		49	0.16	pg/L		05/10/22 09:09	05/25/22 00:22	1
2,3,4,7,8-PeCDF	ND		49	0.17	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>Total PeCDF</b>	<b>0.61</b>	<b>J I</b>	49	0.17	pg/L		05/10/22 09:09	05/25/22 00:22	1
1,2,3,4,7,8-HxCDF	ND		49	0.44	pg/L		05/10/22 09:09	05/25/22 00:22	1
1,2,3,6,7,8-HxCDF	ND		49	0.48	pg/L		05/10/22 09:09	05/25/22 00:22	1
2,3,4,6,7,8-HxCDF	ND		49	0.59	pg/L		05/10/22 09:09	05/25/22 00:22	1
1,2,3,7,8,9-HxCDF	ND		49	0.67	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>Total HxCDF</b>	<b>2.0</b>	<b>J I</b>	49	0.55	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>1.8</b>	<b>J B</b>	49	0.43	pg/L		05/10/22 09:09	05/25/22 00:22	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.58	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>Total HpCDF</b>	<b>4.1</b>	<b>J B</b>	49	0.51	pg/L		05/10/22 09:09	05/25/22 00:22	1
<b>OCDF</b>	<b>4.2</b>	<b>J B</b>	98	0.49	pg/L		05/10/22 09:09	05/25/22 00:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	84		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,7,8-PeCDD	97		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,4,7,8-HxCDD	89		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,6,7,8-HxCDD	93		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,4,6,7,8-HpCDD	110		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-OCDD	80		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-2,3,7,8-TCDF	81		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,7,8-PeCDF	99		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-2,3,4,7,8-PeCDF	87		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,4,7,8-HxCDF	110		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,6,7,8-HxCDF	94		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-2,3,4,6,7,8-HxCDF	101		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,7,8,9-HxCDF	95		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,4,6,7,8-HpCDF	102		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-1,2,3,4,7,8,9-HpCDF	117		40 - 135	05/10/22 09:09	05/25/22 00:22	1
13C-OCDF	89		40 - 135	05/10/22 09:09	05/25/22 00:22	1

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

Date Collected: 04/27/22 10:43

Matrix: Water

Date Received: 04/28/22 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		9.4	0.44	pg/L		05/10/22 09:09	05/25/22 01:22	1
Total TCDD	ND		9.4	0.44	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,7,8-PeCDD	ND		47	0.29	pg/L		05/10/22 09:09	05/25/22 01:22	1
Total PeCDD	ND		47	0.29	pg/L		05/10/22 09:09	05/25/22 01:22	1

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# Client Sample Results

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

Date Collected: 04/27/22 10:43

Matrix: Water

Date Received: 04/28/22 10:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,2,3,4,7,8-HxCDD</b>	<b>1.4</b>	<b>J I B</b>	47	0.24	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,6,7,8-HxCDD	ND		47	0.26	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,7,8,9-HxCDD	ND		47	0.23	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>Total HxCDD</b>	<b>2.4</b>	<b>J I B</b>	47	0.24	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>1,2,3,4,6,7,8-HpCDD</b>	<b>13</b>	<b>J I</b>	47	0.49	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>Total HpCDD</b>	<b>36</b>	<b>J I</b>	47	0.49	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>OCDD</b>	<b>64</b>	<b>J B</b>	94	0.24	pg/L		05/10/22 09:09	05/25/22 01:22	1
2,3,7,8-TCDF	ND		9.4	0.23	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>Total TCDF</b>	<b>1.0</b>	<b>J I</b>	9.4	0.23	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,7,8-PeCDF	ND		47	0.25	pg/L		05/10/22 09:09	05/25/22 01:22	1
2,3,4,7,8-PeCDF	ND		47	0.26	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>Total PeCDF</b>	<b>1.6</b>	<b>J I</b>	47	0.25	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,4,7,8-HxCDF	ND		47	0.49	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,6,7,8-HxCDF	ND		47	0.51	pg/L		05/10/22 09:09	05/25/22 01:22	1
2,3,4,6,7,8-HxCDF	ND		47	0.54	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,7,8,9-HxCDF	ND		47	0.64	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>Total HxCDF</b>	<b>3.9</b>	<b>J I</b>	47	0.54	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>2.5</b>	<b>J I B</b>	47	0.40	pg/L		05/10/22 09:09	05/25/22 01:22	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.53	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>Total HpCDF</b>	<b>5.2</b>	<b>J I B</b>	47	0.46	pg/L		05/10/22 09:09	05/25/22 01:22	1
<b>OCDF</b>	<b>5.7</b>	<b>J B</b>	94	0.18	pg/L		05/10/22 09:09	05/25/22 01:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	74		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,7,8-PeCDD	105		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,4,7,8-HxCDD	102		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,6,7,8-HxCDD	100		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-OCDD	78		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-2,3,7,8-TCDF	83		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,7,8-PeCDF	100		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-2,3,4,7,8-PeCDF	88		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,4,7,8-HxCDF	104		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,6,7,8-HxCDF	93		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-2,3,4,6,7,8-HxCDF	105		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,7,8,9-HxCDF	97		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,4,6,7,8-HpCDF	88		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-1,2,3,4,7,8,9-HpCDF	99		40 - 135	05/10/22 09:09	05/25/22 01:22	1
13C-OCDF	81		40 - 135	05/10/22 09:09	05/25/22 01:22	1

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

Date Collected: 04/27/22 13:06

Matrix: Water

Date Received: 04/28/22 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	0.34	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total TCDD</b>	<b>1.4</b>	<b>J I</b>	9.6	0.34	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>1,2,3,7,8-PeCDD</b>	<b>0.98</b>	<b>J I</b>	48	0.36	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total PeCDD</b>	<b>2.7</b>	<b>J I B</b>	48	0.36	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>2.1</b>	<b>J I B</b>	48	0.35	pg/L		05/10/22 09:09	05/25/22 02:22	1

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# Client Sample Results

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

Date Collected: 04/27/22 13:06

Matrix: Water

Date Received: 04/28/22 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	7.5	J B	48	0.30	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,7,8,9-HxCDD	2.8	J S B	48	0.30	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total HxCDD</b>	<b>28</b>	<b>J S I B</b>	48	0.32	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,4,6,7,8-HpCDD	73	I	48	1.3	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total HpCDD</b>	<b>150</b>	<b>I</b>	48	1.3	pg/L		05/10/22 09:09	05/25/22 02:22	1
OCDD	380	B	96	0.35	pg/L		05/10/22 09:09	05/25/22 02:22	1
2,3,7,8-TCDF	0.84	J	9.6	0.31	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total TCDF</b>	<b>69</b>	<b>I</b>	9.6	0.31	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,7,8-PeCDF	0.92	J	48	0.16	pg/L		05/10/22 09:09	05/25/22 02:22	1
2,3,4,7,8-PeCDF	1.6	J I	48	0.19	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total PeCDF</b>	<b>63</b>	<b>I</b>	48	0.17	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,4,7,8-HxCDF	8.0	J	48	0.76	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,6,7,8-HxCDF	6.1	J I	48	0.81	pg/L		05/10/22 09:09	05/25/22 02:22	1
2,3,4,6,7,8-HxCDF	ND		48	1.0	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,7,8,9-HxCDF	ND		48	0.89	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total HxCDF</b>	<b>110</b>	<b>S I</b>	48	0.87	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,4,6,7,8-HpCDF	18	J B	48	0.35	pg/L		05/10/22 09:09	05/25/22 02:22	1
1,2,3,4,7,8,9-HpCDF	2.9	J B	48	0.49	pg/L		05/10/22 09:09	05/25/22 02:22	1
<b>Total HpCDF</b>	<b>60</b>	<b>B</b>	48	0.42	pg/L		05/10/22 09:09	05/25/22 02:22	1
OCDF	27	J B	96	0.095	pg/L		05/10/22 09:09	05/25/22 02:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	75		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,7,8-PeCDD	93		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,6,7,8-HxCDD	94		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-OCDD	82		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-2,3,7,8-TCDF	73		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,7,8-PeCDF	98		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-2,3,4,7,8-PeCDF	81		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,4,7,8-HxCDF	98		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,6,7,8-HxCDF	85		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-2,3,4,6,7,8-HxCDF	87		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,7,8,9-HxCDF	104		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-1,2,3,4,7,8,9-HpCDF	103		40 - 135	05/10/22 09:09	05/25/22 02:22	1
13C-OCDF	87		40 - 135	05/10/22 09:09	05/25/22 02:22	1

# Isotope Dilution Summary

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

Job ID: 480-197333-2

## 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)
480-197333-1	SUPE-W-06A-042722	79	100	92	99	96	88	75	102
480-197333-2	SUPE-W-28C-042722	78	98	94	102	113	84	79	97
480-197333-3	SUPE-EB-01-042722	73	84	89	99	98	85	73	84
480-197333-4	SUPE-M-99A-042722	84	97	89	93	110	80	81	99
480-197333-5	SUPE-W-06C-042722	74	105	102	100	93	78	83	100
480-197333-6	SUPE-W-12A-042722	75	93	76	94	97	82	73	98
LCS 140-61532/13-A	Lab Control Sample	79	96	76	84	86	65	76	90
MB 140-61532/14-A	Method Blank	75	100	74	78	75	52	79	98

		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)	OCDF (40-135)
480-197333-1	SUPE-W-06A-042722	82	102	88	94	105	95	100	88
480-197333-2	SUPE-W-28C-042722	85	110	97	101	105	106	116	92
480-197333-3	SUPE-EB-01-042722	72	91	90	100	99	81	106	90
480-197333-4	SUPE-M-99A-042722	87	110	94	101	95	102	117	89
480-197333-5	SUPE-W-06C-042722	88	104	93	105	97	88	99	81
480-197333-6	SUPE-W-12A-042722	81	98	85	87	104	94	103	87
LCS 140-61532/13-A	Lab Control Sample	81	90	82	86	86	85	88	71
MB 140-61532/14-A	Method Blank	84	79	73	80	79	71	72	57

### 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
- OCDF = 13C-OCDF

# QC Sample Results

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

Job ID: 480-197333-2

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

**Lab Sample ID: MB 140-61532/14-A**  
**Matrix: Water**  
**Analysis Batch: 61928**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 61532**

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	ND		10	0.58	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total TCDD	ND		10	0.58	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8-PeCDD	ND		50	0.64	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total PeCDD	9.77	J I	50	0.64	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,7,8-HxCDD	2.14	J	50	0.46	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,6,7,8-HxCDD	1.61	J I	50	0.48	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8,9-HxCDD	4.31	J	50	0.44	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HxCDD	8.06	J I	50	0.46	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,6,7,8-HpCDD	ND		50	4.8	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HpCDD	ND		50	4.8	pg/L		05/10/22 09:09	05/24/22 16:20	1
OCDD	7.68	J	100	0.59	pg/L		05/10/22 09:09	05/24/22 16:20	1
2,3,7,8-TCDF	ND		10	0.43	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total TCDF	ND		10	0.43	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8-PeCDF	ND		50	0.49	pg/L		05/10/22 09:09	05/24/22 16:20	1
2,3,4,7,8-PeCDF	ND		50	0.53	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total PeCDF	ND		50	0.53	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,7,8-HxCDF	ND		50	1.5	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,6,7,8-HxCDF	ND		50	1.5	pg/L		05/10/22 09:09	05/24/22 16:20	1
2,3,4,6,7,8-HxCDF	ND		50	1.6	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8,9-HxCDF	ND		50	1.9	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HxCDF	ND		50	1.9	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,6,7,8-HpCDF	1.79	J	50	0.52	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,7,8,9-HpCDF	1.74	J I	50	0.67	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HpCDF	3.52	J I	50	0.59	pg/L		05/10/22 09:09	05/24/22 16:20	1
OCDF	2.35	J I	100	0.42	pg/L		05/10/22 09:09	05/24/22 16:20	1
	MB	MB					Prepared	Analyzed	Dil Fac
Isotope Dilution	%Recovery	Qualifier	Limits						
13C-2,3,7,8-TCDD	75		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,7,8-PeCDD	100		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,7,8-HxCDD	74		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,6,7,8-HxCDD	78		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-OCDD	52		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-2,3,7,8-TCDF	79		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,7,8-PeCDF	98		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-2,3,4,7,8-PeCDF	84		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,7,8,9-HxCDF	79		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135				05/10/22 09:09	05/24/22 16:20	1
13C-OCDF	57		40 - 135				05/10/22 09:09	05/24/22 16:20	1

# QC Sample Results

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

Job ID: 480-197333-2

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

Lab Sample ID: LCS 140-61532/13-A

Matrix: Water

Analysis Batch: 61928

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61532

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	200	217		pg/L		108	77 - 127
1,2,3,7,8-PeCDD	1000	1090		pg/L		109	78 - 128
1,2,3,4,7,8-HxCDD	1000	1060		pg/L		106	73 - 123
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	72 - 127
1,2,3,7,8,9-HxCDD	1000	1080		pg/L		108	76 - 126
1,2,3,4,6,7,8-HpCDD	1000	974		pg/L		97	73 - 123
OCDD	2000	1960		pg/L		98	75 - 125
2,3,7,8-TCDF	200	240		pg/L		120	74 - 124
1,2,3,7,8-PeCDF	1000	993		pg/L		99	74 - 124
2,3,4,7,8-PeCDF	1000	1070		pg/L		107	74 - 124
1,2,3,4,7,8-HxCDF	1000	925		pg/L		92	75 - 125
1,2,3,6,7,8-HxCDF	1000	996		pg/L		100	75 - 125
2,3,4,6,7,8-HxCDF	1000	1030		pg/L		103	76 - 126
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	76 - 126
1,2,3,4,6,7,8-HpCDF	1000	975		pg/L		97	71 - 121
1,2,3,4,7,8,9-HpCDF	1000	1030		pg/L		103	73 - 123
OCDF	2000	1730		pg/L		87	68 - 132

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	79		40 - 135
13C-1,2,3,7,8-PeCDD	96		40 - 135
13C-1,2,3,4,7,8-HxCDD	76		40 - 135
13C-1,2,3,6,7,8-HxCDD	84		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135
13C-OCDD	65		40 - 135
13C-2,3,7,8-TCDF	76		40 - 135
13C-1,2,3,7,8-PeCDF	90		40 - 135
13C-2,3,4,7,8-PeCDF	81		40 - 135
13C-1,2,3,4,7,8-HxCDF	90		40 - 135
13C-1,2,3,6,7,8-HxCDF	82		40 - 135
13C-2,3,4,6,7,8-HxCDF	86		40 - 135
13C-1,2,3,7,8,9-HxCDF	86		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	85		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	88		40 - 135
13C-OCDF	71		40 - 135

# QC Association Summary

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

Job ID: 480-197333-2

## Specialty Organics

### Prep Batch: 61532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	8290	
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	8290	
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	8290	
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	8290	
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	8290	
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	8290	
MB 140-61532/14-A	Method Blank	Total/NA	Water	8290	
LCS 140-61532/13-A	Lab Control Sample	Total/NA	Water	8290	

### Analysis Batch: 61928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-1	SUPE-W-06A-042722	Total/NA	Water	8290A	61532
480-197333-2	SUPE-W-28C-042722	Total/NA	Water	8290A	61532
MB 140-61532/14-A	Method Blank	Total/NA	Water	8290A	61532
LCS 140-61532/13-A	Lab Control Sample	Total/NA	Water	8290A	61532

### Analysis Batch: 62000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197333-3	SUPE-EB-01-042722	Total/NA	Water	8290A	61532
480-197333-4	SUPE-M-99A-042722	Total/NA	Water	8290A	61532
480-197333-5	SUPE-W-06C-042722	Total/NA	Water	8290A	61532
480-197333-6	SUPE-W-12A-042722	Total/NA	Water	8290A	61532



# Lab Chronicle

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

Job ID: 480-197333-2

**Client Sample ID: SUPE-W-06A-042722**

**Lab Sample ID: 480-197333-1**

Date Collected: 04/27/22 08:38

Matrix: Water

Date Received: 04/28/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	61928	05/24/22 17:21	KBL	TAL KNX

**Client Sample ID: SUPE-W-28C-042722**

**Lab Sample ID: 480-197333-2**

Date Collected: 04/27/22 13:54

Matrix: Water

Date Received: 04/28/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	61928	05/24/22 18:22	KBL	TAL KNX

**Client Sample ID: SUPE-EB-01-042722**

**Lab Sample ID: 480-197333-3**

Date Collected: 04/27/22 15:10

Matrix: Water

Date Received: 04/28/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62000	05/24/22 23:22	PMP	TAL KNX

**Client Sample ID: SUPE-M-99A-042722**

**Lab Sample ID: 480-197333-4**

Date Collected: 04/27/22 22:00

Matrix: Water

Date Received: 04/28/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62000	05/25/22 00:22	PMP	TAL KNX

**Client Sample ID: SUPE-W-06C-042722**

**Lab Sample ID: 480-197333-5**

Date Collected: 04/27/22 10:43

Matrix: Water

Date Received: 04/28/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62000	05/25/22 01:22	PMP	TAL KNX

**Client Sample ID: SUPE-W-12A-042722**

**Lab Sample ID: 480-197333-6**

Date Collected: 04/27/22 13:06

Matrix: Water

Date Received: 04/28/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62000	05/25/22 02:22	PMP	TAL KNX

**Laboratory References:**

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

# Accreditation/Certification Summary

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

Job ID: 480-197333-2

## Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998044300	08-31-22

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	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

# Method Summary

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

Job ID: 480-197333-2

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 Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000





# Sample Summary

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

Job ID: 480-197333-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-197333-1	SUPE-W-06A-042722	Water	04/27/22 08:38	04/28/22 10:00
480-197333-2	SUPE-W-28C-042722	Water	04/27/22 13:54	04/28/22 10:00
480-197333-3	SUPE-EB-01-042722	Water	04/27/22 15:10	04/28/22 10:00
480-197333-4	SUPE-M-99A-042722	Water	04/27/22 22:00	04/28/22 10:00
480-197333-5	SUPE-W-06C-042722	Water	04/27/22 10:43	04/28/22 10:00
480-197333-6	SUPE-W-12A-042722	Water	04/27/22 13:06	04/28/22 10:00

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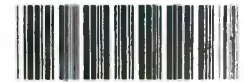
15



# CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

TestAmerica Duluth SC  
269

REF.# 302043



Ref 210311

Project Name: Superior, WI - 2022 OM&M Program  
 Project Number: OM-0556-22  
 Laboratory: TABUF  
 Shipment Method: FEDEX  
 Program: Superior 2022 1SA Sampling\_001

Company: Field & Technical Services  
 Address: 200 Third Avenue  
 Carnegie, PA 15106  
 (412) 279-3363

Client: Beazer East, Inc.  
 Contact: barbaugh.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8260C_VOA+naphtha (Buffalo)		8270D_LL_PCP (Buffalo) (1L)													Notes:																																
					Preservative	HCL	None																																													
				Total Bottle Count																																																
04/27/2022	0838	GW	SUPE-W-06A-042722	5	3	2																																														
04/27/2022	1354	GW	SUPE-W-28C-042722	5	3	2																																														
04/27/2022	1510	GW	SUPE-EB-01-042722	5	3	2																																														
04/27/2022	2200	GW	SUPE-M-99A-042722	5	3	2																																														

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480-197333 Chain of Custody

Temp 3.2, 1.8, 1.4, 2.9 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<input checked="checked" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard
Printed Name: Brenden Arbaugh	Printed Name: Erinessa Basco	Printed Name: Erinessa Basco	Printed Name: Cikold	
Firm FTS	Firm Euroferis	Firm	Firm TA	
Date/Time: 4/27/22 1500	Date/Time: 4/27/22 1600	Date/Time: 4/27/22 1600	Date/Time: 4/28/22 1000	

5/27/2022



## Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-197333-2

**Login Number: 197333**

**List Number: 1**

**Creator: Kolb, Chris M**

**List Source: Eurofins Buffalo**

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	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# FTS, LLC

DATE: May 23, 2022

FROM: Kendra Chintella

SUBJECT: Superior Groundwater

SAMPLE DELIVERY GROUP (SDG): 480-197349-1

SAMPLES: SUPE-W-12CR-042822, SUPE-W-30C-042822, SUPE-W-30A-042822, SUPE-W-18D-042822, SUPE-W-04AR2-042822, SUPE-W-10AR2-042822, SUPE-W-EB-02-042822

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

LABORATORY: Eurofins 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. Benzoic acid was detected in the equipment blank below the QL and result detected below the QL in sample W-18D was qualified not detected at the QL.**
- Surrogate Recoveries  
Noncompliance: The surrogate recovery of p-terphenyl-d14 fell below the recovery limits in sample W-12CR. The surrogate recovery of 2-fluorophenol fell below the recovery limits in sample W-10AR2 in the diluted run. No action was taken on this basis.
- Laboratory Control Sample  
Noncompliance: The LCSD recovery of butyl benzyl phthalate fell below the recovery limits. No action was taken on this basis.

## ANALYTICAL REPORT

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

Laboratory Job ID: 480-197349-1

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:  
5/19/2022 9:19:18 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

Review your project  
results through



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[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 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.



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# Definitions/Glossary

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

Job ID: 480-197349-1

## 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 and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

## 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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Case Narrative

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

Job ID: 480-197349-1

## Job ID: 480-197349-1

### Laboratory: Eurofins Buffalo

#### Narrative

#### Job Narrative 480-197349-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/29/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.0° C, 1.4° C, 2.0° C and 2.2° C.

#### GC/MS VOA

Method 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: SUPE-W-30A-042822. Elevated reporting limits (RLs) are provided.

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

#### GC/MS Semi VOA

Methods 8270D, 8270D LL: The continuing calibration verification (CCV) analyzed in batch 480-624252 was outside the method criteria for the following analyte(s): 2,4,6-Tribromophenol (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8270D, 8270D LL: The laboratory control sample (LCS) for preparation batch 480-624194 and analytical batch 480-624252 recovered outside control limits for the following surrogate: 2,4,6-Tribromophenol. This surrogate is biased high and no detections were found for associated analytes in the following affected samples: SUPE-W-12CR-042822, SUPE-W-30C-042822, SUPE-W-30A-042822, SUPE-W-18D-042822, SUPE-W-04AR2-042822, SUPE-W-10AR2-042822 and SUPE-W-EB-02-042822. Therefore, the data has been reported.

Methods 8270D, 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-12CR-042822. These results have been reported and qualified.

Methods 8270D, 8270D LL: The following samples were diluted due to color, appearance, and viscosity: SUPE-W-30A-042822, SUPE-W-04AR2-042822 and SUPE-W-10AR2-042822. Elevated reporting limits (RL) are provided.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-655604 was outside the method criteria for the following analyte(s): 4-Nitrophenol and Hexachlorocyclopentadiene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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 LCSD associated with preparation batch 500-654744 and analytical batch 500-655604 had 1 analytes outside control limits: Butyl benzyl phthalate. These results have been reported and qualified.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-656186 was outside the method criteria for the following analyte(s): 2,2'-oxybis[1-chloropropane], Benzo[g,h,i]perylene and Hexachlorocyclopentadiene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The following sample contained one acid surrogate outside acceptance limits: SUPE-W-10AR2-042822. 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.



# Case Narrative

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

Job ID: 480-197349-1

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## Job ID: 480-197349-1 (Continued)

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### Laboratory: Eurofins Buffalo (Continued)

#### 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, WI Semiannual Groundwater

Job ID: 480-197349-1

## Client Sample ID: SUPE-W-12CR-042822

## Lab Sample ID: 480-197349-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.056	J	0.15	0.044	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	0.072	J	0.15	0.062	ug/L	1		8270D	Total/NA
Chrysene	0.093	J	0.15	0.052	ug/L	1		8270D	Total/NA

## Client Sample ID: SUPE-W-30C-042822

## Lab Sample ID: 480-197349-2

No Detections.

## Client Sample ID: SUPE-W-30A-042822

## Lab Sample ID: 480-197349-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.0	J	2.0	0.86	ug/L	2		8260C	Total/NA
Anthracene	0.53	J	0.69	0.23	ug/L	1		8270D	Total/NA

## Client Sample ID: SUPE-W-18D-042822

## Lab Sample ID: 480-197349-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	3.9	J	13	3.9	ug/L	1		8270D	Total/NA

## Client Sample ID: SUPE-W-04AR2-042822

## Lab Sample ID: 480-197349-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.14	J	1.4	0.046	ug/L	1		8270D	Total/NA
Acenaphthene	0.77		0.70	0.22	ug/L	1		8270D	Total/NA
Anthracene	7.3		0.70	0.24	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	1.4		0.14	0.040	ug/L	1		8270D	Total/NA
Benzo[a]pyrene	0.51		0.14	0.070	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	1.5		0.14	0.057	ug/L	1		8270D	Total/NA
Benzo[k]fluoranthene	0.65		0.14	0.045	ug/L	1		8270D	Total/NA
Chrysene	2.9		0.14	0.048	ug/L	1		8270D	Total/NA
Dibenz(a,h)anthracene	0.079	J	0.21	0.036	ug/L	1		8270D	Total/NA
Dibenzofuran	1.1	J	1.4	0.18	ug/L	1		8270D	Total/NA
Fluoranthene	15		0.70	0.32	ug/L	1		8270D	Total/NA
Fluorene	2.2		0.70	0.17	ug/L	1		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.26		0.14	0.053	ug/L	1		8270D	Total/NA
Phenanthrene	7.2		0.70	0.21	ug/L	1		8270D	Total/NA
Pyrene	7.2		0.70	0.30	ug/L	1		8270D	Total/NA

## Client Sample ID: SUPE-W-10AR2-042822

## Lab Sample ID: 480-197349-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	5.3		1.0	0.75	ug/L	1		8260C	Total/NA
Benzene	9.4		1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	16		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	2.0		2.0	0.66	ug/L	1		8260C	Total/NA
Naphthalene	1.5		1.0	0.43	ug/L	1		8260C	Total/NA
o-Xylene	11		1.0	0.76	ug/L	1		8260C	Total/NA
Toluene	1.2		1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	13		2.0	0.66	ug/L	1		8260C	Total/NA
3 & 4 Methylphenol	0.37	J	1.3	0.30	ug/L	1		8270D	Total/NA
Acenaphthylene	2.7		0.67	0.18	ug/L	1		8270D	Total/NA
Anthracene	0.63	J	0.67	0.22	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	0.12	J	0.13	0.038	ug/L	1		8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.13	0.054	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

# Detection Summary

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

Job ID: 480-197349-1

## Client Sample ID: SUPE-W-10AR2-042822 (Continued)

Lab Sample ID: 480-197349-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[k]fluoranthene	0.050	J	0.13	0.043	ug/L	1		8270D	Total/NA
Chrysene	0.22		0.13	0.046	ug/L	1		8270D	Total/NA
Dibenzofuran	14		1.3	0.18	ug/L	1		8270D	Total/NA
Fluoranthene	2.7		0.67	0.30	ug/L	1		8270D	Total/NA
Fluorene	12		0.67	0.16	ug/L	1		8270D	Total/NA
Phenanthrene	0.48	J	0.67	0.20	ug/L	1		8270D	Total/NA
Phenol	0.49	J	3.4	0.45	ug/L	1		8270D	Total/NA
Pyrene	1.5		0.67	0.29	ug/L	1		8270D	Total/NA
1-Methylnaphthalene	7.1		1.3	0.20	ug/L	1		8270D	Total/NA
Acenaphthene - DL	58		3.4	1.0	ug/L	5		8270D	Total/NA

## Client Sample ID: SUPE-W-EB-02-042822

Lab Sample ID: 480-197349-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzoic acid	6.1	J	13	3.8	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

Date Collected: 04/28/22 08:28

Matrix: Water

Date Received: 04/29/22 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			05/08/22 13:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/08/22 13:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/22 13:08	1
Benzene	ND		1.0	0.41	ug/L			05/08/22 13:08	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/22 13:08	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/08/22 13:08	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/22 13:08	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/08/22 13:08	1
Naphthalene	ND		1.0	0.43	ug/L			05/08/22 13:08	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/22 13:08	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/22 13:08	1
o-Xylene	ND		1.0	0.76	ug/L			05/08/22 13:08	1
Styrene	ND		1.0	0.73	ug/L			05/08/22 13:08	1
Toluene	ND		1.0	0.51	ug/L			05/08/22 13:08	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/08/22 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		05/08/22 13:08	1
4-Bromofluorobenzene (Surr)	103		73 - 120		05/08/22 13:08	1
Dibromofluoromethane (Surr)	98		75 - 123		05/08/22 13:08	1
Toluene-d8 (Surr)	101		80 - 120		05/08/22 13:08	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		05/02/22 15:33	05/03/22 16:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	144		24 - 146	05/02/22 15:33	05/03/22 16:55	1
2-Fluorobiphenyl	88		37 - 120	05/02/22 15:33	05/03/22 16:55	1
2-Fluorophenol (Surr)	42		10 - 120	05/02/22 15:33	05/03/22 16:55	1
Nitrobenzene-d5 (Surr)	77		26 - 120	05/02/22 15:33	05/03/22 16:55	1
Phenol-d5 (Surr)	27		11 - 120	05/02/22 15:33	05/03/22 16:55	1
p-Terphenyl-d14	55	S1-	64 - 127	05/02/22 15:33	05/03/22 16:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.5	0.18	ug/L		05/04/22 08:47	05/09/22 23:38	1
1,2-Dichlorobenzene	ND		1.5	0.19	ug/L		05/04/22 08:47	05/09/22 23:38	1
1,3-Dichlorobenzene	ND		1.5	0.16	ug/L		05/04/22 08:47	05/09/22 23:38	1
1,4-Dichlorobenzene	ND		1.5	0.16	ug/L		05/04/22 08:47	05/09/22 23:38	1
bis(chloroisopropyl) ether	ND		1.5	0.29	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,4,5-Trichlorophenol	ND		7.7	2.0	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,4,6-Trichlorophenol	ND		3.8	0.55	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,4-Dichlorophenol	ND		7.7	2.0	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,4-Dimethylphenol	ND		7.7	1.4	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,4-Dinitrophenol	ND		15	6.6	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,4-Dinitrotoluene	ND		0.77	0.19	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,6-Dinitrotoluene	ND		0.77	0.057	ug/L		05/04/22 08:47	05/09/22 23:38	1
2-Chloronaphthalene	ND		1.5	0.18	ug/L		05/04/22 08:47	05/09/22 23:38	1
2-Chlorophenol	ND		3.8	0.43	ug/L		05/04/22 08:47	05/09/22 23:38	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

Date Collected: 04/28/22 08:28

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		1.5	0.050	ug/L		05/04/22 08:47	05/09/22 23:38	1
2-Methylphenol	ND		1.5	0.23	ug/L		05/04/22 08:47	05/09/22 23:38	1
2-Nitroaniline	ND		3.8	0.99	ug/L		05/04/22 08:47	05/09/22 23:38	1
2-Nitrophenol	ND		7.7	1.9	ug/L		05/04/22 08:47	05/09/22 23:38	1
3 & 4 Methylphenol	ND		1.5	0.35	ug/L		05/04/22 08:47	05/09/22 23:38	1
3,3'-Dichlorobenzidine	ND		3.8	1.3	ug/L		05/04/22 08:47	05/09/22 23:38	1
3-Nitroaniline	ND		7.7	1.4	ug/L		05/04/22 08:47	05/09/22 23:38	1
4,6-Dinitro-2-methylphenol	ND		15	4.5	ug/L		05/04/22 08:47	05/09/22 23:38	1
4-Bromophenyl phenyl ether	ND		3.8	0.42	ug/L		05/04/22 08:47	05/09/22 23:38	1
4-Chloro-3-methylphenol	ND		7.7	1.8	ug/L		05/04/22 08:47	05/09/22 23:38	1
4-Chloroaniline	ND		7.7	1.5	ug/L		05/04/22 08:47	05/09/22 23:38	1
4-Chlorophenyl phenyl ether	ND		3.8	0.49	ug/L		05/04/22 08:47	05/09/22 23:38	1
4-Nitroaniline	ND		7.7	1.3	ug/L		05/04/22 08:47	05/09/22 23:38	1
4-Nitrophenol	ND		15	5.7	ug/L		05/04/22 08:47	05/09/22 23:38	1
Acenaphthene	ND		0.77	0.24	ug/L		05/04/22 08:47	05/09/22 23:38	1
Acenaphthylene	ND		0.77	0.21	ug/L		05/04/22 08:47	05/09/22 23:38	1
Anthracene	ND		0.77	0.26	ug/L		05/04/22 08:47	05/09/22 23:38	1
<b>Benzo[a]anthracene</b>	<b>0.056</b>	<b>J</b>	0.15	0.044	ug/L		05/04/22 08:47	05/09/22 23:38	1
Benzo[a]pyrene	ND		0.15	0.076	ug/L		05/04/22 08:47	05/09/22 23:38	1
<b>Benzo[b]fluoranthene</b>	<b>0.072</b>	<b>J</b>	0.15	0.062	ug/L		05/04/22 08:47	05/09/22 23:38	1
Benzo[g,h,i]perylene	ND		0.77	0.29	ug/L		05/04/22 08:47	05/09/22 23:38	1
Benzo[k]fluoranthene	ND		0.15	0.049	ug/L		05/04/22 08:47	05/09/22 23:38	1
Benzoic acid	ND		15	4.4	ug/L		05/04/22 08:47	05/09/22 23:38	1
Benzyl alcohol	ND		15	4.6	ug/L		05/04/22 08:47	05/09/22 23:38	1
Bis(2-chloroethoxy)methane	ND		1.5	0.22	ug/L		05/04/22 08:47	05/09/22 23:38	1
Bis(2-chloroethyl)ether	ND		1.5	0.23	ug/L		05/04/22 08:47	05/09/22 23:38	1
Bis(2-ethylhexyl) phthalate	ND		7.7	1.3	ug/L		05/04/22 08:47	05/09/22 23:38	1
Butyl benzyl phthalate	ND	*	1.5	0.37	ug/L		05/04/22 08:47	05/09/22 23:38	1
<b>Chrysene</b>	<b>0.093</b>	<b>J</b>	0.15	0.052	ug/L		05/04/22 08:47	05/09/22 23:38	1
Dibenz(a,h)anthracene	ND		0.23	0.039	ug/L		05/04/22 08:47	05/09/22 23:38	1
Dibenzofuran	ND		1.5	0.20	ug/L		05/04/22 08:47	05/09/22 23:38	1
Diethyl phthalate	ND		3.8	0.28	ug/L		05/04/22 08:47	05/09/22 23:38	1
Dimethyl phthalate	ND		3.8	0.24	ug/L		05/04/22 08:47	05/09/22 23:38	1
Di-n-butyl phthalate	ND		3.8	0.56	ug/L		05/04/22 08:47	05/09/22 23:38	1
Di-n-octyl phthalate	ND		7.7	0.81	ug/L		05/04/22 08:47	05/09/22 23:38	1
Fluoranthene	ND		0.77	0.35	ug/L		05/04/22 08:47	05/09/22 23:38	1
Fluorene	ND		0.77	0.19	ug/L		05/04/22 08:47	05/09/22 23:38	1
Hexachlorobenzene	ND		0.38	0.061	ug/L		05/04/22 08:47	05/09/22 23:38	1
Hexachlorobutadiene	ND		3.8	0.40	ug/L		05/04/22 08:47	05/09/22 23:38	1
Hexachlorocyclopentadiene	ND		15	4.9	ug/L		05/04/22 08:47	05/09/22 23:38	1
Hexachloroethane	ND		3.8	0.46	ug/L		05/04/22 08:47	05/09/22 23:38	1
Indeno[1,2,3-cd]pyrene	ND		0.15	0.058	ug/L		05/04/22 08:47	05/09/22 23:38	1
Isophorone	ND		1.5	0.29	ug/L		05/04/22 08:47	05/09/22 23:38	1
Nitrobenzene	ND		0.77	0.35	ug/L		05/04/22 08:47	05/09/22 23:38	1
N-Nitrosodi-n-propylamine	ND		0.38	0.12	ug/L		05/04/22 08:47	05/09/22 23:38	1
N-Nitrosodiphenylamine	ND		1.5	0.28	ug/L		05/04/22 08:47	05/09/22 23:38	1
Phenanthrene	ND		0.77	0.23	ug/L		05/04/22 08:47	05/09/22 23:38	1
Phenol	ND		3.8	0.52	ug/L		05/04/22 08:47	05/09/22 23:38	1
Pyrene	ND		0.77	0.33	ug/L		05/04/22 08:47	05/09/22 23:38	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

Date Collected: 04/28/22 08:28

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		3.8	0.57	ug/L		05/04/22 08:47	05/09/22 23:38	1
2,3,5,6-Tetrachlorophenol	ND		7.7	2.9	ug/L		05/04/22 08:47	05/09/22 23:38	1
1-Methylnaphthalene	ND		1.5	0.23	ug/L		05/04/22 08:47	05/09/22 23:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	43		27 - 110	05/04/22 08:47	05/09/22 23:38	1
Phenol-d5 (Surr)	35		20 - 110	05/04/22 08:47	05/09/22 23:38	1
Nitrobenzene-d5 (Surr)	54		36 - 120	05/04/22 08:47	05/09/22 23:38	1
2-Fluorobiphenyl	63		34 - 110	05/04/22 08:47	05/09/22 23:38	1
2,4,6-Tribromophenol (Surr)	115		40 - 145	05/04/22 08:47	05/09/22 23:38	1
Terphenyl-d14 (Surr)	81		40 - 145	05/04/22 08:47	05/09/22 23:38	1

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Date Collected: 04/28/22 11:47

Matrix: Water

Date Received: 04/29/22 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			05/08/22 13:30	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/08/22 13:30	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/22 13:30	1
Benzene	ND		1.0	0.41	ug/L			05/08/22 13:30	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/22 13:30	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/08/22 13:30	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/22 13:30	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/08/22 13:30	1
Naphthalene	ND		1.0	0.43	ug/L			05/08/22 13:30	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/22 13:30	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/22 13:30	1
o-Xylene	ND		1.0	0.76	ug/L			05/08/22 13:30	1
Styrene	ND		1.0	0.73	ug/L			05/08/22 13:30	1
Toluene	ND		1.0	0.51	ug/L			05/08/22 13:30	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/08/22 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		05/08/22 13:30	1
4-Bromofluorobenzene (Surr)	105		73 - 120		05/08/22 13:30	1
Dibromofluoromethane (Surr)	100		75 - 123		05/08/22 13:30	1
Toluene-d8 (Surr)	102		80 - 120		05/08/22 13:30	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		05/02/22 15:33	05/03/22 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	119		24 - 146	05/02/22 15:33	05/03/22 17:23	1
2-Fluorobiphenyl	87		37 - 120	05/02/22 15:33	05/03/22 17:23	1
2-Fluorophenol (Surr)	45		10 - 120	05/02/22 15:33	05/03/22 17:23	1
Nitrobenzene-d5 (Surr)	73		26 - 120	05/02/22 15:33	05/03/22 17:23	1
Phenol-d5 (Surr)	30		11 - 120	05/02/22 15:33	05/03/22 17:23	1
p-Terphenyl-d14	95		64 - 127	05/02/22 15:33	05/03/22 17:23	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Date Collected: 04/28/22 11:47

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.4	0.16	ug/L		05/04/22 08:47	05/10/22 00:02	1
1,2-Dichlorobenzene	ND		1.4	0.17	ug/L		05/04/22 08:47	05/10/22 00:02	1
1,3-Dichlorobenzene	ND		1.4	0.14	ug/L		05/04/22 08:47	05/10/22 00:02	1
1,4-Dichlorobenzene	ND		1.4	0.14	ug/L		05/04/22 08:47	05/10/22 00:02	1
bis(chloroisopropyl) ether	ND		1.4	0.26	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,4,5-Trichlorophenol	ND		6.8	1.7	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,4,6-Trichlorophenol	ND		3.4	0.49	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,4-Dichlorophenol	ND		6.8	1.8	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,4-Dimethylphenol	ND		6.8	1.2	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,4-Dinitrophenol	ND		14	5.9	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,4-Dinitrotoluene	ND		0.68	0.17	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,6-Dinitrotoluene	ND		0.68	0.050	ug/L		05/04/22 08:47	05/10/22 00:02	1
2-Chloronaphthalene	ND		1.4	0.16	ug/L		05/04/22 08:47	05/10/22 00:02	1
2-Chlorophenol	ND		3.4	0.38	ug/L		05/04/22 08:47	05/10/22 00:02	1
2-Methylnaphthalene	ND		1.4	0.044	ug/L		05/04/22 08:47	05/10/22 00:02	1
2-Methylphenol	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 00:02	1
2-Nitroaniline	ND		3.4	0.88	ug/L		05/04/22 08:47	05/10/22 00:02	1
2-Nitrophenol	ND		6.8	1.7	ug/L		05/04/22 08:47	05/10/22 00:02	1
3 & 4 Methylphenol	ND		1.4	0.31	ug/L		05/04/22 08:47	05/10/22 00:02	1
3,3'-Dichlorobenzidine	ND		3.4	1.2	ug/L		05/04/22 08:47	05/10/22 00:02	1
3-Nitroaniline	ND		6.8	1.2	ug/L		05/04/22 08:47	05/10/22 00:02	1
4,6-Dinitro-2-methylphenol	ND		14	4.0	ug/L		05/04/22 08:47	05/10/22 00:02	1
4-Bromophenyl phenyl ether	ND		3.4	0.37	ug/L		05/04/22 08:47	05/10/22 00:02	1
4-Chloro-3-methylphenol	ND		6.8	1.6	ug/L		05/04/22 08:47	05/10/22 00:02	1
4-Chloroaniline	ND		6.8	1.4	ug/L		05/04/22 08:47	05/10/22 00:02	1
4-Chlorophenyl phenyl ether	ND		3.4	0.43	ug/L		05/04/22 08:47	05/10/22 00:02	1
4-Nitroaniline	ND		6.8	1.1	ug/L		05/04/22 08:47	05/10/22 00:02	1
4-Nitrophenol	ND		14	5.1	ug/L		05/04/22 08:47	05/10/22 00:02	1
Acenaphthene	ND		0.68	0.21	ug/L		05/04/22 08:47	05/10/22 00:02	1
Acenaphthylene	ND		0.68	0.18	ug/L		05/04/22 08:47	05/10/22 00:02	1
Anthracene	ND		0.68	0.23	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzo[a]anthracene	ND		0.14	0.039	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzo[a]pyrene	ND		0.14	0.067	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzo[b]fluoranthene	ND		0.14	0.055	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzo[g,h,i]perylene	ND		0.68	0.26	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzo[k]fluoranthene	ND		0.14	0.044	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzoic acid	ND		14	3.9	ug/L		05/04/22 08:47	05/10/22 00:02	1
Benzyl alcohol	ND		14	4.1	ug/L		05/04/22 08:47	05/10/22 00:02	1
Bis(2-chloroethoxy)methane	ND		1.4	0.19	ug/L		05/04/22 08:47	05/10/22 00:02	1
Bis(2-chloroethyl)ether	ND		1.4	0.20	ug/L		05/04/22 08:47	05/10/22 00:02	1
Bis(2-ethylhexyl) phthalate	ND		6.8	1.2	ug/L		05/04/22 08:47	05/10/22 00:02	1
Butyl benzyl phthalate	ND	*	1.4	0.33	ug/L		05/04/22 08:47	05/10/22 00:02	1
Chrysene	ND		0.14	0.046	ug/L		05/04/22 08:47	05/10/22 00:02	1
Dibenz(a,h)anthracene	ND		0.20	0.035	ug/L		05/04/22 08:47	05/10/22 00:02	1
Dibenzofuran	ND		1.4	0.18	ug/L		05/04/22 08:47	05/10/22 00:02	1
Diethyl phthalate	ND		3.4	0.25	ug/L		05/04/22 08:47	05/10/22 00:02	1
Dimethyl phthalate	ND		3.4	0.21	ug/L		05/04/22 08:47	05/10/22 00:02	1
Di-n-butyl phthalate	ND		3.4	0.50	ug/L		05/04/22 08:47	05/10/22 00:02	1
Di-n-octyl phthalate	ND		6.8	0.72	ug/L		05/04/22 08:47	05/10/22 00:02	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Date Collected: 04/28/22 11:47

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.68	0.31	ug/L		05/04/22 08:47	05/10/22 00:02	1
Fluorene	ND		0.68	0.17	ug/L		05/04/22 08:47	05/10/22 00:02	1
Hexachlorobenzene	ND		0.34	0.054	ug/L		05/04/22 08:47	05/10/22 00:02	1
Hexachlorobutadiene	ND		3.4	0.35	ug/L		05/04/22 08:47	05/10/22 00:02	1
Hexachlorocyclopentadiene	ND		14	4.3	ug/L		05/04/22 08:47	05/10/22 00:02	1
Hexachloroethane	ND		3.4	0.41	ug/L		05/04/22 08:47	05/10/22 00:02	1
Indeno[1,2,3-cd]pyrene	ND		0.14	0.051	ug/L		05/04/22 08:47	05/10/22 00:02	1
Isophorone	ND		1.4	0.26	ug/L		05/04/22 08:47	05/10/22 00:02	1
Nitrobenzene	ND		0.68	0.31	ug/L		05/04/22 08:47	05/10/22 00:02	1
N-Nitrosodi-n-propylamine	ND		0.34	0.10	ug/L		05/04/22 08:47	05/10/22 00:02	1
N-Nitrosodiphenylamine	ND		1.4	0.25	ug/L		05/04/22 08:47	05/10/22 00:02	1
Phenanthrene	ND		0.68	0.21	ug/L		05/04/22 08:47	05/10/22 00:02	1
Phenol	ND		3.4	0.46	ug/L		05/04/22 08:47	05/10/22 00:02	1
Pyrene	ND		0.68	0.29	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,3,4,6-Tetrachlorophenol	ND		3.4	0.51	ug/L		05/04/22 08:47	05/10/22 00:02	1
2,3,5,6-Tetrachlorophenol	ND		6.8	2.6	ug/L		05/04/22 08:47	05/10/22 00:02	1
1-Methylnaphthalene	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 00:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	45		27 - 110	05/04/22 08:47	05/10/22 00:02	1
Phenol-d5 (Surr)	25		20 - 110	05/04/22 08:47	05/10/22 00:02	1
Nitrobenzene-d5 (Surr)	58		36 - 120	05/04/22 08:47	05/10/22 00:02	1
2-Fluorobiphenyl	69		34 - 110	05/04/22 08:47	05/10/22 00:02	1
2,4,6-Tribromophenol (Surr)	96		40 - 145	05/04/22 08:47	05/10/22 00:02	1
Terphenyl-d14 (Surr)	95		40 - 145	05/04/22 08:47	05/10/22 00:02	1

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Date Collected: 04/28/22 13:51

Matrix: Water

Date Received: 04/29/22 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		2.0	1.6	ug/L			05/08/22 13:52	2
1,2,4-Trimethylbenzene	ND		2.0	1.5	ug/L			05/08/22 13:52	2
1,3,5-Trimethylbenzene	ND		2.0	1.5	ug/L			05/08/22 13:52	2
Benzene	ND		2.0	0.82	ug/L			05/08/22 13:52	2
Chloromethane	ND		2.0	0.70	ug/L			05/08/22 13:52	2
Ethylbenzene	ND		2.0	1.5	ug/L			05/08/22 13:52	2
Methyl tert-butyl ether	ND		2.0	0.32	ug/L			05/08/22 13:52	2
m-Xylene & p-Xylene	ND		4.0	1.3	ug/L			05/08/22 13:52	2
<b>Naphthalene</b>	<b>1.0</b>	<b>J</b>	2.0	0.86	ug/L			05/08/22 13:52	2
n-Butylbenzene	ND		2.0	1.3	ug/L			05/08/22 13:52	2
N-Propylbenzene	ND		2.0	1.4	ug/L			05/08/22 13:52	2
o-Xylene	ND		2.0	1.5	ug/L			05/08/22 13:52	2
Styrene	ND		2.0	1.5	ug/L			05/08/22 13:52	2
Toluene	ND		2.0	1.0	ug/L			05/08/22 13:52	2
Xylenes, Total	ND		4.0	1.3	ug/L			05/08/22 13:52	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		05/08/22 13:52	2

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Date Collected: 04/28/22 13:51

Matrix: Water

Date Received: 04/29/22 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		73 - 120		05/08/22 13:52	2
Dibromofluoromethane (Surr)	97		75 - 123		05/08/22 13:52	2
Toluene-d8 (Surr)	101		80 - 120		05/08/22 13:52	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		05/02/22 15:33	05/03/22 17:50	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		24 - 146	05/02/22 15:33	05/03/22 17:50	10
2-Fluorobiphenyl	98		37 - 120	05/02/22 15:33	05/03/22 17:50	10
2-Fluorophenol (Surr)	48		10 - 120	05/02/22 15:33	05/03/22 17:50	10
Nitrobenzene-d5 (Surr)	83		26 - 120	05/02/22 15:33	05/03/22 17:50	10
Phenol-d5 (Surr)	25		11 - 120	05/02/22 15:33	05/03/22 17:50	10
p-Terphenyl-d14	101		64 - 127	05/02/22 15:33	05/03/22 17:50	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.4	0.16	ug/L		05/04/22 08:47	05/10/22 00:26	1
1,2-Dichlorobenzene	ND		1.4	0.17	ug/L		05/04/22 08:47	05/10/22 00:26	1
1,3-Dichlorobenzene	ND		1.4	0.14	ug/L		05/04/22 08:47	05/10/22 00:26	1
1,4-Dichlorobenzene	ND		1.4	0.14	ug/L		05/04/22 08:47	05/10/22 00:26	1
bis(chloroisopropyl) ether	ND		1.4	0.26	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,4,5-Trichlorophenol	ND		6.9	1.8	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,4,6-Trichlorophenol	ND		3.4	0.49	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,4-Dichlorophenol	ND		6.9	1.8	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,4-Dimethylphenol	ND		6.9	1.2	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,4-Dinitrophenol	ND		14	5.9	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,4-Dinitrotoluene	ND		0.69	0.17	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,6-Dinitrotoluene	ND		0.69	0.051	ug/L		05/04/22 08:47	05/10/22 00:26	1
2-Chloronaphthalene	ND		1.4	0.16	ug/L		05/04/22 08:47	05/10/22 00:26	1
2-Chlorophenol	ND		3.4	0.38	ug/L		05/04/22 08:47	05/10/22 00:26	1
2-Methylnaphthalene	ND		1.4	0.045	ug/L		05/04/22 08:47	05/10/22 00:26	1
2-Methylphenol	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 00:26	1
2-Nitroaniline	ND		3.4	0.89	ug/L		05/04/22 08:47	05/10/22 00:26	1
2-Nitrophenol	ND		6.9	1.7	ug/L		05/04/22 08:47	05/10/22 00:26	1
3 & 4 Methylphenol	ND		1.4	0.31	ug/L		05/04/22 08:47	05/10/22 00:26	1
3,3'-Dichlorobenzidine	ND		3.4	1.2	ug/L		05/04/22 08:47	05/10/22 00:26	1
3-Nitroaniline	ND		6.9	1.2	ug/L		05/04/22 08:47	05/10/22 00:26	1
4,6-Dinitro-2-methylphenol	ND		14	4.1	ug/L		05/04/22 08:47	05/10/22 00:26	1
4-Bromophenyl phenyl ether	ND		3.4	0.37	ug/L		05/04/22 08:47	05/10/22 00:26	1
4-Chloro-3-methylphenol	ND		6.9	1.6	ug/L		05/04/22 08:47	05/10/22 00:26	1
4-Chloroaniline	ND		6.9	1.4	ug/L		05/04/22 08:47	05/10/22 00:26	1
4-Chlorophenyl phenyl ether	ND		3.4	0.44	ug/L		05/04/22 08:47	05/10/22 00:26	1
4-Nitroaniline	ND		6.9	1.1	ug/L		05/04/22 08:47	05/10/22 00:26	1
4-Nitrophenol	ND		14	5.1	ug/L		05/04/22 08:47	05/10/22 00:26	1
Acenaphthene	ND		0.69	0.21	ug/L		05/04/22 08:47	05/10/22 00:26	1
Acenaphthylene	ND		0.69	0.18	ug/L		05/04/22 08:47	05/10/22 00:26	1
<b>Anthracene</b>	<b>0.53</b>	<b>J</b>	0.69	0.23	ug/L		05/04/22 08:47	05/10/22 00:26	1
Benzo[a]anthracene	ND		0.14	0.039	ug/L		05/04/22 08:47	05/10/22 00:26	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Date Collected: 04/28/22 13:51

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.14	0.068	ug/L		05/04/22 08:47	05/10/22 00:26	1
Benzo[b]fluoranthene	ND		0.14	0.056	ug/L		05/04/22 08:47	05/10/22 00:26	1
Benzo[g,h,i]perylene	ND		0.69	0.26	ug/L		05/04/22 08:47	05/10/22 00:26	1
Benzo[k]fluoranthene	ND		0.14	0.044	ug/L		05/04/22 08:47	05/10/22 00:26	1
Benzoic acid	ND		14	4.0	ug/L		05/04/22 08:47	05/10/22 00:26	1
Benzyl alcohol	ND		14	4.2	ug/L		05/04/22 08:47	05/10/22 00:26	1
Bis(2-chloroethoxy)methane	ND		1.4	0.20	ug/L		05/04/22 08:47	05/10/22 00:26	1
Bis(2-chloroethyl)ether	ND		1.4	0.20	ug/L		05/04/22 08:47	05/10/22 00:26	1
Bis(2-ethylhexyl) phthalate	ND		6.9	1.2	ug/L		05/04/22 08:47	05/10/22 00:26	1
Butyl benzyl phthalate	ND	*	1.4	0.33	ug/L		05/04/22 08:47	05/10/22 00:26	1
Chrysene	ND		0.14	0.047	ug/L		05/04/22 08:47	05/10/22 00:26	1
Dibenz(a,h)anthracene	ND		0.21	0.035	ug/L		05/04/22 08:47	05/10/22 00:26	1
Dibenzofuran	ND		1.4	0.18	ug/L		05/04/22 08:47	05/10/22 00:26	1
Diethyl phthalate	ND		3.4	0.25	ug/L		05/04/22 08:47	05/10/22 00:26	1
Dimethyl phthalate	ND		3.4	0.22	ug/L		05/04/22 08:47	05/10/22 00:26	1
Di-n-butyl phthalate	ND		3.4	0.50	ug/L		05/04/22 08:47	05/10/22 00:26	1
Di-n-octyl phthalate	ND		6.9	0.72	ug/L		05/04/22 08:47	05/10/22 00:26	1
Fluoranthene	ND		0.69	0.31	ug/L		05/04/22 08:47	05/10/22 00:26	1
Fluorene	ND		0.69	0.17	ug/L		05/04/22 08:47	05/10/22 00:26	1
Hexachlorobenzene	ND		0.34	0.055	ug/L		05/04/22 08:47	05/10/22 00:26	1
Hexachlorobutadiene	ND		3.4	0.35	ug/L		05/04/22 08:47	05/10/22 00:26	1
Hexachlorocyclopentadiene	ND		14	4.4	ug/L		05/04/22 08:47	05/10/22 00:26	1
Hexachloroethane	ND		3.4	0.41	ug/L		05/04/22 08:47	05/10/22 00:26	1
Indeno[1,2,3-cd]pyrene	ND		0.14	0.051	ug/L		05/04/22 08:47	05/10/22 00:26	1
Isophorone	ND		1.4	0.26	ug/L		05/04/22 08:47	05/10/22 00:26	1
Nitrobenzene	ND		0.69	0.31	ug/L		05/04/22 08:47	05/10/22 00:26	1
N-Nitrosodi-n-propylamine	ND		0.34	0.11	ug/L		05/04/22 08:47	05/10/22 00:26	1
N-Nitrosodiphenylamine	ND		1.4	0.25	ug/L		05/04/22 08:47	05/10/22 00:26	1
Phenanthrene	ND		0.69	0.21	ug/L		05/04/22 08:47	05/10/22 00:26	1
Phenol	ND		3.4	0.46	ug/L		05/04/22 08:47	05/10/22 00:26	1
Pyrene	ND		0.69	0.29	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,3,4,6-Tetrachlorophenol	ND		3.4	0.51	ug/L		05/04/22 08:47	05/10/22 00:26	1
2,3,5,6-Tetrachlorophenol	ND		6.9	2.6	ug/L		05/04/22 08:47	05/10/22 00:26	1
1-Methylnaphthalene	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 00:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	44		27 - 110	05/04/22 08:47	05/10/22 00:26	1
Phenol-d5 (Surr)	27		20 - 110	05/04/22 08:47	05/10/22 00:26	1
Nitrobenzene-d5 (Surr)	56		36 - 120	05/04/22 08:47	05/10/22 00:26	1
2-Fluorobiphenyl	69		34 - 110	05/04/22 08:47	05/10/22 00:26	1
2,4,6-Tribromophenol (Surr)	96		40 - 145	05/04/22 08:47	05/10/22 00:26	1
Terphenyl-d14 (Surr)	90		40 - 145	05/04/22 08:47	05/10/22 00:26	1

**Client Sample ID: SUPE-W-18D-042822**

**Lab Sample ID: 480-197349-4**

Date Collected: 04/28/22 08:29

Matrix: Water

Date Received: 04/29/22 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		05/02/22 15:33	05/03/22 18:18	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-18D-042822**

**Lab Sample ID: 480-197349-4**

**Date Collected: 04/28/22 08:29**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	132		24 - 146	05/02/22 15:33	05/03/22 18:18	1
2-Fluorobiphenyl	89		37 - 120	05/02/22 15:33	05/03/22 18:18	1
2-Fluorophenol (Surr)	42		10 - 120	05/02/22 15:33	05/03/22 18:18	1
Nitrobenzene-d5 (Surr)	73		26 - 120	05/02/22 15:33	05/03/22 18:18	1
Phenol-d5 (Surr)	27		11 - 120	05/02/22 15:33	05/03/22 18:18	1
p-Terphenyl-d14	102		64 - 127	05/02/22 15:33	05/03/22 18:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 00:51	1
1,2-Dichlorobenzene	ND		1.3	0.17	ug/L		05/04/22 08:47	05/10/22 00:51	1
1,3-Dichlorobenzene	ND		1.3	0.14	ug/L		05/04/22 08:47	05/10/22 00:51	1
1,4-Dichlorobenzene	ND		1.3	0.14	ug/L		05/04/22 08:47	05/10/22 00:51	1
bis(chloroisopropyl) ether	ND		1.3	0.26	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,4,5-Trichlorophenol	ND		6.7	1.7	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,4,6-Trichlorophenol	ND		3.4	0.48	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,4-Dichlorophenol	ND		6.7	1.7	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,4-Dimethylphenol	ND		6.7	1.2	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,4-Dinitrophenol	ND		13	5.8	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,4-Dinitrotoluene	ND		0.67	0.16	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,6-Dinitrotoluene	ND		0.67	0.050	ug/L		05/04/22 08:47	05/10/22 00:51	1
2-Chloronaphthalene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 00:51	1
2-Chlorophenol	ND		3.4	0.38	ug/L		05/04/22 08:47	05/10/22 00:51	1
2-Methylnaphthalene	ND		1.3	0.044	ug/L		05/04/22 08:47	05/10/22 00:51	1
2-Methylphenol	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 00:51	1
2-Nitroaniline	ND		3.4	0.86	ug/L		05/04/22 08:47	05/10/22 00:51	1
2-Nitrophenol	ND		6.7	1.7	ug/L		05/04/22 08:47	05/10/22 00:51	1
3 & 4 Methylphenol	ND		1.3	0.30	ug/L		05/04/22 08:47	05/10/22 00:51	1
3,3'-Dichlorobenzidine	ND		3.4	1.1	ug/L		05/04/22 08:47	05/10/22 00:51	1
3-Nitroaniline	ND		6.7	1.2	ug/L		05/04/22 08:47	05/10/22 00:51	1
4,6-Dinitro-2-methylphenol	ND		13	4.0	ug/L		05/04/22 08:47	05/10/22 00:51	1
4-Bromophenyl phenyl ether	ND		3.4	0.36	ug/L		05/04/22 08:47	05/10/22 00:51	1
4-Chloro-3-methylphenol	ND		6.7	1.5	ug/L		05/04/22 08:47	05/10/22 00:51	1
4-Chloroaniline	ND		6.7	1.4	ug/L		05/04/22 08:47	05/10/22 00:51	1
4-Chlorophenyl phenyl ether	ND		3.4	0.43	ug/L		05/04/22 08:47	05/10/22 00:51	1
4-Nitroaniline	ND		6.7	1.1	ug/L		05/04/22 08:47	05/10/22 00:51	1
4-Nitrophenol	ND		13	5.0	ug/L		05/04/22 08:47	05/10/22 00:51	1
Acenaphthene	ND		0.67	0.21	ug/L		05/04/22 08:47	05/10/22 00:51	1
Acenaphthylene	ND		0.67	0.18	ug/L		05/04/22 08:47	05/10/22 00:51	1
Anthracene	ND		0.67	0.22	ug/L		05/04/22 08:47	05/10/22 00:51	1
Benzo[a]anthracene	ND		0.13	0.038	ug/L		05/04/22 08:47	05/10/22 00:51	1
Benzo[a]pyrene	ND		0.13	0.066	ug/L		05/04/22 08:47	05/10/22 00:51	1
Benzo[b]fluoranthene	ND		0.13	0.054	ug/L		05/04/22 08:47	05/10/22 00:51	1
Benzo[g,h,i]perylene	ND		0.67	0.25	ug/L		05/04/22 08:47	05/10/22 00:51	1
Benzo[k]fluoranthene	ND		0.13	0.043	ug/L		05/04/22 08:47	05/10/22 00:51	1
<b>Benzoic acid</b>	<b>3.9</b>	<b>J</b>	13	3.9	ug/L		05/04/22 08:47	05/10/22 00:51	1
Benzyl alcohol	ND		13	4.1	ug/L		05/04/22 08:47	05/10/22 00:51	1
Bis(2-chloroethoxy)methane	ND		1.3	0.19	ug/L		05/04/22 08:47	05/10/22 00:51	1
Bis(2-chloroethyl)ether	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 00:51	1
Bis(2-ethylhexyl) phthalate	ND		6.7	1.1	ug/L		05/04/22 08:47	05/10/22 00:51	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-18D-042822**

**Lab Sample ID: 480-197349-4**

Date Collected: 04/28/22 08:29

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	ND	*-	1.3	0.32	ug/L		05/04/22 08:47	05/10/22 00:51	1
Chrysene	ND		0.13	0.046	ug/L		05/04/22 08:47	05/10/22 00:51	1
Dibenz(a,h)anthracene	ND		0.20	0.034	ug/L		05/04/22 08:47	05/10/22 00:51	1
Dibenzofuran	ND		1.3	0.18	ug/L		05/04/22 08:47	05/10/22 00:51	1
Diethyl phthalate	ND		3.4	0.24	ug/L		05/04/22 08:47	05/10/22 00:51	1
Dimethyl phthalate	ND		3.4	0.21	ug/L		05/04/22 08:47	05/10/22 00:51	1
Di-n-butyl phthalate	ND		3.4	0.49	ug/L		05/04/22 08:47	05/10/22 00:51	1
Di-n-octyl phthalate	ND		6.7	0.70	ug/L		05/04/22 08:47	05/10/22 00:51	1
Fluoranthene	ND		0.67	0.30	ug/L		05/04/22 08:47	05/10/22 00:51	1
Fluorene	ND		0.67	0.16	ug/L		05/04/22 08:47	05/10/22 00:51	1
Hexachlorobenzene	ND		0.34	0.053	ug/L		05/04/22 08:47	05/10/22 00:51	1
Hexachlorobutadiene	ND		3.4	0.35	ug/L		05/04/22 08:47	05/10/22 00:51	1
Hexachlorocyclopentadiene	ND		13	4.3	ug/L		05/04/22 08:47	05/10/22 00:51	1
Hexachloroethane	ND		3.4	0.40	ug/L		05/04/22 08:47	05/10/22 00:51	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.050	ug/L		05/04/22 08:47	05/10/22 00:51	1
Isophorone	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 00:51	1
Naphthalene	ND		0.67	0.21	ug/L		05/04/22 08:47	05/10/22 00:51	1
Nitrobenzene	ND		0.67	0.30	ug/L		05/04/22 08:47	05/10/22 00:51	1
N-Nitrosodi-n-propylamine	ND		0.34	0.10	ug/L		05/04/22 08:47	05/10/22 00:51	1
N-Nitrosodiphenylamine	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 00:51	1
Phenanthrene	ND		0.67	0.20	ug/L		05/04/22 08:47	05/10/22 00:51	1
Phenol	ND		3.4	0.45	ug/L		05/04/22 08:47	05/10/22 00:51	1
Pyrene	ND		0.67	0.29	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,3,4,6-Tetrachlorophenol	ND		3.4	0.50	ug/L		05/04/22 08:47	05/10/22 00:51	1
2,3,5,6-Tetrachlorophenol	ND		6.7	2.6	ug/L		05/04/22 08:47	05/10/22 00:51	1
1-Methylnaphthalene	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 00:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	42		27 - 110	05/04/22 08:47	05/10/22 00:51	1
Phenol-d5 (Surr)	24		20 - 110	05/04/22 08:47	05/10/22 00:51	1
Nitrobenzene-d5 (Surr)	57		36 - 120	05/04/22 08:47	05/10/22 00:51	1
2-Fluorobiphenyl	65		34 - 110	05/04/22 08:47	05/10/22 00:51	1
2,4,6-Tribromophenol (Surr)	100		40 - 145	05/04/22 08:47	05/10/22 00:51	1
Terphenyl-d14 (Surr)	131		40 - 145	05/04/22 08:47	05/10/22 00:51	1

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 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			05/08/22 14:14	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/08/22 14:14	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/22 14:14	1
Benzene	ND		1.0	0.41	ug/L			05/08/22 14:14	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/22 14:14	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/08/22 14:14	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/22 14:14	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/08/22 14:14	1
Naphthalene	ND		1.0	0.43	ug/L			05/08/22 14:14	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/22 14:14	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/22 14:14	1
o-Xylene	ND		1.0	0.76	ug/L			05/08/22 14:14	1
Styrene	ND		1.0	0.73	ug/L			05/08/22 14:14	1
Toluene	ND		1.0	0.51	ug/L			05/08/22 14:14	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/08/22 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		05/08/22 14:14	1
4-Bromofluorobenzene (Surr)	106		73 - 120		05/08/22 14:14	1
Dibromofluoromethane (Surr)	100		75 - 123		05/08/22 14:14	1
Toluene-d8 (Surr)	101		80 - 120		05/08/22 14:14	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		05/02/22 15:33	05/03/22 18:46	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	126		24 - 146	05/02/22 15:33	05/03/22 18:46	5
2-Fluorobiphenyl	96		37 - 120	05/02/22 15:33	05/03/22 18:46	5
2-Fluorophenol (Surr)	45		10 - 120	05/02/22 15:33	05/03/22 18:46	5
Nitrobenzene-d5 (Surr)	76		26 - 120	05/02/22 15:33	05/03/22 18:46	5
Phenol-d5 (Surr)	25		11 - 120	05/02/22 15:33	05/03/22 18:46	5
p-Terphenyl-d14	95		64 - 127	05/02/22 15:33	05/03/22 18:46	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.4	0.17	ug/L		05/04/22 08:47	05/10/22 01:15	1
1,2-Dichlorobenzene	ND		1.4	0.17	ug/L		05/04/22 08:47	05/10/22 01:15	1
1,3-Dichlorobenzene	ND		1.4	0.15	ug/L		05/04/22 08:47	05/10/22 01:15	1
1,4-Dichlorobenzene	ND		1.4	0.15	ug/L		05/04/22 08:47	05/10/22 01:15	1
bis(chloroisopropyl) ether	ND		1.4	0.27	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,4,5-Trichlorophenol	ND		7.0	1.8	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,4,6-Trichlorophenol	ND		3.5	0.50	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,4-Dichlorophenol	ND		7.0	1.8	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,4-Dimethylphenol	ND		7.0	1.3	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,4-Dinitrophenol	ND		14	6.0	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,4-Dinitrotoluene	ND		0.70	0.17	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,6-Dinitrotoluene	ND		0.70	0.052	ug/L		05/04/22 08:47	05/10/22 01:15	1
2-Chloronaphthalene	ND		1.4	0.17	ug/L		05/04/22 08:47	05/10/22 01:15	1
2-Chlorophenol	ND		3.5	0.39	ug/L		05/04/22 08:47	05/10/22 01:15	1
2-Methylnaphthalene	0.14	J	1.4	0.046	ug/L		05/04/22 08:47	05/10/22 01:15	1
2-Methylphenol	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 01:15	1
2-Nitroaniline	ND		3.5	0.91	ug/L		05/04/22 08:47	05/10/22 01:15	1
2-Nitrophenol	ND		7.0	1.8	ug/L		05/04/22 08:47	05/10/22 01:15	1
3 & 4 Methylphenol	ND		1.4	0.32	ug/L		05/04/22 08:47	05/10/22 01:15	1
3,3'-Dichlorobenzidine	ND		3.5	1.2	ug/L		05/04/22 08:47	05/10/22 01:15	1
3-Nitroaniline	ND		7.0	1.3	ug/L		05/04/22 08:47	05/10/22 01:15	1
4,6-Dinitro-2-methylphenol	ND		14	4.2	ug/L		05/04/22 08:47	05/10/22 01:15	1
4-Bromophenyl phenyl ether	ND		3.5	0.38	ug/L		05/04/22 08:47	05/10/22 01:15	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	ND		7.0	1.6	ug/L		05/04/22 08:47	05/10/22 01:15	1
4-Chloroaniline	ND		7.0	1.4	ug/L		05/04/22 08:47	05/10/22 01:15	1
4-Chlorophenyl phenyl ether	ND		3.5	0.45	ug/L		05/04/22 08:47	05/10/22 01:15	1
4-Nitroaniline	ND		7.0	1.2	ug/L		05/04/22 08:47	05/10/22 01:15	1
4-Nitrophenol	ND		14	5.2	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Acenaphthene</b>	<b>0.77</b>		0.70	0.22	ug/L		05/04/22 08:47	05/10/22 01:15	1
Acenaphthylene	ND		0.70	0.19	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Anthracene</b>	<b>7.3</b>		0.70	0.24	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Benzo[a]anthracene</b>	<b>1.4</b>		0.14	0.040	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Benzo[a]pyrene</b>	<b>0.51</b>		0.14	0.070	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Benzo[b]fluoranthene</b>	<b>1.5</b>		0.14	0.057	ug/L		05/04/22 08:47	05/10/22 01:15	1
Benzo[g,h,i]perylene	ND		0.70	0.26	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Benzo[k]fluoranthene</b>	<b>0.65</b>		0.14	0.045	ug/L		05/04/22 08:47	05/10/22 01:15	1
Benzoic acid	ND		14	4.1	ug/L		05/04/22 08:47	05/10/22 01:15	1
Benzyl alcohol	ND		14	4.3	ug/L		05/04/22 08:47	05/10/22 01:15	1
Bis(2-chloroethoxy)methane	ND		1.4	0.20	ug/L		05/04/22 08:47	05/10/22 01:15	1
Bis(2-chloroethyl)ether	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 01:15	1
Bis(2-ethylhexyl) phthalate	ND		7.0	1.2	ug/L		05/04/22 08:47	05/10/22 01:15	1
Butyl benzyl phthalate	ND	*	1.4	0.34	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Chrysene</b>	<b>2.9</b>		0.14	0.048	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Dibenz(a,h)anthracene</b>	<b>0.079</b>	J	0.21	0.036	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Dibenzofuran</b>	<b>1.1</b>	J	1.4	0.18	ug/L		05/04/22 08:47	05/10/22 01:15	1
Diethyl phthalate	ND		3.5	0.25	ug/L		05/04/22 08:47	05/10/22 01:15	1
Dimethyl phthalate	ND		3.5	0.22	ug/L		05/04/22 08:47	05/10/22 01:15	1
Di-n-butyl phthalate	ND		3.5	0.51	ug/L		05/04/22 08:47	05/10/22 01:15	1
Di-n-octyl phthalate	ND		7.0	0.74	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Fluoranthene</b>	<b>15</b>		0.70	0.32	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Fluorene</b>	<b>2.2</b>		0.70	0.17	ug/L		05/04/22 08:47	05/10/22 01:15	1
Hexachlorobenzene	ND		0.35	0.056	ug/L		05/04/22 08:47	05/10/22 01:15	1
Hexachlorobutadiene	ND		3.5	0.36	ug/L		05/04/22 08:47	05/10/22 01:15	1
Hexachlorocyclopentadiene	ND		14	4.5	ug/L		05/04/22 08:47	05/10/22 01:15	1
Hexachloroethane	ND		3.5	0.42	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.26</b>		0.14	0.053	ug/L		05/04/22 08:47	05/10/22 01:15	1
Isophorone	ND		1.4	0.26	ug/L		05/04/22 08:47	05/10/22 01:15	1
Nitrobenzene	ND		0.70	0.32	ug/L		05/04/22 08:47	05/10/22 01:15	1
N-Nitrosodi-n-propylamine	ND		0.35	0.11	ug/L		05/04/22 08:47	05/10/22 01:15	1
N-Nitrosodiphenylamine	ND		1.4	0.26	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Phenanthrene</b>	<b>7.2</b>		0.70	0.21	ug/L		05/04/22 08:47	05/10/22 01:15	1
Phenol	ND		3.5	0.47	ug/L		05/04/22 08:47	05/10/22 01:15	1
<b>Pyrene</b>	<b>7.2</b>		0.70	0.30	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,3,4,6-Tetrachlorophenol	ND		3.5	0.53	ug/L		05/04/22 08:47	05/10/22 01:15	1
2,3,5,6-Tetrachlorophenol	ND		7.0	2.7	ug/L		05/04/22 08:47	05/10/22 01:15	1
1-Methylnaphthalene	ND		1.4	0.21	ug/L		05/04/22 08:47	05/10/22 01:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	45		27 - 110	05/04/22 08:47	05/10/22 01:15	1
Phenol-d5 (Surr)	29		20 - 110	05/04/22 08:47	05/10/22 01:15	1
Nitrobenzene-d5 (Surr)	63		36 - 120	05/04/22 08:47	05/10/22 01:15	1
2-Fluorobiphenyl	76		34 - 110	05/04/22 08:47	05/10/22 01:15	1
2,4,6-Tribromophenol (Surr)	120		40 - 145	05/04/22 08:47	05/10/22 01:15	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	95		40 - 145	05/04/22 08:47	05/10/22 01:15	1

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

Date Collected: 04/28/22 14:00

Matrix: Water

Date Received: 04/29/22 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			05/08/22 14:37	1
<b>1,2,4-Trimethylbenzene</b>	<b>5.3</b>		1.0	0.75	ug/L			05/08/22 14:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/22 14:37	1
<b>Benzene</b>	<b>9.4</b>		1.0	0.41	ug/L			05/08/22 14:37	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/22 14:37	1
<b>Ethylbenzene</b>	<b>16</b>		1.0	0.74	ug/L			05/08/22 14:37	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/22 14:37	1
<b>m-Xylene &amp; p-Xylene</b>	<b>2.0</b>		2.0	0.66	ug/L			05/08/22 14:37	1
<b>Naphthalene</b>	<b>1.5</b>		1.0	0.43	ug/L			05/08/22 14:37	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/22 14:37	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/22 14:37	1
<b>o-Xylene</b>	<b>11</b>		1.0	0.76	ug/L			05/08/22 14:37	1
Styrene	ND		1.0	0.73	ug/L			05/08/22 14:37	1
<b>Toluene</b>	<b>1.2</b>		1.0	0.51	ug/L			05/08/22 14:37	1
<b>Xylenes, Total</b>	<b>13</b>		2.0	0.66	ug/L			05/08/22 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		05/08/22 14:37	1
4-Bromofluorobenzene (Surr)	99		73 - 120		05/08/22 14:37	1
Dibromofluoromethane (Surr)	98		75 - 123		05/08/22 14:37	1
Toluene-d8 (Surr)	101		80 - 120		05/08/22 14:37	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		05/02/22 15:33	05/03/22 19:14	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	122		24 - 146	05/02/22 15:33	05/03/22 19:14	5
2-Fluorobiphenyl	92		37 - 120	05/02/22 15:33	05/03/22 19:14	5
2-Fluorophenol (Surr)	45		10 - 120	05/02/22 15:33	05/03/22 19:14	5
Nitrobenzene-d5 (Surr)	79		26 - 120	05/02/22 15:33	05/03/22 19:14	5
Phenol-d5 (Surr)	26		11 - 120	05/02/22 15:33	05/03/22 19:14	5
p-Terphenyl-d14	100		64 - 127	05/02/22 15:33	05/03/22 19:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 01:40	1
1,2-Dichlorobenzene	ND		1.3	0.17	ug/L		05/04/22 08:47	05/10/22 01:40	1
1,3-Dichlorobenzene	ND		1.3	0.14	ug/L		05/04/22 08:47	05/10/22 01:40	1
1,4-Dichlorobenzene	ND		1.3	0.14	ug/L		05/04/22 08:47	05/10/22 01:40	1
bis(chloroisopropyl) ether	ND		1.3	0.26	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,4,5-Trichlorophenol	ND		6.7	1.7	ug/L		05/04/22 08:47	05/10/22 01:40	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

Date Collected: 04/28/22 14:00

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		3.4	0.48	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,4-Dichlorophenol	ND		6.7	1.7	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,4-Dimethylphenol	ND		6.7	1.2	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,4-Dinitrophenol	ND		13	5.8	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,4-Dinitrotoluene	ND		0.67	0.16	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,6-Dinitrotoluene	ND		0.67	0.050	ug/L		05/04/22 08:47	05/10/22 01:40	1
2-Chloronaphthalene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 01:40	1
2-Chlorophenol	ND		3.4	0.38	ug/L		05/04/22 08:47	05/10/22 01:40	1
2-Methylnaphthalene	ND		1.3	0.044	ug/L		05/04/22 08:47	05/10/22 01:40	1
2-Methylphenol	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 01:40	1
2-Nitroaniline	ND		3.4	0.86	ug/L		05/04/22 08:47	05/10/22 01:40	1
2-Nitrophenol	ND		6.7	1.7	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>3 &amp; 4 Methylphenol</b>	<b>0.37</b>	<b>J</b>	1.3	0.30	ug/L		05/04/22 08:47	05/10/22 01:40	1
3,3'-Dichlorobenzidine	ND		3.4	1.2	ug/L		05/04/22 08:47	05/10/22 01:40	1
3-Nitroaniline	ND		6.7	1.2	ug/L		05/04/22 08:47	05/10/22 01:40	1
4,6-Dinitro-2-methylphenol	ND		13	4.0	ug/L		05/04/22 08:47	05/10/22 01:40	1
4-Bromophenyl phenyl ether	ND		3.4	0.36	ug/L		05/04/22 08:47	05/10/22 01:40	1
4-Chloro-3-methylphenol	ND		6.7	1.5	ug/L		05/04/22 08:47	05/10/22 01:40	1
4-Chloroaniline	ND		6.7	1.4	ug/L		05/04/22 08:47	05/10/22 01:40	1
4-Chlorophenyl phenyl ether	ND		3.4	0.43	ug/L		05/04/22 08:47	05/10/22 01:40	1
4-Nitroaniline	ND		6.7	1.1	ug/L		05/04/22 08:47	05/10/22 01:40	1
4-Nitrophenol	ND		13	5.0	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Acenaphthylene</b>	<b>2.7</b>		0.67	0.18	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Anthracene</b>	<b>0.63</b>	<b>J</b>	0.67	0.22	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Benzo[a]anthracene</b>	<b>0.12</b>	<b>J</b>	0.13	0.038	ug/L		05/04/22 08:47	05/10/22 01:40	1
Benzo[a]pyrene	ND		0.13	0.066	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Benzo[b]fluoranthene</b>	<b>0.13</b>		0.13	0.054	ug/L		05/04/22 08:47	05/10/22 01:40	1
Benzo[g,h,i]perylene	ND		0.67	0.25	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Benzo[k]fluoranthene</b>	<b>0.050</b>	<b>J</b>	0.13	0.043	ug/L		05/04/22 08:47	05/10/22 01:40	1
Benzoic acid	ND		13	3.9	ug/L		05/04/22 08:47	05/10/22 01:40	1
Benzyl alcohol	ND		13	4.1	ug/L		05/04/22 08:47	05/10/22 01:40	1
Bis(2-chloroethoxy)methane	ND		1.3	0.19	ug/L		05/04/22 08:47	05/10/22 01:40	1
Bis(2-chloroethyl)ether	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 01:40	1
Bis(2-ethylhexyl) phthalate	ND		6.7	1.2	ug/L		05/04/22 08:47	05/10/22 01:40	1
Butyl benzyl phthalate	ND	*	1.3	0.32	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Chrysene</b>	<b>0.22</b>		0.13	0.046	ug/L		05/04/22 08:47	05/10/22 01:40	1
Dibenz(a,h)anthracene	ND		0.20	0.034	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Dibenzofuran</b>	<b>14</b>		1.3	0.18	ug/L		05/04/22 08:47	05/10/22 01:40	1
Diethyl phthalate	ND		3.4	0.24	ug/L		05/04/22 08:47	05/10/22 01:40	1
Dimethyl phthalate	ND		3.4	0.21	ug/L		05/04/22 08:47	05/10/22 01:40	1
Di-n-butyl phthalate	ND		3.4	0.49	ug/L		05/04/22 08:47	05/10/22 01:40	1
Di-n-octyl phthalate	ND		6.7	0.71	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Fluoranthene</b>	<b>2.7</b>		0.67	0.30	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Fluorene</b>	<b>12</b>		0.67	0.16	ug/L		05/04/22 08:47	05/10/22 01:40	1
Hexachlorobenzene	ND		0.34	0.053	ug/L		05/04/22 08:47	05/10/22 01:40	1
Hexachlorobutadiene	ND		3.4	0.35	ug/L		05/04/22 08:47	05/10/22 01:40	1
Hexachlorocyclopentadiene	ND		13	4.3	ug/L		05/04/22 08:47	05/10/22 01:40	1
Hexachloroethane	ND		3.4	0.40	ug/L		05/04/22 08:47	05/10/22 01:40	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.050	ug/L		05/04/22 08:47	05/10/22 01:40	1



# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

Date Collected: 04/28/22 14:00

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 01:40	1
Nitrobenzene	ND		0.67	0.30	ug/L		05/04/22 08:47	05/10/22 01:40	1
N-Nitrosodi-n-propylamine	ND		0.34	0.10	ug/L		05/04/22 08:47	05/10/22 01:40	1
N-Nitrosodiphenylamine	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Phenanthrene</b>	<b>0.48</b>	<b>J</b>	0.67	0.20	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Phenol</b>	<b>0.49</b>	<b>J</b>	3.4	0.45	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>Pyrene</b>	<b>1.5</b>		0.67	0.29	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,3,4,6-Tetrachlorophenol	ND		3.4	0.50	ug/L		05/04/22 08:47	05/10/22 01:40	1
2,3,5,6-Tetrachlorophenol	ND		6.7	2.6	ug/L		05/04/22 08:47	05/10/22 01:40	1
<b>1-Methylnaphthalene</b>	<b>7.1</b>		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	63		27 - 110	05/04/22 08:47	05/10/22 01:40	1
Phenol-d5 (Surr)	43		20 - 110	05/04/22 08:47	05/10/22 01:40	1
Nitrobenzene-d5 (Surr)	75		36 - 120	05/04/22 08:47	05/10/22 01:40	1
2-Fluorobiphenyl	88		34 - 110	05/04/22 08:47	05/10/22 01:40	1
2,4,6-Tribromophenol (Surr)	96		40 - 145	05/04/22 08:47	05/10/22 01:40	1
Terphenyl-d14 (Surr)	92		40 - 145	05/04/22 08:47	05/10/22 01:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>58</b>		3.4	1.0	ug/L		05/04/22 08:47	05/12/22 11:38	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	20	S1-	27 - 110	05/04/22 08:47	05/12/22 11:38	5
Phenol-d5 (Surr)	21		20 - 110	05/04/22 08:47	05/12/22 11:38	5
Nitrobenzene-d5 (Surr)	55		36 - 120	05/04/22 08:47	05/12/22 11:38	5
2-Fluorobiphenyl	55		34 - 110	05/04/22 08:47	05/12/22 11:38	5
2,4,6-Tribromophenol (Surr)	57		40 - 145	05/04/22 08:47	05/12/22 11:38	5
Terphenyl-d14 (Surr)	77		40 - 145	05/04/22 08:47	05/12/22 11:38	5

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/29/22 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			05/08/22 14:59	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/08/22 14:59	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/22 14:59	1
Benzene	ND		1.0	0.41	ug/L			05/08/22 14:59	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/22 14:59	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/08/22 14:59	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/22 14:59	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/08/22 14:59	1
Naphthalene	ND		1.0	0.43	ug/L			05/08/22 14:59	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/22 14:59	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/22 14:59	1
o-Xylene	ND		1.0	0.76	ug/L			05/08/22 14:59	1
Styrene	ND		1.0	0.73	ug/L			05/08/22 14:59	1
Toluene	ND		1.0	0.51	ug/L			05/08/22 14:59	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

**Date Collected: 04/28/22 15:00**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		2.0	0.66	ug/L			05/08/22 14:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120					05/08/22 14:59	1
4-Bromofluorobenzene (Surr)	104		73 - 120					05/08/22 14:59	1
Dibromofluoromethane (Surr)	98		75 - 123					05/08/22 14:59	1
Toluene-d8 (Surr)	103		80 - 120					05/08/22 14:59	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		05/02/22 15:33	05/03/22 19:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	104		24 - 146				05/02/22 15:33	05/03/22 19:41	1
2-Fluorobiphenyl	98		37 - 120				05/02/22 15:33	05/03/22 19:41	1
2-Fluorophenol (Surr)	45		10 - 120				05/02/22 15:33	05/03/22 19:41	1
Nitrobenzene-d5 (Surr)	80		26 - 120				05/02/22 15:33	05/03/22 19:41	1
Phenol-d5 (Surr)	29		11 - 120				05/02/22 15:33	05/03/22 19:41	1
p-Terphenyl-d14	106		64 - 127				05/02/22 15:33	05/03/22 19:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 02:04	1
1,2-Dichlorobenzene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 02:04	1
1,3-Dichlorobenzene	ND		1.3	0.14	ug/L		05/04/22 08:47	05/10/22 02:04	1
1,4-Dichlorobenzene	ND		1.3	0.14	ug/L		05/04/22 08:47	05/10/22 02:04	1
bis(chloroisopropyl) ether	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,4,5-Trichlorophenol	ND		6.6	1.7	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,4,6-Trichlorophenol	ND		3.3	0.48	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,4-Dichlorophenol	ND		6.6	1.7	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,4-Dimethylphenol	ND		6.6	1.2	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,4-Dinitrophenol	ND		13	5.7	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,4-Dinitrotoluene	ND		0.66	0.16	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,6-Dinitrotoluene	ND		0.66	0.049	ug/L		05/04/22 08:47	05/10/22 02:04	1
2-Chloronaphthalene	ND		1.3	0.16	ug/L		05/04/22 08:47	05/10/22 02:04	1
2-Chlorophenol	ND		3.3	0.37	ug/L		05/04/22 08:47	05/10/22 02:04	1
2-Methylnaphthalene	ND		1.3	0.043	ug/L		05/04/22 08:47	05/10/22 02:04	1
2-Methylphenol	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 02:04	1
2-Nitroaniline	ND		3.3	0.86	ug/L		05/04/22 08:47	05/10/22 02:04	1
2-Nitrophenol	ND		6.6	1.7	ug/L		05/04/22 08:47	05/10/22 02:04	1
3 & 4 Methylphenol	ND		1.3	0.30	ug/L		05/04/22 08:47	05/10/22 02:04	1
3,3'-Dichlorobenzidine	ND		3.3	1.1	ug/L		05/04/22 08:47	05/10/22 02:04	1
3-Nitroaniline	ND		6.6	1.2	ug/L		05/04/22 08:47	05/10/22 02:04	1
4,6-Dinitro-2-methylphenol	ND		13	3.9	ug/L		05/04/22 08:47	05/10/22 02:04	1
4-Bromophenyl phenyl ether	ND		3.3	0.36	ug/L		05/04/22 08:47	05/10/22 02:04	1
4-Chloro-3-methylphenol	ND		6.6	1.5	ug/L		05/04/22 08:47	05/10/22 02:04	1
4-Chloroaniline	ND		6.6	1.3	ug/L		05/04/22 08:47	05/10/22 02:04	1
4-Chlorophenyl phenyl ether	ND		3.3	0.42	ug/L		05/04/22 08:47	05/10/22 02:04	1
4-Nitroaniline	ND		6.6	1.1	ug/L		05/04/22 08:47	05/10/22 02:04	1
4-Nitrophenol	ND		13	4.9	ug/L		05/04/22 08:47	05/10/22 02:04	1

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# Client Sample Results

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.66	0.21	ug/L		05/04/22 08:47	05/10/22 02:04	1
Acenaphthylene	ND		0.66	0.18	ug/L		05/04/22 08:47	05/10/22 02:04	1
Anthracene	ND		0.66	0.22	ug/L		05/04/22 08:47	05/10/22 02:04	1
Benzo[a]anthracene	ND		0.13	0.038	ug/L		05/04/22 08:47	05/10/22 02:04	1
Benzo[a]pyrene	ND		0.13	0.066	ug/L		05/04/22 08:47	05/10/22 02:04	1
Benzo[b]fluoranthene	ND		0.13	0.054	ug/L		05/04/22 08:47	05/10/22 02:04	1
Benzo[g,h,i]perylene	ND		0.66	0.25	ug/L		05/04/22 08:47	05/10/22 02:04	1
Benzo[k]fluoranthene	ND		0.13	0.043	ug/L		05/04/22 08:47	05/10/22 02:04	1
<b>Benzoic acid</b>	<b>6.1</b>	<b>J</b>	13	3.8	ug/L		05/04/22 08:47	05/10/22 02:04	1
Benzyl alcohol	ND		13	4.0	ug/L		05/04/22 08:47	05/10/22 02:04	1
Bis(2-chloroethoxy)methane	ND		1.3	0.19	ug/L		05/04/22 08:47	05/10/22 02:04	1
Bis(2-chloroethyl)ether	ND		1.3	0.19	ug/L		05/04/22 08:47	05/10/22 02:04	1
Bis(2-ethylhexyl) phthalate	ND		6.6	1.1	ug/L		05/04/22 08:47	05/10/22 02:04	1
Butyl benzyl phthalate	ND	*	1.3	0.32	ug/L		05/04/22 08:47	05/10/22 02:04	1
Chrysene	ND		0.13	0.045	ug/L		05/04/22 08:47	05/10/22 02:04	1
Dibenz(a,h)anthracene	ND		0.20	0.034	ug/L		05/04/22 08:47	05/10/22 02:04	1
Dibenzofuran	ND		1.3	0.17	ug/L		05/04/22 08:47	05/10/22 02:04	1
Diethyl phthalate	ND		3.3	0.24	ug/L		05/04/22 08:47	05/10/22 02:04	1
Dimethyl phthalate	ND		3.3	0.21	ug/L		05/04/22 08:47	05/10/22 02:04	1
Di-n-butyl phthalate	ND		3.3	0.49	ug/L		05/04/22 08:47	05/10/22 02:04	1
Di-n-octyl phthalate	ND		6.6	0.70	ug/L		05/04/22 08:47	05/10/22 02:04	1
Fluoranthene	ND		0.66	0.30	ug/L		05/04/22 08:47	05/10/22 02:04	1
Fluorene	ND		0.66	0.16	ug/L		05/04/22 08:47	05/10/22 02:04	1
Hexachlorobenzene	ND		0.33	0.053	ug/L		05/04/22 08:47	05/10/22 02:04	1
Hexachlorobutadiene	ND		3.3	0.34	ug/L		05/04/22 08:47	05/10/22 02:04	1
Hexachlorocyclopentadiene	ND		13	4.2	ug/L		05/04/22 08:47	05/10/22 02:04	1
Hexachloroethane	ND		3.3	0.40	ug/L		05/04/22 08:47	05/10/22 02:04	1
Indeno[1,2,3-cd]pyrene	ND		0.13	0.050	ug/L		05/04/22 08:47	05/10/22 02:04	1
Isophorone	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 02:04	1
Nitrobenzene	ND		0.66	0.30	ug/L		05/04/22 08:47	05/10/22 02:04	1
N-Nitrosodi-n-propylamine	ND		0.33	0.10	ug/L		05/04/22 08:47	05/10/22 02:04	1
N-Nitrosodiphenylamine	ND		1.3	0.25	ug/L		05/04/22 08:47	05/10/22 02:04	1
Phenanthrene	ND		0.66	0.20	ug/L		05/04/22 08:47	05/10/22 02:04	1
Phenol	ND		3.3	0.45	ug/L		05/04/22 08:47	05/10/22 02:04	1
Pyrene	ND		0.66	0.28	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,3,4,6-Tetrachlorophenol	ND		3.3	0.50	ug/L		05/04/22 08:47	05/10/22 02:04	1
2,3,5,6-Tetrachlorophenol	ND		6.6	2.5	ug/L		05/04/22 08:47	05/10/22 02:04	1
1-Methylnaphthalene	ND		1.3	0.20	ug/L		05/04/22 08:47	05/10/22 02:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	49		27 - 110	05/04/22 08:47	05/10/22 02:04	1
Phenol-d5 (Surr)	28		20 - 110	05/04/22 08:47	05/10/22 02:04	1
Nitrobenzene-d5 (Surr)	67		36 - 120	05/04/22 08:47	05/10/22 02:04	1
2-Fluorobiphenyl	80		34 - 110	05/04/22 08:47	05/10/22 02:04	1
2,4,6-Tribromophenol (Surr)	98		40 - 145	05/04/22 08:47	05/10/22 02:04	1
Terphenyl-d14 (Surr)	99		40 - 145	05/04/22 08:47	05/10/22 02:04	1

# Surrogate Summary

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

Job ID: 480-197349-1

## 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)
480-197349-1	SUPE-W-12CR-042822	99	103	98	101
480-197349-2	SUPE-W-30C-042822	100	105	100	102
480-197349-3	SUPE-W-30A-042822	99	105	97	101
480-197349-5	SUPE-W-04AR2-042822	100	106	100	101
480-197349-6	SUPE-W-10AR2-042822	100	99	98	101
480-197349-7	SUPE-W-EB-02-042822	99	104	98	103
LCS 480-625069/5	Lab Control Sample	99	100	97	102
MB 480-625069/7	Method Blank	99	103	96	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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (27-110)	PHL (20-110)	NBZ (36-120)	FBP (34-110)	TBP (40-145)	TPHL (40-145)
480-197349-1	SUPE-W-12CR-042822	43	35	54	63	115	81
480-197349-2	SUPE-W-30C-042822	45	25	58	69	96	95
480-197349-3	SUPE-W-30A-042822	44	27	56	69	96	90
480-197349-4	SUPE-W-18D-042822	42	24	57	65	100	131
480-197349-5	SUPE-W-04AR2-042822	45	29	63	76	120	95
480-197349-6	SUPE-W-10AR2-042822	63	43	75	88	96	92
480-197349-6 - DL	SUPE-W-10AR2-042822	20 S1-	21	55	55	57	77
480-197349-7	SUPE-W-EB-02-042822	49	28	67	80	98	99
LCS 500-654744/2-A	Lab Control Sample	65	56	65	75	114	98
LCSD 500-654744/3-A	Lab Control Sample Dup	71	57	66	77	120	81
MB 500-654744/1-A	Method Blank	55	36	62	81	94	95

### Surrogate Legend

2FP = 2-Fluorophenol (Surr)  
 PHL = Phenol-d5 (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 FBP = 2-Fluorobiphenyl  
 TBP = 2,4,6-Tribromophenol (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)
480-197349-1	SUPE-W-12CR-042822	144	88	42	77	27	55 S1-
480-197349-2	SUPE-W-30C-042822	119	87	45	73	30	95
480-197349-3	SUPE-W-30A-042822	89	98	48	83	25	101
480-197349-4	SUPE-W-18D-042822	132	89	42	73	27	102

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# Surrogate Summary

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

Job ID: 480-197349-1

**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)
480-197349-5	SUPE-W-04AR2-042822	126	96	45	76	25	95
480-197349-6	SUPE-W-10AR2-042822	122	92	45	79	26	100
480-197349-7	SUPE-W-EB-02-042822	104	98	45	80	29	106
LCS 480-624194/2-A	Lab Control Sample	156 S1+	98	48	81	32	113
MB 480-624194/1-A	Method Blank	113	88	42	72	27	98

**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: 480-197349-1

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

**Lab Sample ID: MB 480-625069/7**  
**Matrix: Water**  
**Analysis Batch: 625069**

**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			05/08/22 11:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			05/08/22 11:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			05/08/22 11:27	1
Benzene	ND		1.0	0.41	ug/L			05/08/22 11:27	1
Chloromethane	ND		1.0	0.35	ug/L			05/08/22 11:27	1
Ethylbenzene	ND		1.0	0.74	ug/L			05/08/22 11:27	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			05/08/22 11:27	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			05/08/22 11:27	1
Naphthalene	ND		1.0	0.43	ug/L			05/08/22 11:27	1
n-Butylbenzene	ND		1.0	0.64	ug/L			05/08/22 11:27	1
N-Propylbenzene	ND		1.0	0.69	ug/L			05/08/22 11:27	1
o-Xylene	ND		1.0	0.76	ug/L			05/08/22 11:27	1
Styrene	ND		1.0	0.73	ug/L			05/08/22 11:27	1
Toluene	ND		1.0	0.51	ug/L			05/08/22 11:27	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/08/22 11:27	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		05/08/22 11:27	1
4-Bromofluorobenzene (Surr)	103		73 - 120		05/08/22 11:27	1
Dibromofluoromethane (Surr)	96		75 - 123		05/08/22 11:27	1
Toluene-d8 (Surr)	101		80 - 120		05/08/22 11:27	1

**Lab Sample ID: LCS 480-625069/5**  
**Matrix: Water**  
**Analysis Batch: 625069**

**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	21.6		ug/L		87	73 - 126
1,2,4-Trimethylbenzene	25.0	22.5		ug/L		90	76 - 121
1,3,5-Trimethylbenzene	25.0	22.1		ug/L		88	77 - 121
Benzene	25.0	22.5		ug/L		90	71 - 124
Chloromethane	25.0	25.7		ug/L		103	68 - 124
Ethylbenzene	25.0	23.0		ug/L		92	77 - 123
Methyl tert-butyl ether	25.0	22.1		ug/L		88	77 - 120
m-Xylene & p-Xylene	25.0	23.0		ug/L		92	76 - 122
Naphthalene	25.0	20.5		ug/L		82	66 - 125
n-Butylbenzene	25.0	21.9		ug/L		87	71 - 128
N-Propylbenzene	25.0	22.4		ug/L		90	75 - 127
o-Xylene	25.0	22.4		ug/L		90	76 - 122
Styrene	25.0	22.9		ug/L		92	80 - 120
Toluene	25.0	23.1		ug/L		92	80 - 122
Xylenes, Total	50.0	45.4		ug/L		91	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	99		77 - 120
4-Bromofluorobenzene (Surr)	100		73 - 120
Dibromofluoromethane (Surr)	97		75 - 123
Toluene-d8 (Surr)	102		80 - 120

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# QC Sample Results

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

Job ID: 480-197349-1

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

**Lab Sample ID: MB 500-654744/1-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		1.6	0.19	ug/L		05/04/22 08:47	05/09/22 17:07	1
1,2-Dichlorobenzene	ND		1.6	0.20	ug/L		05/04/22 08:47	05/09/22 17:07	1
1,3-Dichlorobenzene	ND		1.6	0.17	ug/L		05/04/22 08:47	05/09/22 17:07	1
1,4-Dichlorobenzene	ND		1.6	0.17	ug/L		05/04/22 08:47	05/09/22 17:07	1
bis(chloroisopropyl) ether	ND		1.6	0.30	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,4,5-Trichlorophenol	ND		8.0	2.1	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,4,6-Trichlorophenol	ND		4.0	0.57	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,4-Dichlorophenol	ND		8.0	2.1	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,4-Dimethylphenol	ND		8.0	1.4	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,4-Dinitrophenol	ND		16	6.9	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,4-Dinitrotoluene	ND		0.80	0.20	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,6-Dinitrotoluene	ND		0.80	0.059	ug/L		05/04/22 08:47	05/09/22 17:07	1
2-Chloronaphthalene	ND		1.6	0.19	ug/L		05/04/22 08:47	05/09/22 17:07	1
2-Chlorophenol	ND		4.0	0.45	ug/L		05/04/22 08:47	05/09/22 17:07	1
2-Methylnaphthalene	ND		1.6	0.052	ug/L		05/04/22 08:47	05/09/22 17:07	1
2-Methylphenol	ND		1.6	0.24	ug/L		05/04/22 08:47	05/09/22 17:07	1
2-Nitroaniline	ND		4.0	1.0	ug/L		05/04/22 08:47	05/09/22 17:07	1
2-Nitrophenol	ND		8.0	2.0	ug/L		05/04/22 08:47	05/09/22 17:07	1
3 & 4 Methylphenol	ND		1.6	0.36	ug/L		05/04/22 08:47	05/09/22 17:07	1
3,3'-Dichlorobenzidine	ND		4.0	1.4	ug/L		05/04/22 08:47	05/09/22 17:07	1
3-Nitroaniline	ND		8.0	1.4	ug/L		05/04/22 08:47	05/09/22 17:07	1
4,6-Dinitro-2-methylphenol	ND		16	4.7	ug/L		05/04/22 08:47	05/09/22 17:07	1
4-Bromophenyl phenyl ether	ND		4.0	0.43	ug/L		05/04/22 08:47	05/09/22 17:07	1
4-Chloro-3-methylphenol	ND		8.0	1.8	ug/L		05/04/22 08:47	05/09/22 17:07	1
4-Chloroaniline	ND		8.0	1.6	ug/L		05/04/22 08:47	05/09/22 17:07	1
4-Chlorophenyl phenyl ether	ND		4.0	0.51	ug/L		05/04/22 08:47	05/09/22 17:07	1
4-Nitroaniline	ND		8.0	1.3	ug/L		05/04/22 08:47	05/09/22 17:07	1
4-Nitrophenol	ND		16	5.9	ug/L		05/04/22 08:47	05/09/22 17:07	1
Acenaphthene	ND		0.80	0.25	ug/L		05/04/22 08:47	05/09/22 17:07	1
Acenaphthylene	ND		0.80	0.21	ug/L		05/04/22 08:47	05/09/22 17:07	1
Anthracene	ND		0.80	0.27	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzo[a]anthracene	ND		0.16	0.045	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzo[a]pyrene	ND		0.16	0.079	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzo[b]fluoranthene	ND		0.16	0.065	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzo[g,h,i]perylene	ND		0.80	0.30	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzo[k]fluoranthene	ND		0.16	0.051	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzoic acid	ND		16	4.6	ug/L		05/04/22 08:47	05/09/22 17:07	1
Benzyl alcohol	ND		16	4.8	ug/L		05/04/22 08:47	05/09/22 17:07	1
Bis(2-chloroethoxy)methane	ND		1.6	0.23	ug/L		05/04/22 08:47	05/09/22 17:07	1
Bis(2-chloroethyl)ether	ND		1.6	0.23	ug/L		05/04/22 08:47	05/09/22 17:07	1
Bis(2-ethylhexyl) phthalate	ND		8.0	1.4	ug/L		05/04/22 08:47	05/09/22 17:07	1
Butyl benzyl phthalate	ND		1.6	0.38	ug/L		05/04/22 08:47	05/09/22 17:07	1
Chrysene	ND		0.16	0.055	ug/L		05/04/22 08:47	05/09/22 17:07	1
Dibenz(a,h)anthracene	ND		0.24	0.041	ug/L		05/04/22 08:47	05/09/22 17:07	1
Dibenzofuran	ND		1.6	0.21	ug/L		05/04/22 08:47	05/09/22 17:07	1
Diethyl phthalate	ND		4.0	0.29	ug/L		05/04/22 08:47	05/09/22 17:07	1
Dimethyl phthalate	ND		4.0	0.25	ug/L		05/04/22 08:47	05/09/22 17:07	1
Di-n-butyl phthalate	ND		4.0	0.58	ug/L		05/04/22 08:47	05/09/22 17:07	1

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# QC Sample Results

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

Job ID: 480-197349-1

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

**Lab Sample ID: MB 500-654744/1-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Di-n-octyl phthalate	ND		8.0	0.84	ug/L		05/04/22 08:47	05/09/22 17:07	1
Fluoranthene	ND		0.80	0.36	ug/L		05/04/22 08:47	05/09/22 17:07	1
Fluorene	ND		0.80	0.20	ug/L		05/04/22 08:47	05/09/22 17:07	1
Hexachlorobenzene	ND		0.40	0.064	ug/L		05/04/22 08:47	05/09/22 17:07	1
Hexachlorobutadiene	ND		4.0	0.41	ug/L		05/04/22 08:47	05/09/22 17:07	1
Hexachlorocyclopentadiene	ND		16	5.1	ug/L		05/04/22 08:47	05/09/22 17:07	1
Hexachloroethane	ND		4.0	0.48	ug/L		05/04/22 08:47	05/09/22 17:07	1
Indeno[1,2,3-cd]pyrene	ND		0.16	0.060	ug/L		05/04/22 08:47	05/09/22 17:07	1
Isophorone	ND		1.6	0.30	ug/L		05/04/22 08:47	05/09/22 17:07	1
Naphthalene	ND		0.80	0.25	ug/L		05/04/22 08:47	05/09/22 17:07	1
Nitrobenzene	ND		0.80	0.36	ug/L		05/04/22 08:47	05/09/22 17:07	1
N-Nitrosodi-n-propylamine	ND		0.40	0.12	ug/L		05/04/22 08:47	05/09/22 17:07	1
N-Nitrosodiphenylamine	ND		1.6	0.30	ug/L		05/04/22 08:47	05/09/22 17:07	1
Phenanthrene	ND		0.80	0.24	ug/L		05/04/22 08:47	05/09/22 17:07	1
Phenol	ND		4.0	0.54	ug/L		05/04/22 08:47	05/09/22 17:07	1
Pyrene	ND		0.80	0.34	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,3,4,6-Tetrachlorophenol	ND		4.0	0.60	ug/L		05/04/22 08:47	05/09/22 17:07	1
2,3,5,6-Tetrachlorophenol	ND		8.0	3.1	ug/L		05/04/22 08:47	05/09/22 17:07	1
1-Methylnaphthalene	ND		1.6	0.24	ug/L		05/04/22 08:47	05/09/22 17:07	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	55		27 - 110	05/04/22 08:47	05/09/22 17:07	1
Phenol-d5 (Surr)	36		20 - 110	05/04/22 08:47	05/09/22 17:07	1
Nitrobenzene-d5 (Surr)	62		36 - 120	05/04/22 08:47	05/09/22 17:07	1
2-Fluorobiphenyl	81		34 - 110	05/04/22 08:47	05/09/22 17:07	1
2,4,6-Tribromophenol (Surr)	94		40 - 145	05/04/22 08:47	05/09/22 17:07	1
Terphenyl-d14 (Surr)	95		40 - 145	05/04/22 08:47	05/09/22 17:07	1

**Lab Sample ID: LCS 500-654744/2-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	32.0	18.5		ug/L		58	26 - 110
1,3-Dichlorobenzene	32.0	17.3		ug/L		54	22 - 110
1,4-Dichlorobenzene	32.0	17.4		ug/L		54	23 - 110
bis(chloroisopropyl) ether	32.0	17.7		ug/L		55	38 - 140
2,4,5-Trichlorophenol	32.0	28.0		ug/L		87	63 - 124
2,4,6-Trichlorophenol	32.0	26.8		ug/L		84	62 - 121
2,4-Dichlorophenol	32.0	28.1		ug/L		88	58 - 120
2,4-Dimethylphenol	32.0	21.7		ug/L		68	51 - 115
2,4-Dinitrophenol	64.0	56.0		ug/L		87	37 - 130
2,4-Dinitrotoluene	32.0	29.0		ug/L		91	63 - 129
2,6-Dinitrotoluene	32.0	28.2		ug/L		88	63 - 129
2-Chloronaphthalene	32.0	22.3		ug/L		70	39 - 110
2-Chlorophenol	32.0	23.9		ug/L		75	59 - 110
2-Methylnaphthalene	32.0	22.3		ug/L		70	34 - 110

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# QC Sample Results

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

Job ID: 480-197349-1

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

**Lab Sample ID: LCS 500-654744/2-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylphenol	32.0	25.0		ug/L		78	53 - 115
2-Nitroaniline	32.0	22.7		ug/L		71	59 - 138
2-Nitrophenol	32.0	27.3		ug/L		85	59 - 115
3 & 4 Methylphenol	32.0	24.3		ug/L		76	50 - 116
3,3'-Dichlorobenzidine	32.0	31.9		ug/L		100	60 - 132
3-Nitroaniline	32.0	27.5		ug/L		86	47 - 123
4,6-Dinitro-2-methylphenol	64.0	56.6		ug/L		89	50 - 129
4-Bromophenyl phenyl ether	32.0	27.1		ug/L		85	58 - 120
4-Chloro-3-methylphenol	32.0	26.0		ug/L		81	64 - 128
4-Chloroaniline	32.0	26.6		ug/L		83	35 - 128
4-Chlorophenyl phenyl ether	32.0	24.3		ug/L		76	48 - 116
4-Nitroaniline	32.0	21.9		ug/L		69	35 - 110
4-Nitrophenol	64.0	28.0		ug/L		44	20 - 110
Acenaphthene	32.0	23.1		ug/L		72	46 - 110
Acenaphthylene	32.0	24.5		ug/L		77	47 - 113
Anthracene	32.0	27.8		ug/L		87	67 - 118
Benzo[a]anthracene	32.0	26.8		ug/L		84	70 - 126
Benzo[a]pyrene	32.0	28.6		ug/L		89	70 - 135
Benzo[b]fluoranthene	32.0	27.3		ug/L		85	69 - 136
Benzo[g,h,i]perylene	32.0	28.0		ug/L		88	70 - 135
Benzo[k]fluoranthene	32.0	28.2		ug/L		88	70 - 133
Benzoic acid	64.0	39.8		ug/L		62	10 - 112
Benzyl alcohol	32.0	24.7		ug/L		77	46 - 132
Bis(2-chloroethoxy)methane	32.0	24.5		ug/L		76	59 - 118
Bis(2-chloroethyl)ether	32.0	23.0		ug/L		72	54 - 112
Bis(2-ethylhexyl) phthalate	32.0	25.4		ug/L		79	69 - 136
Butyl benzyl phthalate	32.0	24.2		ug/L		76	68 - 135
Chrysene	32.0	28.0		ug/L		87	68 - 129
Dibenz(a,h)anthracene	32.0	28.5		ug/L		89	70 - 134
Dibenzofuran	32.0	25.1		ug/L		78	51 - 110
Diethyl phthalate	32.0	25.5		ug/L		80	62 - 123
Dimethyl phthalate	32.0	27.1		ug/L		85	63 - 122
Di-n-butyl phthalate	32.0	27.5		ug/L		86	69 - 129
Di-n-octyl phthalate	32.0	29.8		ug/L		93	68 - 137
Fluoranthene	32.0	29.6		ug/L		93	68 - 126
Fluorene	32.0	24.4		ug/L		76	53 - 120
Hexachlorobenzene	32.0	30.3		ug/L		95	61 - 126
Hexachlorobutadiene	32.0	16.3		ug/L		51	20 - 100
Hexachlorocyclopentadiene	32.0	12.1	J	ug/L		38	10 - 105
Hexachloroethane	32.0	14.0		ug/L		44	20 - 100
Indeno[1,2,3-cd]pyrene	32.0	27.9		ug/L		87	65 - 133
Isophorone	32.0	23.3		ug/L		73	54 - 127
Naphthalene	32.0	22.1		ug/L		69	36 - 110
Nitrobenzene	32.0	21.2		ug/L		66	54 - 121
N-Nitrosodi-n-propylamine	32.0	22.9		ug/L		71	47 - 131
N-Nitrosodiphenylamine	32.0	27.0		ug/L		84	66 - 120
Phenanthrene	32.0	27.0		ug/L		84	65 - 120
Phenol	32.0	17.0		ug/L		53	33 - 100
Pyrene	32.0	27.0		ug/L		84	70 - 126

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# QC Sample Results

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

Job ID: 480-197349-1

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

**Lab Sample ID: LCS 500-654744/2-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,4,6-Tetrachlorophenol	32.0	29.9		ug/L		94	44 - 128
1-Methylnaphthalene	32.0	22.3		ug/L		70	38 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	65		27 - 110
Phenol-d5 (Surr)	56		20 - 110
Nitrobenzene-d5 (Surr)	65		36 - 120
2-Fluorobiphenyl	75		34 - 110
2,4,6-Tribromophenol (Surr)	114		40 - 145
Terphenyl-d14 (Surr)	98		40 - 145

**Lab Sample ID: LCSD 500-654744/3-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	32.0	20.1		ug/L		63	26 - 110	4	20
1,2-Dichlorobenzene	32.0	19.1		ug/L		60	26 - 110	3	20
1,3-Dichlorobenzene	32.0	18.2		ug/L		57	22 - 110	5	20
1,4-Dichlorobenzene	32.0	18.6		ug/L		58	23 - 110	7	20
bis(chloroisopropyl) ether	32.0	18.3		ug/L		57	38 - 140	3	20
2,4,5-Trichlorophenol	32.0	29.1		ug/L		91	63 - 124	4	20
2,4,6-Trichlorophenol	32.0	28.5		ug/L		89	62 - 121	6	20
2,4-Dichlorophenol	32.0	30.2		ug/L		94	58 - 120	7	20
2,4-Dimethylphenol	32.0	25.9		ug/L		81	51 - 115	18	20
2,4-Dinitrophenol	64.0	60.4		ug/L		94	37 - 130	8	20
2,4-Dinitrotoluene	32.0	31.0		ug/L		97	63 - 129	7	20
2,6-Dinitrotoluene	32.0	29.9		ug/L		94	63 - 129	6	20
2-Chloronaphthalene	32.0	22.9		ug/L		71	39 - 110	3	20
2-Chlorophenol	32.0	25.8		ug/L		81	59 - 110	8	20
2-Methylnaphthalene	32.0	22.6		ug/L		71	34 - 110	1	20
2-Methylphenol	32.0	26.9		ug/L		84	53 - 115	7	20
2-Nitroaniline	32.0	23.7		ug/L		74	59 - 138	4	20
2-Nitrophenol	32.0	28.5		ug/L		89	59 - 115	4	20
3 & 4 Methylphenol	32.0	25.6		ug/L		80	50 - 116	6	20
3,3'-Dichlorobenzidine	32.0	34.2		ug/L		107	60 - 132	7	20
3-Nitroaniline	32.0	28.2		ug/L		88	47 - 123	3	20
4,6-Dinitro-2-methylphenol	64.0	56.1		ug/L		88	50 - 129	1	20
4-Bromophenyl phenyl ether	32.0	30.9		ug/L		97	58 - 120	13	20
4-Chloro-3-methylphenol	32.0	27.8		ug/L		87	64 - 128	7	20
4-Chloroaniline	32.0	26.8		ug/L		84	35 - 128	1	20
4-Chlorophenyl phenyl ether	32.0	25.8		ug/L		81	48 - 116	6	20
4-Nitroaniline	32.0	23.9		ug/L		75	35 - 110	8	20
4-Nitrophenol	64.0	29.4		ug/L		46	20 - 110	5	20
Acenaphthene	32.0	24.4		ug/L		76	46 - 110	5	20
Acenaphthylene	32.0	26.2		ug/L		82	47 - 113	7	20
Anthracene	32.0	27.4		ug/L		86	67 - 118	1	20
Benzo[a]anthracene	32.0	28.7		ug/L		90	70 - 126	7	20

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# QC Sample Results

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

Job ID: 480-197349-1

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

**Lab Sample ID: LCSD 500-654744/3-A**  
**Matrix: Water**  
**Analysis Batch: 655604**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 654744**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Benzo[a]pyrene	32.0	29.9		ug/L		94	70 - 135	5	20	
Benzo[b]fluoranthene	32.0	29.5		ug/L		92	69 - 136	8	20	
Benzo[g,h,i]perylene	32.0	29.6		ug/L		92	70 - 135	5	20	
Benzo[k]fluoranthene	32.0	28.5		ug/L		89	70 - 133	1	20	
Benzoic acid	64.0	43.7		ug/L		68	10 - 112	9	20	
Benzyl alcohol	32.0	25.8		ug/L		80	46 - 132	4	20	
Bis(2-chloroethoxy)methane	32.0	25.8		ug/L		81	59 - 118	5	20	
Bis(2-chloroethyl)ether	32.0	24.0		ug/L		75	54 - 112	4	20	
Bis(2-ethylhexyl) phthalate	32.0	26.5		ug/L		83	69 - 136	5	20	
Butyl benzyl phthalate	32.0	21.2	*	ug/L		66	68 - 135	13	20	
Chrysene	32.0	29.3		ug/L		92	68 - 129	5	20	
Dibenz(a,h)anthracene	32.0	29.3		ug/L		92	70 - 134	3	20	
Dibenzofuran	32.0	26.1		ug/L		82	51 - 110	4	20	
Diethyl phthalate	32.0	27.4		ug/L		86	62 - 123	7	20	
Dimethyl phthalate	32.0	28.6		ug/L		89	63 - 122	5	20	
Di-n-butyl phthalate	32.0	27.0		ug/L		84	69 - 129	2	20	
Di-n-octyl phthalate	32.0	29.7		ug/L		93	68 - 137	1	20	
Fluoranthene	32.0	29.2		ug/L		91	68 - 126	2	20	
Fluorene	32.0	25.9		ug/L		81	53 - 120	6	20	
Hexachlorobenzene	32.0	34.9		ug/L		109	61 - 126	14	20	
Hexachlorobutadiene	32.0	16.2		ug/L		51	20 - 100	1	20	
Hexachlorocyclopentadiene	32.0	13.0	J	ug/L		41	10 - 105	7	20	
Hexachloroethane	32.0	14.1		ug/L		44	20 - 100	1	20	
Indeno[1,2,3-cd]pyrene	32.0	28.9		ug/L		90	65 - 133	4	20	
Isophorone	32.0	24.6		ug/L		77	54 - 127	5	20	
Naphthalene	32.0	23.0		ug/L		72	36 - 110	4	20	
Nitrobenzene	32.0	21.9		ug/L		68	54 - 121	3	20	
N-Nitrosodi-n-propylamine	32.0	24.2		ug/L		76	47 - 131	6	20	
N-Nitrosodiphenylamine	32.0	26.4		ug/L		82	66 - 120	2	20	
Phenanthrene	32.0	26.6		ug/L		83	65 - 120	1	20	
Phenol	32.0	17.9		ug/L		56	33 - 100	5	20	
Pyrene	32.0	23.5		ug/L		73	70 - 126	14	20	
2,3,4,6-Tetrachlorophenol	32.0	30.8		ug/L		96	44 - 128	3	20	
1-Methylnaphthalene	32.0	23.0		ug/L		72	38 - 110	3	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	71		27 - 110
Phenol-d5 (Surr)	57		20 - 110
Nitrobenzene-d5 (Surr)	66		36 - 120
2-Fluorobiphenyl	77		34 - 110
2,4,6-Tribromophenol (Surr)	120		40 - 145
Terphenyl-d14 (Surr)	81		40 - 145

# QC Sample Results

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

Job ID: 480-197349-1

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

**Lab Sample ID: MB 480-624194/1-A**  
**Matrix: Water**  
**Analysis Batch: 624252**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 624194**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		05/02/22 15:33	05/03/22 12:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	113		24 - 146				05/02/22 15:33	05/03/22 12:19	1
2-Fluorobiphenyl	88		37 - 120				05/02/22 15:33	05/03/22 12:19	1
2-Fluorophenol (Surr)	42		10 - 120				05/02/22 15:33	05/03/22 12:19	1
Nitrobenzene-d5 (Surr)	72		26 - 120				05/02/22 15:33	05/03/22 12:19	1
Phenol-d5 (Surr)	27		11 - 120				05/02/22 15:33	05/03/22 12:19	1
p-Terphenyl-d14	98		64 - 127				05/02/22 15:33	05/03/22 12:19	1

**Lab Sample ID: LCS 480-624194/2-A**  
**Matrix: Water**  
**Analysis Batch: 624252**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 624194**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	16.0	17.2		ug/L		108	10 - 131
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	156	S1+	24 - 146				
2-Fluorobiphenyl	98		37 - 120				
2-Fluorophenol (Surr)	48		10 - 120				
Nitrobenzene-d5 (Surr)	81		26 - 120				
Phenol-d5 (Surr)	32		11 - 120				
p-Terphenyl-d14	113		64 - 127				

# QC Association Summary

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

Job ID: 480-197349-1

## GC/MS VOA

### Analysis Batch: 625069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	8260C	
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	8260C	
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	8260C	
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	8260C	
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	8260C	
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	8260C	
MB 480-625069/7	Method Blank	Total/NA	Water	8260C	
LCS 480-625069/5	Lab Control Sample	Total/NA	Water	8260C	

## GC/MS Semi VOA

### Prep Batch: 624194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	3510C	
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	3510C	
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	3510C	
480-197349-4	SUPE-W-18D-042822	Total/NA	Water	3510C	
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	3510C	
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	3510C	
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	3510C	
MB 480-624194/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-624194/2-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 624252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	8270D LL	624194
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	8270D LL	624194
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	8270D LL	624194
480-197349-4	SUPE-W-18D-042822	Total/NA	Water	8270D LL	624194
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	8270D LL	624194
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	8270D LL	624194
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	8270D LL	624194
MB 480-624194/1-A	Method Blank	Total/NA	Water	8270D LL	624194
LCS 480-624194/2-A	Lab Control Sample	Total/NA	Water	8270D LL	624194

### Prep Batch: 654744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	3510C	
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	3510C	
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	3510C	
480-197349-4	SUPE-W-18D-042822	Total/NA	Water	3510C	
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	3510C	
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	3510C	
480-197349-6 - DL	SUPE-W-10AR2-042822	Total/NA	Water	3510C	
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	3510C	
MB 500-654744/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-654744/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-654744/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

# QC Association Summary

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

Job ID: 480-197349-1

## GC/MS Semi VOA

### Analysis Batch: 655604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	8270D	654744
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	8270D	654744
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	8270D	654744
480-197349-4	SUPE-W-18D-042822	Total/NA	Water	8270D	654744
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	8270D	654744
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	8270D	654744
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	8270D	654744
MB 500-654744/1-A	Method Blank	Total/NA	Water	8270D	654744
LCS 500-654744/2-A	Lab Control Sample	Total/NA	Water	8270D	654744
LCSD 500-654744/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	654744

### Analysis Batch: 656186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-6 - DL	SUPE-W-10AR2-042822	Total/NA	Water	8270D	654744

# Lab Chronicle

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

**Date Collected: 04/28/22 08:28**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	625069	05/08/22 13:08	CRL	TAL BUF
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/09/22 23:38	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 16:55	PJQ	TAL BUF

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

**Date Collected: 04/28/22 11:47**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	625069	05/08/22 13:30	CRL	TAL BUF
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/10/22 00:02	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 17:23	PJQ	TAL BUF

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

**Date Collected: 04/28/22 13:51**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	625069	05/08/22 13:52	CRL	TAL BUF
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/10/22 00:26	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		10	624252	05/03/22 17:50	PJQ	TAL BUF

**Client Sample ID: SUPE-W-18D-042822**

**Lab Sample ID: 480-197349-4**

**Date Collected: 04/28/22 08:29**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/10/22 00:51	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 18:18	PJQ	TAL BUF

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

**Date Collected: 04/28/22 12:11**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	625069	05/08/22 14:14	CRL	TAL BUF

# Lab Chronicle

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

Job ID: 480-197349-1

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

**Date Collected: 04/28/22 12:11**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/10/22 01:15	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		5	624252	05/03/22 18:46	PJQ	TAL BUF

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

**Date Collected: 04/28/22 14:00**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	625069	05/08/22 14:37	CRL	TAL BUF
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/10/22 01:40	SS	TAL CHI
Total/NA	Prep	3510C	DL		654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D	DL	5	656186	05/12/22 11:38	JSB	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		5	624252	05/03/22 19:14	PJQ	TAL BUF

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

**Date Collected: 04/28/22 15:00**

**Matrix: Water**

**Date Received: 04/29/22 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	625069	05/08/22 14:59	CRL	TAL BUF
Total/NA	Prep	3510C			654744	05/04/22 08:47	TS	TAL CHI
Total/NA	Analysis	8270D		1	655604	05/10/22 02:04	SS	TAL CHI
Total/NA	Prep	3510C			624194	05/02/22 15:33	CMC	TAL BUF
Total/NA	Analysis	8270D LL		1	624252	05/03/22 19:41	PJQ	TAL BUF

**Laboratory References:**

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins 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: 480-197349-1

## Laboratory: Eurofins Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998310390	08-31-22

## Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-22

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
8270D	3510C	Water	2,3,5,6-Tetrachlorophenol



# Method Summary

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

Job ID: 480-197349-1

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 Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

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

Job ID: 480-197349-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-197349-1	SUPE-W-12CR-042822	Water	04/28/22 08:28	04/29/22 10:00
480-197349-2	SUPE-W-30C-042822	Water	04/28/22 11:47	04/29/22 10:00
480-197349-3	SUPE-W-30A-042822	Water	04/28/22 13:51	04/29/22 10:00
480-197349-4	SUPE-W-18D-042822	Water	04/28/22 08:29	04/29/22 10:00
480-197349-5	SUPE-W-04AR2-042822	Water	04/28/22 12:11	04/29/22 10:00
480-197349-6	SUPE-W-10AR2-042822	Water	04/28/22 14:00	04/29/22 10:00
480-197349-7	SUPE-W-EB-02-042822	Water	04/28/22 15:00	04/29/22 10:00

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# CHAIN OF CUSTODY REQUEST FORM

REF.# 3020010



TestAmerica Duluth SC 269

Ref 210311

Project Name: Superior, WI - 2022 OM&M Program  
 Project Number: OM-0556-22  
 Laboratory: TACHI  
 Shipment Method: FEDEX  
 Program: Superior 2022 1SA Sampling\_001

Company: Field & Technical Services  
 Address: 200 Third Avenue  
 Carnegie, PA 15106  
 (412) 279-3363

Client: Beazer East, Inc.  
 Contact: tlowe.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative	Total Bottle Count		Notes:
						None	8270D_SVOC (less naphtha) (Chicago)	
04/28/2022	0828	GW	SUPE-W-12CR-042822		None	2	2	
04/28/2022	1147	GW	SUPE-W-30C-042822		None	2	2	
04/28/2022	1351	GW	SUPE-W-30A-042822		None	2	2	



480-197349 Chain of Custody

Temp 2.0 1.1 2.2 1.4 # / ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i> Printed Name: Trevor Lowe Firm: FTS Date/Time: 5/19/2022	Signature: <i>[Signature]</i> Printed Name: <i>[Signature]</i> Firm: TA Date/Time: 5/12/22 1000	Signature: Printed Name: Firm: Date/Time:	Signature: Printed Name: Firm: Date/Time:	<input checked="" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard



# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>		Sampler: Lab PM: Brown, Shali		Carrier Tracking No(s): 480-71769-1	
Client Contact: Shipping/Receiving		Phone: E-Mail: Shali.Brown@et.eurofins.com		Page: 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin		Job #: 480-197349-1	
Address: 5815 Middlebrook Pike, Knoxville TN, 37921		Due Date Requested: 5/19/2022		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
PO #: 865-291-3000(Tel) 865-584-4315(Fax)		TAT Requested (days):		Analysis Requested:	
WO #: Project #: 18015916		Project Name: Superior, WI Semiannual Groundwater		Other:	
Site: SSOW#:		Field Filtered Sample (Yes or No)		Total Number of Containers	
Sample Identification - Client ID (Lab ID)		Perform MS/MSD (Yes or No)		Special Instructions/Note:	
SUPE-W-12CR-042822 (480-197349-1)	4/28/22	08:28 Central	X	X	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-30C-042822 (480-197349-2)	4/28/22	11:47 Central	X	X	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-30A-042822 (480-197349-3)	4/28/22	13:51 Central	X	X	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-04AR2-042822 (480-197349-5)	4/28/22	12:11 Central	X	X	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-10AR2-042822 (480-197349-6)	4/28/22	14:00 Central	X	X	Refer to PT-PM-WI-006 for Wisconsin Protocol
SUPE-W-EB-02-042822 (480-197349-7)	4/28/22	15:00 Central	X	X	Refer to PT-PM-WI-006 for Wisconsin Protocol
		Matrix (Water, Solid, Oil, Tissue, Air) Preservation Code: Water		8290A/8290 P Sep 17 Isomers + Totals 1888 3870 4608 1000 left 05.07.22 5.7% Custody seal intact	

Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2  
 Empty Kit Relinquished by: Date: Time: Method of Shipment: Archive For Months  
 Relinquished by: Date/Time: Company: Received by: Date/Time: Company: Cooler Temperature(s) °C and Other Remarks:  
 Relinquished by: Date/Time: Company: Received by: Date/Time: Company: Received by: Date/Time: Company: Custody Seal Intact:  Yes  No  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For Months  
 Special Instructions/QC Requirements:



EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	✓				
2. Were ambient air containers received intact?			✓	Containers, Broken	
3. The coolers/containers custody seal if present, is it intact?	✓			Checked in lab Yes NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID: <u>5C-71</u> Correction factor: <u>+0.05°C</u>	✓			Cooler Out of Temp, Client Contacted, Proceed/Cancel Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	✓			Containers, Broken	
6. Were samples received in appropriate containers?	✓			Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			COC & Samples Do Not Match COC Incorrect/Incomplete COC Not Received	
8. Were all of the samples listed on the COC received?	✓			Sample Received, Not on COC Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	✓			COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?			✓	Sampler Not Listed on COC	
11. Is the client and project name/# identified?	✓			COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	✓			COC No tests on COC	
13. Is the matrix of the samples noted?	✓			COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			COC Incorrect/Incomplete	
15. Were samples received within holding time?	✓			Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	pH Adjusted, pH Included (See box 16A) Incorrect Preservative	
17. Were VOA samples received without headspace?			✓	Headspace (VOA only) Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓		
19. For 1613B water samples is pH<9?			✓	If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			✓	Project missing info	
Project #: <u>18015916</u> PM Instructions: _____					
Sample Receiving Associate: <u>[Signature]</u> Date: <u>05.03.22</u>					
Box 16A: pH Preservation					Box 18A: Residual Chlorine
Preservative:					
Lot Number:					
Exp Date:					
Analyst:					
Date:					
Time:					
Labeling Verified by: _____ Date: _____					
pH test strip lot number: _____					

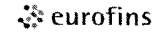
QA026R32.doc, 062719



**Eurofins Buffalo**

10 Hazelwood Drive  
Amherst, NY 14228-2298  
Phone 716-691-2600 Fax 716-691-7991

**Chain of Custody Record**



Environment Testing  
America

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<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab PM	Carrier Tracking No(s)	COC No																																																																																																																																																																																																																																																																																																							
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Company: Eurofins Environment Testing North Centr		E-Mail	Shali Brown@et.eurofins.com	State of Origin:		Page																																																																																																																																																																																																																																																																																																						
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Note: Since laboratory accreditations are subject to change Eurofins Environment Testing Northeast, LLC 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 Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.		Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																																																																																																																																																																																																																																																																																								
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# Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-197349-1

**Login Number: 197349**

**List Number: 1**

**Creator: Kolb, Chris M**

**List Source: Eurofins Buffalo**

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	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-197349-1

**Login Number: 197349**  
**List Number: 3**  
**Creator: Scott, Sherri L**

**List Source: Eurofins Chicago**  
**List Creation: 05/03/22 05:17 PM**

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	0.4
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



# FTS, LLC

DATE: June 2, 2022

FROM: Kendra Chintella

SUBJECT: Superior Groundwater

SAMPLE DELIVERY GROUP (SDG): 480-197349-2

SAMPLES: SUPE-W-12CR-042822, SUPE-W-30C-042822, SUPE-W-30A-042822, SUPE-W-04AR2-042822, SUPE-W-10AR2-042822, SUPE-W-EB-02-042822

ANALYSES: Method 8290A (Dioxins/Furans)

LABORATORY: Eurofins 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-HpCDF, 1,2,3,4,7,8,9-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, OCDD, OCDF, total HpCDF, total HxCDD, and total PeCDD were detected in the method blank. Results were detected in the method blank below the QL and results detected below the QL in samples were qualified not detected at the QL.
- Field Blank Contamination  
**Noncompliance:** 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, OCDD, OCDF, total HpCDF, total HxCDD, and total PeCDD were detected in the equipment blank. Results were detected in the equipment blank below the QL and results detected below the QL in samples were qualified not detected at the QL.
- Surrogate Recoveries  
Noncompliance: None
- Laboratory Control Sample  
Noncompliance: None

## ANALYTICAL REPORT

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

Laboratory Job ID: 480-197349-2

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:  
5/27/2022 6:17:03 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 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.



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# Definitions/Glossary

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

Job ID: 480-197349-2

## 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.
S	Ion suppression

## 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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Case Narrative

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

Job ID: 480-197349-2

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## Job ID: 480-197349-2

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Laboratory: Eurofins Buffalo

### Narrative

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#### Job Narrative 480-197349-2

### Comments

No additional comments.

### Receipt

The samples were received on 4/29/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.0° C, 1.4° C, 2.0° C and 2.2° C.

### Dioxin

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

### Organic Prep

Methods 1668\_Sep\_2L, 3540C, 8290, HRMS-Sepf, HRMS-Sox, Split: The following samples went through Gel-Permeation Cleanup procedure, based on EPA method 3640A: .SUPE-W-12CR-042822

Method 8290: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 140-61532. The method required MS/MSD were not performed due to insufficient sample received. As a result, the data may be rejected by the WDNR.

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: 480-197349-2

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	1.3	J I B	50	0.78	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.1	J B	50	0.30	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	1.4	J I B	50	0.32	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	1.2	J B	50	0.29	pg/L	1		8290A	Total/NA
Total HxCDD	13	J I B	50	0.31	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	42	J	50	2.2	pg/L	1		8290A	Total/NA
Total HpCDD	140		50	2.2	pg/L	1		8290A	Total/NA
OCDD	420	B	99	0.39	pg/L	1		8290A	Total/NA
Total TCDF	2.9	J I	9.9	0.24	pg/L	1		8290A	Total/NA
Total PeCDF	5.5	J I	50	0.47	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.4	J I	50	0.40	pg/L	1		8290A	Total/NA
Total HxCDF	28	J I	50	0.40	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	6.9	J B	50	0.32	pg/L	1		8290A	Total/NA
Total HpCDF	24	J B	50	0.37	pg/L	1		8290A	Total/NA
OCDF	14	J B	99	0.19	pg/L	1		8290A	Total/NA

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	1.4	J I B	49	0.19	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	0.55	J I B	49	0.20	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.80	J S B	49	0.18	pg/L	1		8290A	Total/NA
Total HxCDD	6.9	J I S B	49	0.19	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	7.8	J	49	0.48	pg/L	1		8290A	Total/NA
Total HpCDD	33	J	49	0.48	pg/L	1		8290A	Total/NA
OCDD	76	J B	97	0.28	pg/L	1		8290A	Total/NA
Total TCDF	1.5	J	9.7	0.25	pg/L	1		8290A	Total/NA
Total PeCDF	0.50	J I	49	0.23	pg/L	1		8290A	Total/NA
Total HxCDF	1.3	J I	49	0.35	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	1.5	J I B	49	0.31	pg/L	1		8290A	Total/NA
Total HpCDF	4.0	J I B	49	0.37	pg/L	1		8290A	Total/NA
OCDF	4.2	J B	97	0.22	pg/L	1		8290A	Total/NA

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	0.68	J I	49	0.35	pg/L	1		8290A	Total/NA
Total PeCDD	1.8	J I B	49	0.35	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	3.8	J B	49	0.26	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	23	J B	49	0.26	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	5.4	J S B	49	0.25	pg/L	1		8290A	Total/NA
Total HxCDD	100	I S B	49	0.26	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	670		49	2.3	pg/L	1		8290A	Total/NA
Total HpCDD	1500		49	2.3	pg/L	1		8290A	Total/NA
OCDD	9200	B	97	0.24	pg/L	1		8290A	Total/NA
Total TCDF	76	I	9.7	0.33	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDF	2.0	J I	49	0.33	pg/L	1		8290A	Total/NA
2,3,4,7,8-PeCDF	3.7	J	49	0.34	pg/L	1		8290A	Total/NA
Total PeCDF	310	I	49	0.34	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	28	J	49	4.8	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	44	J I	49	5.1	pg/L	1		8290A	Total/NA
Total HxCDF	870	I S	49	5.7	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

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

Job ID: 480-197349-2

## Client Sample ID: SUPE-W-30A-042822 (Continued)

Lab Sample ID: 480-197349-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDF	220	B	49	1.3	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	23	J B	49	1.9	pg/L	1		8290A	Total/NA
Total HpCDF	950	B	49	1.6	pg/L	1		8290A	Total/NA
OCDF	660	B	97	0.13	pg/L	1		8290A	Total/NA

## Client Sample ID: SUPE-W-04AR2-042822

Lab Sample ID: 480-197349-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	1.1	J I	49	0.15	pg/L	1		8290A	Total/NA
Total PeCDD	2.3	J I B	49	0.15	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	3.2	J B	49	0.15	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	3.1	J B	49	0.16	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	3.6	J B	49	0.15	pg/L	1		8290A	Total/NA
Total HxCDD	31	J I B	49	0.15	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	52		49	1.5	pg/L	1		8290A	Total/NA
Total HpCDD	270		49	1.5	pg/L	1		8290A	Total/NA
OCDD	480	B	97	0.29	pg/L	1		8290A	Total/NA
Total TCDF	2.3	J I	9.7	0.23	pg/L	1		8290A	Total/NA
1,2,3,7,8-PeCDF	0.90	J	49	0.42	pg/L	1		8290A	Total/NA
2,3,4,7,8-PeCDF	0.65	J	49	0.39	pg/L	1		8290A	Total/NA
Total PeCDF	6.7	J I	49	0.41	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	2.2	J	49	0.33	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.5	J I	49	0.35	pg/L	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.9	J	49	0.36	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDF	1.9	J	49	0.43	pg/L	1		8290A	Total/NA
Total HxCDF	29	J I	49	0.37	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	8.0	J B	49	0.19	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	2.9	J B	49	0.28	pg/L	1		8290A	Total/NA
Total HpCDF	26	J B	49	0.24	pg/L	1		8290A	Total/NA
OCDF	21	J B	97	0.91	pg/L	1		8290A	Total/NA

## Client Sample ID: SUPE-W-10AR2-042822

Lab Sample ID: 480-197349-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	0.51	J I	9.9	0.32	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	1.5	J I B	50	0.15	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	1.1	J B	50	0.15	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	1.7	J S B	50	0.14	pg/L	1		8290A	Total/NA
Total HxCDD	11	J I S B	50	0.15	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	23	J	50	0.78	pg/L	1		8290A	Total/NA
Total HpCDD	88		50	0.78	pg/L	1		8290A	Total/NA
OCDD	210	B	99	0.20	pg/L	1		8290A	Total/NA
Total TCDF	8.3	J I	9.9	0.21	pg/L	1		8290A	Total/NA
Total PeCDF	7.7	J I	50	0.30	pg/L	1		8290A	Total/NA
Total HxCDF	14	J I	50	0.54	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	3.8	J I B	50	0.40	pg/L	1		8290A	Total/NA
Total HpCDF	13	J I B	50	0.48	pg/L	1		8290A	Total/NA
OCDF	13	J B	99	1.1	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

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

Job ID: 480-197349-2

Client Sample ID: SUPE-W-EB-02-042822

Lab Sample ID: 480-197349-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	0.92	J   B	47	0.22	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	0.87	J B	47	0.16	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	0.39	J   S B	47	0.16	pg/L	1		8290A	Total/NA
Total HxCDD	2.9	J   S B	47	0.16	pg/L	1		8290A	Total/NA
OCDD	3.9	J B	95	0.22	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	0.47	J   B	47	0.20	pg/L	1		8290A	Total/NA
Total HpCDF	0.47	J   B	47	0.24	pg/L	1		8290A	Total/NA
OCDF	0.91	J B	95	0.080	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

Date Collected: 04/28/22 08:28

Matrix: Water

Date Received: 04/29/22 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		9.9	0.35	pg/L		05/10/22 09:09	05/25/22 03:22	1
Total TCDD	ND		9.9	0.35	pg/L		05/10/22 09:09	05/25/22 03:22	1
1,2,3,7,8-PeCDD	ND		50	0.78	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total PeCDD</b>	<b>1.3</b>	<b>J I B</b>	50	0.78	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>1.1</b>	<b>J B</b>	50	0.30	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>1.4</b>	<b>J I B</b>	50	0.32	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>1.2</b>	<b>J B</b>	50	0.29	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total HxCDD</b>	<b>13</b>	<b>J I B</b>	50	0.31	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>1,2,3,4,6,7,8-HpCDD</b>	<b>42</b>	<b>J</b>	50	2.2	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total HpCDD</b>	<b>140</b>		50	2.2	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>OCDD</b>	<b>420</b>	<b>B</b>	99	0.39	pg/L		05/10/22 09:09	05/25/22 03:22	1
2,3,7,8-TCDF	ND		9.9	0.24	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total TCDF</b>	<b>2.9</b>	<b>J I</b>	9.9	0.24	pg/L		05/10/22 09:09	05/25/22 03:22	1
1,2,3,7,8-PeCDF	ND		50	0.48	pg/L		05/10/22 09:09	05/25/22 03:22	1
2,3,4,7,8-PeCDF	ND		50	0.47	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total PeCDF</b>	<b>5.5</b>	<b>J I</b>	50	0.47	pg/L		05/10/22 09:09	05/25/22 03:22	1
1,2,3,4,7,8-HxCDF	ND		50	0.36	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>1,2,3,6,7,8-HxCDF</b>	<b>2.4</b>	<b>J I</b>	50	0.40	pg/L		05/10/22 09:09	05/25/22 03:22	1
2,3,4,6,7,8-HxCDF	ND		50	0.39	pg/L		05/10/22 09:09	05/25/22 03:22	1
1,2,3,7,8,9-HxCDF	ND		50	0.47	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total HxCDF</b>	<b>28</b>	<b>J I</b>	50	0.40	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>6.9</b>	<b>J B</b>	50	0.32	pg/L		05/10/22 09:09	05/25/22 03:22	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.42	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>Total HpCDF</b>	<b>24</b>	<b>J B</b>	50	0.37	pg/L		05/10/22 09:09	05/25/22 03:22	1
<b>OCDF</b>	<b>14</b>	<b>J B</b>	99	0.19	pg/L		05/10/22 09:09	05/25/22 03:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,7,8-PeCDD	86		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,4,7,8-HxCDD	75		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-OCDD	56		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-2,3,7,8-TCDF	73		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,7,8-PeCDF	85		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-2,3,4,7,8-PeCDF	80		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,4,7,8-HxCDF	77		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,6,7,8-HxCDF	67		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-2,3,4,6,7,8-HxCDF	74		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-1,2,3,4,7,8,9-HpCDF	74		40 - 135	05/10/22 09:09	05/25/22 03:22	1
13C-OCDF	58		40 - 135	05/10/22 09:09	05/25/22 03:22	1

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Date Collected: 04/28/22 11:47

Matrix: Water

Date Received: 04/29/22 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		05/10/22 09:09	05/26/22 02:59	1

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# Client Sample Results

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Date Collected: 04/28/22 11:47

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	ND		9.7	0.33	pg/L		05/10/22 09:09	05/26/22 02:59	1
1,2,3,7,8-PeCDD	ND		49	0.19	pg/L		05/10/22 09:09	05/26/22 02:59	1
Total PeCDD	ND		49	0.19	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>1,2,3,4,7,8-HxCDD</b>	<b>1.4</b>	<b>J I B</b>	49	0.19	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>1,2,3,6,7,8-HxCDD</b>	<b>0.55</b>	<b>J I B</b>	49	0.20	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>0.80</b>	<b>J S B</b>	49	0.18	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>Total HxCDD</b>	<b>6.9</b>	<b>J I S B</b>	49	0.19	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>1,2,3,4,6,7,8-HpCDD</b>	<b>7.8</b>	<b>J</b>	49	0.48	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>Total HpCDD</b>	<b>33</b>	<b>J</b>	49	0.48	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>OCDD</b>	<b>76</b>	<b>J B</b>	97	0.28	pg/L		05/10/22 09:09	05/26/22 02:59	1
2,3,7,8-TCDF	ND		9.7	0.25	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>Total TCDF</b>	<b>1.5</b>	<b>J</b>	9.7	0.25	pg/L		05/10/22 09:09	05/26/22 02:59	1
1,2,3,7,8-PeCDF	ND		49	0.24	pg/L		05/10/22 09:09	05/26/22 02:59	1
2,3,4,7,8-PeCDF	ND		49	0.23	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>Total PeCDF</b>	<b>0.50</b>	<b>J I</b>	49	0.23	pg/L		05/10/22 09:09	05/26/22 02:59	1
1,2,3,4,7,8-HxCDF	ND		49	0.31	pg/L		05/10/22 09:09	05/26/22 02:59	1
1,2,3,6,7,8-HxCDF	ND		49	0.34	pg/L		05/10/22 09:09	05/26/22 02:59	1
2,3,4,6,7,8-HxCDF	ND		49	0.35	pg/L		05/10/22 09:09	05/26/22 02:59	1
1,2,3,7,8,9-HxCDF	ND		49	0.40	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>Total HxCDF</b>	<b>1.3</b>	<b>J I</b>	49	0.35	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>1.5</b>	<b>J I B</b>	49	0.31	pg/L		05/10/22 09:09	05/26/22 02:59	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.44	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>Total HpCDF</b>	<b>4.0</b>	<b>J I B</b>	49	0.37	pg/L		05/10/22 09:09	05/26/22 02:59	1
<b>OCDF</b>	<b>4.2</b>	<b>J B</b>	97	0.22	pg/L		05/10/22 09:09	05/26/22 02:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,7,8-PeCDD	110		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,4,7,8-HxCDD	91		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,4,6,7,8-HpCDD	107		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-OCDD	84		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-2,3,7,8-TCDF	81		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,7,8-PeCDF	104		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-2,3,4,7,8-PeCDF	96		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,4,7,8-HxCDF	102		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,6,7,8-HxCDF	86		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-2,3,4,6,7,8-HxCDF	99		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,7,8,9-HxCDF	99		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,4,6,7,8-HpCDF	96		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-1,2,3,4,7,8,9-HpCDF	104		40 - 135	05/10/22 09:09	05/26/22 02:59	1
13C-OCDF	88		40 - 135	05/10/22 09:09	05/26/22 02:59	1

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Date Collected: 04/28/22 13:51

Matrix: Water

Date Received: 04/29/22 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	0.45	pg/L		05/10/22 09:09	05/25/22 05:23	1
Total TCDD	ND		9.7	0.45	pg/L		05/10/22 09:09	05/25/22 05:23	1

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# Client Sample Results

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Date Collected: 04/28/22 13:51

Matrix: Water

Date Received: 04/29/22 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	0.68	J I	49	0.35	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total PeCDD</b>	<b>1.8</b>	<b>J I B</b>	49	0.35	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,4,7,8-HxCDD	3.8	J B	49	0.26	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,6,7,8-HxCDD	23	J B	49	0.26	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,7,8,9-HxCDD	5.4	J S B	49	0.25	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total HxCDD</b>	<b>100</b>	<b>I S B</b>	49	0.26	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,4,6,7,8-HpCDD	670		49	2.3	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total HpCDD</b>	<b>1500</b>		49	2.3	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>OCDD</b>	<b>9200</b>	<b>B</b>	97	0.24	pg/L		05/10/22 09:09	05/25/22 05:23	1
2,3,7,8-TCDF	ND		9.7	0.33	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total TCDF</b>	<b>76</b>	<b>I</b>	9.7	0.33	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,7,8-PeCDF	2.0	J I	49	0.33	pg/L		05/10/22 09:09	05/25/22 05:23	1
2,3,4,7,8-PeCDF	3.7	J	49	0.34	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total PeCDF</b>	<b>310</b>	<b>I</b>	49	0.34	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,4,7,8-HxCDF	28	J	49	4.8	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,6,7,8-HxCDF	44	J I	49	5.1	pg/L		05/10/22 09:09	05/25/22 05:23	1
2,3,4,6,7,8-HxCDF	ND		49	6.3	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,7,8,9-HxCDF	ND		49	6.6	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total HxCDF</b>	<b>870</b>	<b>I S</b>	49	5.7	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,4,6,7,8-HpCDF	220	B	49	1.3	pg/L		05/10/22 09:09	05/25/22 05:23	1
1,2,3,4,7,8,9-HpCDF	23	J B	49	1.9	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>Total HpCDF</b>	<b>950</b>	<b>B</b>	49	1.6	pg/L		05/10/22 09:09	05/25/22 05:23	1
<b>OCDF</b>	<b>660</b>	<b>B</b>	97	0.13	pg/L		05/10/22 09:09	05/25/22 05:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	75		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,7,8-PeCDD	117		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,4,7,8-HxCDD	96		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,6,7,8-HxCDD	101		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,4,6,7,8-HpCDD	110		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-OCDD	93		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-2,3,7,8-TCDF	75		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,7,8-PeCDF	125		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-2,3,4,7,8-PeCDF	105		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,4,7,8-HxCDF	114		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,6,7,8-HxCDF	101		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-2,3,4,6,7,8-HxCDF	106		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,7,8,9-HxCDF	110		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,4,6,7,8-HpCDF	105		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-1,2,3,4,7,8,9-HpCDF	108		40 - 135	05/10/22 09:09	05/25/22 05:23	1
13C-OCDF	97		40 - 135	05/10/22 09:09	05/25/22 05:23	1

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 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	0.27	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total TCDD	ND		9.7	0.27	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,7,8-PeCDD	1.1	J I	49	0.15	pg/L		05/10/22 09:09	05/25/22 16:58	1

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# Client Sample Results

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 10:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	2.3	J I B	49	0.15	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,4,7,8-HxCDD	3.2	J B	49	0.15	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,6,7,8-HxCDD	3.1	J B	49	0.16	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,7,8,9-HxCDD	3.6	J B	49	0.15	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total HxCDD	31	J I B	49	0.15	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,4,6,7,8-HpCDD	52		49	1.5	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total HpCDD	270		49	1.5	pg/L		05/10/22 09:09	05/25/22 16:58	1
OCDD	480	B	97	0.29	pg/L		05/10/22 09:09	05/25/22 16:58	1
2,3,7,8-TCDF	ND		9.7	0.23	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total TCDF	2.3	J I	9.7	0.23	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,7,8-PeCDF	0.90	J	49	0.42	pg/L		05/10/22 09:09	05/25/22 16:58	1
2,3,4,7,8-PeCDF	0.65	J	49	0.39	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total PeCDF	6.7	J I	49	0.41	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,4,7,8-HxCDF	2.2	J	49	0.33	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,6,7,8-HxCDF	2.5	J I	49	0.35	pg/L		05/10/22 09:09	05/25/22 16:58	1
2,3,4,6,7,8-HxCDF	1.9	J	49	0.36	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,7,8,9-HxCDF	1.9	J	49	0.43	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total HxCDF	29	J I	49	0.37	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,4,6,7,8-HpCDF	8.0	J B	49	0.19	pg/L		05/10/22 09:09	05/25/22 16:58	1
1,2,3,4,7,8,9-HpCDF	2.9	J B	49	0.28	pg/L		05/10/22 09:09	05/25/22 16:58	1
Total HpCDF	26	J B	49	0.24	pg/L		05/10/22 09:09	05/25/22 16:58	1
OCDF	21	J B	97	0.91	pg/L		05/10/22 09:09	05/25/22 16:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	80		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,7,8-PeCDD	101		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,4,7,8-HxCDD	92		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,6,7,8-HxCDD	92		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,4,6,7,8-HpCDD	91		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-OCDD	73		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-2,3,7,8-TCDF	78		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,7,8-PeCDF	91		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-2,3,4,7,8-PeCDF	91		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,4,7,8-HxCDF	99		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,6,7,8-HxCDF	87		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-2,3,4,6,7,8-HxCDF	97		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,7,8,9-HxCDF	95		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,4,6,7,8-HpCDF	89		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-1,2,3,4,7,8,9-HpCDF	92		40 - 135	05/10/22 09:09	05/25/22 16:58	1
13C-OCDF	78		40 - 135	05/10/22 09:09	05/25/22 16:58	1

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

Date Collected: 04/28/22 14:00

Matrix: Water

Date Received: 04/29/22 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		9.9	0.32	pg/L		05/10/22 09:09	05/25/22 17:59	1
Total TCDD	0.51	J I	9.9	0.32	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,7,8-PeCDD	ND		50	0.30	pg/L		05/10/22 09:09	05/25/22 17:59	1
Total PeCDD	ND		50	0.30	pg/L		05/10/22 09:09	05/25/22 17:59	1

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# Client Sample Results

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

Date Collected: 04/28/22 14:00

Matrix: Water

Date Received: 04/29/22 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	1.5	J I B	50	0.15	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,6,7,8-HxCDD	1.1	J B	50	0.15	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,7,8,9-HxCDD	1.7	J S B	50	0.14	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>Total HxCDD</b>	<b>11</b>	<b>J I S B</b>	50	0.15	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,4,6,7,8-HpCDD	23	J	50	0.78	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>Total HpCDD</b>	<b>88</b>		50	0.78	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>OCDD</b>	<b>210</b>	<b>B</b>	99	0.20	pg/L		05/10/22 09:09	05/25/22 17:59	1
2,3,7,8-TCDF	ND		9.9	0.21	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>Total TCDF</b>	<b>8.3</b>	<b>J I</b>	9.9	0.21	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,7,8-PeCDF	ND		50	0.30	pg/L		05/10/22 09:09	05/25/22 17:59	1
2,3,4,7,8-PeCDF	ND		50	0.30	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>Total PeCDF</b>	<b>7.7</b>	<b>J I</b>	50	0.30	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,4,7,8-HxCDF	ND		50	0.48	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,6,7,8-HxCDF	ND		50	0.54	pg/L		05/10/22 09:09	05/25/22 17:59	1
2,3,4,6,7,8-HxCDF	ND		50	0.55	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,7,8,9-HxCDF	ND		50	0.59	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>Total HxCDF</b>	<b>14</b>	<b>J I</b>	50	0.54	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,4,6,7,8-HpCDF	3.8	J I B	50	0.40	pg/L		05/10/22 09:09	05/25/22 17:59	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.56	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>Total HpCDF</b>	<b>13</b>	<b>J I B</b>	50	0.48	pg/L		05/10/22 09:09	05/25/22 17:59	1
<b>OCDF</b>	<b>13</b>	<b>J B</b>	99	1.1	pg/L		05/10/22 09:09	05/25/22 17:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	86		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,7,8-PeCDD	120		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,4,7,8-HxCDD	89		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-OCDD	74		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-2,3,7,8-TCDF	82		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,7,8-PeCDF	112		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-2,3,4,7,8-PeCDF	101		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,4,7,8-HxCDF	96		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,6,7,8-HxCDF	84		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-2,3,4,6,7,8-HxCDF	97		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,7,8,9-HxCDF	100		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-1,2,3,4,7,8,9-HpCDF	101		40 - 135	05/10/22 09:09	05/25/22 17:59	1
13C-OCDF	79		40 - 135	05/10/22 09:09	05/25/22 17:59	1

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/29/22 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	0.20	pg/L		05/10/22 09:09	05/26/22 04:00	1
Total TCDD	ND		9.5	0.20	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,7,8-PeCDD	ND		47	0.22	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>Total PeCDD</b>	<b>0.92</b>	<b>J I B</b>	47	0.22	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,4,7,8-HxCDD	0.87	J B	47	0.16	pg/L		05/10/22 09:09	05/26/22 04:00	1

Eurofins Buffalo

# Client Sample Results

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/29/22 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	ND		47	0.17	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>1,2,3,7,8,9-HxCDD</b>	<b>0.39</b>	<b>J I S B</b>	47	0.16	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>Total HxCDD</b>	<b>2.9</b>	<b>J I S B</b>	47	0.16	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,4,6,7,8-HpCDD	ND		47	1.0	pg/L		05/10/22 09:09	05/26/22 04:00	1
Total HpCDD	ND		47	1.0	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>OCDD</b>	<b>3.9</b>	<b>J B</b>	95	0.22	pg/L		05/10/22 09:09	05/26/22 04:00	1
2,3,7,8-TCDF	ND		9.5	0.19	pg/L		05/10/22 09:09	05/26/22 04:00	1
Total TCDF	ND		9.5	0.19	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,7,8-PeCDF	ND		47	0.17	pg/L		05/10/22 09:09	05/26/22 04:00	1
2,3,4,7,8-PeCDF	ND		47	0.15	pg/L		05/10/22 09:09	05/26/22 04:00	1
Total PeCDF	ND		47	0.17	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,4,7,8-HxCDF	ND		47	0.25	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,6,7,8-HxCDF	ND		47	0.28	pg/L		05/10/22 09:09	05/26/22 04:00	1
2,3,4,6,7,8-HxCDF	ND		47	0.29	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,7,8,9-HxCDF	ND		47	0.32	pg/L		05/10/22 09:09	05/26/22 04:00	1
Total HxCDF	ND		47	0.32	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>1,2,3,4,6,7,8-HpCDF</b>	<b>0.47</b>	<b>J I B</b>	47	0.20	pg/L		05/10/22 09:09	05/26/22 04:00	1
1,2,3,4,7,8,9-HpCDF	ND		47	0.29	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>Total HpCDF</b>	<b>0.47</b>	<b>J I B</b>	47	0.24	pg/L		05/10/22 09:09	05/26/22 04:00	1
<b>OCDF</b>	<b>0.91</b>	<b>J B</b>	95	0.080	pg/L		05/10/22 09:09	05/26/22 04:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,7,8-PeCDD	102		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,4,7,8-HxCDD	92		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,6,7,8-HxCDD	91		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,4,6,7,8-HpCDD	93		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-OCDD	73		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-2,3,7,8-TCDF	77		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,7,8-PeCDF	101		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-2,3,4,7,8-PeCDF	98		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,4,7,8-HxCDF	100		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,6,7,8-HxCDF	85		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-2,3,4,6,7,8-HxCDF	98		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,7,8,9-HxCDF	98		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,4,6,7,8-HpCDF	91		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-1,2,3,4,7,8,9-HpCDF	99		40 - 135	05/10/22 09:09	05/26/22 04:00	1
13C-OCDF	79		40 - 135	05/10/22 09:09	05/26/22 04:00	1

# Isotope Dilution Summary

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

Job ID: 480-197349-2

## 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)
480-197349-1	SUPE-W-12CR-042822	72	86	75	74	75	56	73	85
480-197349-2	SUPE-W-30C-042822	81	110	91	95	107	84	81	104
480-197349-3	SUPE-W-30A-042822	75	117	96	101	110	93	75	125
480-197349-5	SUPE-W-04AR2-042822	80	101	92	92	91	73	78	91
480-197349-6	SUPE-W-10AR2-042822	86	120	89	95	96	74	82	112
480-197349-7	SUPE-W-EB-02-042822	81	102	92	91	93	73	77	101
LCS 140-61532/13-A	Lab Control Sample	79	96	76	84	86	65	76	90
MB 140-61532/14-A	Method Blank	75	100	74	78	75	52	79	98

		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)	OCDF (40-135)
480-197349-1	SUPE-W-12CR-042822	80	77	67	74	77	68	74	58
480-197349-2	SUPE-W-30C-042822	96	102	86	99	99	96	104	88
480-197349-3	SUPE-W-30A-042822	105	114	101	106	110	105	108	97
480-197349-5	SUPE-W-04AR2-042822	91	99	87	97	95	89	92	78
480-197349-6	SUPE-W-10AR2-042822	101	96	84	97	100	94	101	79
480-197349-7	SUPE-W-EB-02-042822	98	100	85	98	98	91	99	79
LCS 140-61532/13-A	Lab Control Sample	81	90	82	86	86	85	88	71
MB 140-61532/14-A	Method Blank	84	79	73	80	79	71	72	57

### 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
- OCDF = 13C-OCDF



# QC Sample Results

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

Job ID: 480-197349-2

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

**Lab Sample ID: MB 140-61532/14-A**  
**Matrix: Water**  
**Analysis Batch: 61928**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 61532**

Analyte	MB	MB	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,3,7,8-TCDD	ND		10	0.58	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total TCDD	ND		10	0.58	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8-PeCDD	ND		50	0.64	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total PeCDD	9.77	J I	50	0.64	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,7,8-HxCDD	2.14	J	50	0.46	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,6,7,8-HxCDD	1.61	J I	50	0.48	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8,9-HxCDD	4.31	J	50	0.44	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HxCDD	8.06	J I	50	0.46	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,6,7,8-HpCDD	ND		50	4.8	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HpCDD	ND		50	4.8	pg/L		05/10/22 09:09	05/24/22 16:20	1
OCDD	7.68	J	100	0.59	pg/L		05/10/22 09:09	05/24/22 16:20	1
2,3,7,8-TCDF	ND		10	0.43	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total TCDF	ND		10	0.43	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8-PeCDF	ND		50	0.49	pg/L		05/10/22 09:09	05/24/22 16:20	1
2,3,4,7,8-PeCDF	ND		50	0.53	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total PeCDF	ND		50	0.53	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,7,8-HxCDF	ND		50	1.5	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,6,7,8-HxCDF	ND		50	1.5	pg/L		05/10/22 09:09	05/24/22 16:20	1
2,3,4,6,7,8-HxCDF	ND		50	1.6	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,7,8,9-HxCDF	ND		50	1.9	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HxCDF	ND		50	1.9	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,6,7,8-HpCDF	1.79	J	50	0.52	pg/L		05/10/22 09:09	05/24/22 16:20	1
1,2,3,4,7,8,9-HpCDF	1.74	J I	50	0.67	pg/L		05/10/22 09:09	05/24/22 16:20	1
Total HpCDF	3.52	J I	50	0.59	pg/L		05/10/22 09:09	05/24/22 16:20	1
OCDF	2.35	J I	100	0.42	pg/L		05/10/22 09:09	05/24/22 16:20	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,7,8-TCDD	75		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,7,8-PeCDD	100		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,7,8-HxCDD	74		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,6,7,8-HxCDD	78		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-OCDD	52		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-2,3,7,8-TCDF	79		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,7,8-PeCDF	98		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-2,3,4,7,8-PeCDF	84		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,7,8-HxCDF	79		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-2,3,4,6,7,8-HxCDF	80		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,7,8,9-HxCDF	79		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,6,7,8-HpCDF	71		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135	05/10/22 09:09	05/24/22 16:20	1
13C-OCDF	57		40 - 135	05/10/22 09:09	05/24/22 16:20	1

# QC Sample Results

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

Job ID: 480-197349-2

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

Lab Sample ID: LCS 140-61532/13-A

Matrix: Water

Analysis Batch: 61928

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61532

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	200	217		pg/L		108	77 - 127
1,2,3,7,8-PeCDD	1000	1090		pg/L		109	78 - 128
1,2,3,4,7,8-HxCDD	1000	1060		pg/L		106	73 - 123
1,2,3,6,7,8-HxCDD	1000	1020		pg/L		102	72 - 127
1,2,3,7,8,9-HxCDD	1000	1080		pg/L		108	76 - 126
1,2,3,4,6,7,8-HpCDD	1000	974		pg/L		97	73 - 123
OCDD	2000	1960		pg/L		98	75 - 125
2,3,7,8-TCDF	200	240		pg/L		120	74 - 124
1,2,3,7,8-PeCDF	1000	993		pg/L		99	74 - 124
2,3,4,7,8-PeCDF	1000	1070		pg/L		107	74 - 124
1,2,3,4,7,8-HxCDF	1000	925		pg/L		92	75 - 125
1,2,3,6,7,8-HxCDF	1000	996		pg/L		100	75 - 125
2,3,4,6,7,8-HxCDF	1000	1030		pg/L		103	76 - 126
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	76 - 126
1,2,3,4,6,7,8-HpCDF	1000	975		pg/L		97	71 - 121
1,2,3,4,7,8,9-HpCDF	1000	1030		pg/L		103	73 - 123
OCDF	2000	1730		pg/L		87	68 - 132

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	79		40 - 135
13C-1,2,3,7,8-PeCDD	96		40 - 135
13C-1,2,3,4,7,8-HxCDD	76		40 - 135
13C-1,2,3,6,7,8-HxCDD	84		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	86		40 - 135
13C-OCDD	65		40 - 135
13C-2,3,7,8-TCDF	76		40 - 135
13C-1,2,3,7,8-PeCDF	90		40 - 135
13C-2,3,4,7,8-PeCDF	81		40 - 135
13C-1,2,3,4,7,8-HxCDF	90		40 - 135
13C-1,2,3,6,7,8-HxCDF	82		40 - 135
13C-2,3,4,6,7,8-HxCDF	86		40 - 135
13C-1,2,3,7,8,9-HxCDF	86		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	85		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	88		40 - 135
13C-OCDF	71		40 - 135

# QC Association Summary

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

Job ID: 480-197349-2

## Specialty Organics

### Prep Batch: 61532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	8290	
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	8290	
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	8290	
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	8290	
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	8290	
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	8290	
MB 140-61532/14-A	Method Blank	Total/NA	Water	8290	
LCS 140-61532/13-A	Lab Control Sample	Total/NA	Water	8290	

### Analysis Batch: 61928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-61532/14-A	Method Blank	Total/NA	Water	8290A	61532
LCS 140-61532/13-A	Lab Control Sample	Total/NA	Water	8290A	61532

### Analysis Batch: 62000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-1	SUPE-W-12CR-042822	Total/NA	Water	8290A	61532
480-197349-3	SUPE-W-30A-042822	Total/NA	Water	8290A	61532

### Analysis Batch: 62016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-5	SUPE-W-04AR2-042822	Total/NA	Water	8290A	61532
480-197349-6	SUPE-W-10AR2-042822	Total/NA	Water	8290A	61532

### Analysis Batch: 62038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-197349-2	SUPE-W-30C-042822	Total/NA	Water	8290A	61532
480-197349-7	SUPE-W-EB-02-042822	Total/NA	Water	8290A	61532

# Lab Chronicle

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

Job ID: 480-197349-2

**Client Sample ID: SUPE-W-12CR-042822**

**Lab Sample ID: 480-197349-1**

Date Collected: 04/28/22 08:28

Matrix: Water

Date Received: 04/29/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62000	05/25/22 03:22	PMP	TAL KNX

**Client Sample ID: SUPE-W-30C-042822**

**Lab Sample ID: 480-197349-2**

Date Collected: 04/28/22 11:47

Matrix: Water

Date Received: 04/29/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62038	05/26/22 02:59	PMP	TAL KNX

**Client Sample ID: SUPE-W-30A-042822**

**Lab Sample ID: 480-197349-3**

Date Collected: 04/28/22 13:51

Matrix: Water

Date Received: 04/29/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62000	05/25/22 05:23	PMP	TAL KNX

**Client Sample ID: SUPE-W-04AR2-042822**

**Lab Sample ID: 480-197349-5**

Date Collected: 04/28/22 12:11

Matrix: Water

Date Received: 04/29/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62016	05/25/22 16:58	KBL	TAL KNX

**Client Sample ID: SUPE-W-10AR2-042822**

**Lab Sample ID: 480-197349-6**

Date Collected: 04/28/22 14:00

Matrix: Water

Date Received: 04/29/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62016	05/25/22 17:59	KBL	TAL KNX

**Client Sample ID: SUPE-W-EB-02-042822**

**Lab Sample ID: 480-197349-7**

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/29/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			61532	05/10/22 09:09	HNC	TAL KNX
Total/NA	Analysis	8290A		1	62038	05/26/22 04:00	PMP	TAL KNX

**Laboratory References:**

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

# Accreditation/Certification Summary

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

Job ID: 480-197349-2

## Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998044300	08-31-22

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	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



# Method Summary

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

Job ID: 480-197349-2

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 Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000



# Sample Summary

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

Job ID: 480-197349-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-197349-1	SUPE-W-12CR-042822	Water	04/28/22 08:28	04/29/22 10:00
480-197349-2	SUPE-W-30C-042822	Water	04/28/22 11:47	04/29/22 10:00
480-197349-3	SUPE-W-30A-042822	Water	04/28/22 13:51	04/29/22 10:00
480-197349-5	SUPE-W-04AR2-042822	Water	04/28/22 12:11	04/29/22 10:00
480-197349-6	SUPE-W-10AR2-042822	Water	04/28/22 14:00	04/29/22 10:00
480-197349-7	SUPE-W-EB-02-042822	Water	04/28/22 15:00	04/29/22 10:00

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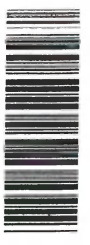
15



# CHAIN OF CUSTODY REQUEST FORM

TestAmerica Duluth SC 269

REF.# 3020010



Ref 210311

Project Name: Superior, WI - 2022 OM&M Program  
 Project Number: OM-0556-22  
 Laboratory: TACHI  
 Shipment Method: FEDEX  
 Program: Superior 2022 1SA Sampling\_001

Company: Field & Technical Services  
 Address: 200 Third Avenue  
 Carnegie, PA 15106  
 (412) 279-3363

Client: Beazer East, Inc.  
 Contact: tlowe.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative	Total Bottle Count		Notes:
						8270D_SVOC (less naphtha) (Chicago)	None	
04/28/2022	0828	GW	SUPE-W-12CR-042822			2	2	
04/28/2022	1147	GW	SUPE-W-30C-042822			2	2	
04/28/2022	1351	GW	SUPE-W-30A-042822			2	2	



480-197349 Chain of Custody

Temp 2.0 1.1 2.2 1.4 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Trevor Lowe</i> Printed Name: Trevor Lowe Firm: FTS Date/Time: 5/27/2022	Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: <i>[Firm]</i> Date/Time: 4/29/22 1000	Signature: Printed Name: Firm: Date/Time:	Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: TA Date/Time: 4/29/22 1000	<input checked="" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard





## Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-197349-2

**Login Number: 197349**

**List Number: 1**

**Creator: Kolb, Chris M**

**List Source: Eurofins Buffalo**

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	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# FTS, LLC

**DATE:** October 26, 2022

**FROM:** Kendra Chintella

**SUBJECT:** Superior Groundwater

**SAMPLE DELIVERY GROUP (SDG):** 180-145689-1

**SAMPLES:** SUPE-W-06A-100522, SUPE-W-06C-100522, SUPE-W-12A-100522, SUPE-W-30C-100422, SUPE-EB1-100422

**ANALYSES:** Method 8260C (VOCs), 8270E LL (SVOCs), 8270D LL (Pentachlorophenol)

**LABORATORY:** Eurofins Laboratories, Buffalo, Pittsburgh

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: Di-n-butyl phthalate was detected above the QL in the equipment blank and the result in sample W-06A was qualified as not detected at the QL. The di-n-butyl phthalate results in samples W-06C, W-12A, and W-30C were qualified "J+". Phenanthrene was detected below the QL in the equipment blank and the results in samples W-12A and W-30C were qualified not detected at the QL. The phenanthrene results in samples W-06A and W-06C were qualified "J+".
- Surrogate Recoveries  
Noncompliance: None
- Matrix Spike/Matrix Spike Duplicate  
Noncompliance: The MS/MSD recoveries of several SVOCs were outside of the recovery limits. No action was taken on this basis.
- Laboratory Control Sample  
Noncompliance: The LCS/LCSD recoveries of 2-nitrophenol, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-octyl phthalate, and hexachlorocyclopentadiene were above the recovery limits. No action was taken on this basis.

## ANALYTICAL REPORT

Eurofins Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-145689-1

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:  
10/20/2022 4:09:24 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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.

PA Lab ID: 02-00416



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# Case Narrative

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

Job ID: 180-145689-1

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## Job ID: 180-145689-1

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### Laboratory: Eurofins Pittsburgh

#### Narrative

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#### Job Narrative 180-145689-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/6/2022 9:01 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.3° C.

#### GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-644817 recovered outside acceptance criteria, low biased, for 1,1,1-Trichloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

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

#### GC/MS Semi VOA

Method 8270E LL: The continuing calibration verification (CCV) associated with batch 180-414968 recovered above the upper control limit for Bis(2-ethylhexyl) phthalate and Hexachlorocyclopentadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: CCVIS 180-414968/3.

Method 8270E LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-414851 and analytical batch 180-415129 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8270E LL: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for preparation batch 180-414522 and analytical batch 180-415129 recovered outside control limits for the following analytes: 2-Nitrophenol, Bis(2-ethylhexyl) phthalate, Butyl benzyl phthalate, Di-n-octyl phthalate and Hexachlorocyclopentadiene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270E LL: The continuing calibration verification (CCV) associated with batch 180-415201 recovered above the upper control limit for 2-Nitroaniline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: CCVIS 180-415201/3.

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

#### Organic Prep

Method 3510C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: SUPE-W-06C-100522 and SUPE-W-12A-100522.

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

# Definitions/Glossary

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

Job ID: 180-145689-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control 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.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

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

Job ID: 180-145689-1

## Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998027800	08-31-23

## Laboratory: Eurofins Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998310390	08-31-23

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# Sample Summary

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

Job ID: 180-145689-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-145689-1	SUPE-W-06A-100522	Water	10/05/22 09:05	10/06/22 09:01
180-145689-2	SUPE-W-06C-100522	Water	10/05/22 10:59	10/06/22 09:01
180-145689-3	SUPE-W-12A-100522	Water	10/05/22 13:00	10/06/22 09:01
180-145689-4	SUPE-W-30C-100422	Water	10/04/22 18:32	10/06/22 09:01
180-145689-5	SUPE-EB1-100422	Water	10/04/22 19:10	10/06/22 09:01

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# Method Summary

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

Job ID: 180-145689-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET BUF
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	EET PIT
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PIT
5030C	Purge and Trap	SW846	EET BUF

#### Protocol References:

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

#### Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Lab Chronicle

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-06A-100522**

**Lab Sample ID: 180-145689-1**

Date Collected: 10/05/22 09:05

Matrix: Water

Date Received: 10/06/22 09:01

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645602	10/15/22 13:40	CR	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			980 mL	1 mL	644801	10/11/22 08:43	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/13/22 19:28	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415201	10/15/22 13:05	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-W-06C-100522**

**Lab Sample ID: 180-145689-2**

Date Collected: 10/05/22 10:59

Matrix: Water

Date Received: 10/06/22 09:01

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645602	10/15/22 14:02	CR	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			890 mL	1 mL	644801	10/11/22 08:43	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/13/22 19:00	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			240 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415129	10/14/22 21:29	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-W-12A-100522**

**Lab Sample ID: 180-145689-3**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/06/22 09:01

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645602	10/15/22 14:26	CR	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			860 mL	1 mL	644801	10/11/22 08:43	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/13/22 19:56	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415129	10/14/22 22:33	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-W-30C-100422**

**Lab Sample ID: 180-145689-4**

Date Collected: 10/04/22 18:32

Matrix: Water

Date Received: 10/06/22 09:01

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	644817	10/11/22 15:25	CB	EET BUF
Instrument ID: HP5975T										

# Lab Chronicle

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-30C-100422**

**Lab Sample ID: 180-145689-4**

**Date Collected: 10/04/22 18:32**

**Matrix: Water**

**Date Received: 10/06/22 09:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			990 mL	1 mL	644801	10/11/22 08:43	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/13/22 20:23	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			250 mL	0.25 mL	414522	10/08/22 17:39	VJC	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	414968	10/13/22 23:44	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-EB1-100422**

**Lab Sample ID: 180-145689-5**

**Date Collected: 10/04/22 19:10**

**Matrix: Water**

**Date Received: 10/06/22 09:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	644817	10/11/22 15:47	CB	EET BUF
Instrument ID: HP5975T										
Total/NA	Prep	3510C			990 mL	1 mL	644801	10/11/22 08:43	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/13/22 20:51	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			240 mL	0.25 mL	414522	10/08/22 17:39	VJC	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	414968	10/14/22 00:05	VVP	EET PIT
Instrument ID: CH733										

**Laboratory References:**

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600  
 EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

Lab: EET BUF  
 Batch Type: Prep  
     JMP = Jacob Pollock  
 Batch Type: Analysis  
     CB = Christa Baker  
     CR = Carly Repka  
     RJS = Robert Schick  
 Lab: EET PIT  
 Batch Type: Prep  
     BJT = Bill Trout  
     VJC = Vincent Cervone  
 Batch Type: Analysis  
     VVP = Vincent Piccolino

# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-06A-100522**

**Lab Sample ID: 180-145689-1**

Date Collected: 10/05/22 09:05

Matrix: Water

Date Received: 10/06/22 09:01

## Method: SW846 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			10/15/22 13:40	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 13:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 13:40	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 13:40	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 13:40	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 13:40	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 13:40	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 13:40	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 13:40	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 13:40	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 13:40	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 13:40	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 13:40	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 13:40	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 13:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120					10/15/22 13:40	1
4-Bromofluorobenzene (Surr)	96		73 - 120					10/15/22 13:40	1
Dibromofluoromethane (Surr)	98		75 - 123					10/15/22 13:40	1
Toluene-d8 (Surr)	97		80 - 120					10/15/22 13:40	1

## Method: SW846 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	0.35	ug/L		10/11/22 08:43	10/13/22 19:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	119		24 - 146				10/11/22 08:43	10/13/22 19:28	1
2-Fluorobiphenyl	109		37 - 120				10/11/22 08:43	10/13/22 19:28	1
2-Fluorophenol (Surr)	57		10 - 120				10/11/22 08:43	10/13/22 19:28	1
Nitrobenzene-d5 (Surr)	84		26 - 120				10/11/22 08:43	10/13/22 19:28	1
Phenol-d5 (Surr)	39		11 - 120				10/11/22 08:43	10/13/22 19:28	1
p-Terphenyl-d14	111		64 - 127				10/11/22 08:43	10/13/22 19:28	1

## Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 13:05	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/12/22 13:18	10/15/22 13:05	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/12/22 13:18	10/15/22 13:05	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/12/22 13:18	10/15/22 13:05	1
1-Methylnaphthalene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/12/22 13:18	10/15/22 13:05	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/12/22 13:18	10/15/22 13:05	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-06A-100522**

**Lab Sample ID: 180-145689-1**

Date Collected: 10/05/22 09:05

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/12/22 13:18	10/15/22 13:05	1
2-Chlorophenol	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 13:05	1
2-Methylnaphthalene	ND		0.21	0.067	ug/L		10/12/22 13:18	10/15/22 13:05	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/12/22 13:18	10/15/22 13:05	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/12/22 13:18	10/15/22 13:05	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/12/22 13:18	10/15/22 13:05	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/12/22 13:18	10/15/22 13:05	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/12/22 13:18	10/15/22 13:05	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/12/22 13:18	10/15/22 13:05	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/12/22 13:18	10/15/22 13:05	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/12/22 13:18	10/15/22 13:05	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/12/22 13:18	10/15/22 13:05	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/12/22 13:18	10/15/22 13:05	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/12/22 13:18	10/15/22 13:05	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/12/22 13:18	10/15/22 13:05	1
Acenaphthene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/15/22 13:05	1
Acenaphthylene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/15/22 13:05	1
Anthracene	ND		0.21	0.053	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzoic acid	ND		5.4	1.0	ug/L		10/12/22 13:18	10/15/22 13:05	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/15/22 13:05	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/12/22 13:18	10/15/22 13:05	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/12/22 13:18	10/15/22 13:05	1
Bis(2-ethylhexyl) phthalate	ND		11	6.8	ug/L		10/12/22 13:18	10/15/22 13:05	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/12/22 13:18	10/15/22 13:05	1
Butyl benzyl phthalate	ND		1.1	0.50	ug/L		10/12/22 13:18	10/15/22 13:05	1
Chrysene	ND		0.21	0.088	ug/L		10/12/22 13:18	10/15/22 13:05	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/12/22 13:18	10/15/22 13:05	1
Dibenzofuran	ND		1.1	0.21	ug/L		10/12/22 13:18	10/15/22 13:05	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/12/22 13:18	10/15/22 13:05	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/12/22 13:18	10/15/22 13:05	1
<b>Di-n-butyl phthalate</b>	<b>1.0</b>	<b>J</b>	1.1	0.81	ug/L		10/12/22 13:18	10/15/22 13:05	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/12/22 13:18	10/15/22 13:05	1
Fluoranthene	ND		0.21	0.065	ug/L		10/12/22 13:18	10/15/22 13:05	1
Fluorene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 13:05	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/15/22 13:05	1
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 13:05	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/12/22 13:18	10/15/22 13:05	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 13:05	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/12/22 13:18	10/15/22 13:05	1
Isophorone	ND		1.1	0.20	ug/L		10/12/22 13:18	10/15/22 13:05	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/12/22 13:18	10/15/22 13:05	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/12/22 13:18	10/15/22 13:05	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/12/22 13:18	10/15/22 13:05	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/12/22 13:18	10/15/22 13:05	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-06A-100522**

**Lab Sample ID: 180-145689-1**

Date Collected: 10/05/22 09:05

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	0.26		0.21	0.060	ug/L		10/12/22 13:18	10/15/22 13:05	1
Phenol	ND		1.1	0.53	ug/L		10/12/22 13:18	10/15/22 13:05	1
Pyrene	ND		0.21	0.059	ug/L		10/12/22 13:18	10/15/22 13:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		23 - 128	10/12/22 13:18	10/15/22 13:05	1
2-Fluorobiphenyl	78		20 - 105	10/12/22 13:18	10/15/22 13:05	1
2-Fluorophenol (Surr)	65		20 - 105	10/12/22 13:18	10/15/22 13:05	1
Nitrobenzene-d5 (Surr)	93		20 - 107	10/12/22 13:18	10/15/22 13:05	1
Phenol-d5 (Surr)	63		20 - 106	10/12/22 13:18	10/15/22 13:05	1
Terphenyl-d14 (Surr)	91		22 - 120	10/12/22 13:18	10/15/22 13:05	1

**Client Sample ID: SUPE-W-06C-100522**

**Lab Sample ID: 180-145689-2**

Date Collected: 10/05/22 10:59

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 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			10/15/22 14:02	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 14:02	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 14:02	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 14:02	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 14:02	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 14:02	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 14:02	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 14:02	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 14:02	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 14:02	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 14:02	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 14:02	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 14:02	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 14:02	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		77 - 120		10/15/22 14:02	1
4-Bromofluorobenzene (Surr)	98		73 - 120		10/15/22 14:02	1
Dibromofluoromethane (Surr)	95		75 - 123		10/15/22 14:02	1
Toluene-d8 (Surr)	97		80 - 120		10/15/22 14:02	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.1	0.38	ug/L		10/11/22 08:43	10/13/22 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	114		24 - 146	10/11/22 08:43	10/13/22 19:00	1
2-Fluorobiphenyl	109		37 - 120	10/11/22 08:43	10/13/22 19:00	1
2-Fluorophenol (Surr)	58		10 - 120	10/11/22 08:43	10/13/22 19:00	1
Nitrobenzene-d5 (Surr)	84		26 - 120	10/11/22 08:43	10/13/22 19:00	1
Phenol-d5 (Surr)	40		11 - 120	10/11/22 08:43	10/13/22 19:00	1
p-Terphenyl-d14	101		64 - 127	10/11/22 08:43	10/13/22 19:00	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-06C-100522**

**Lab Sample ID: 180-145689-2**

Date Collected: 10/05/22 10:59

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	F1	1.0	0.14	ug/L		10/12/22 13:18	10/14/22 21:29	1
1,2-Dichlorobenzene	ND	F1	1.0	0.099	ug/L		10/12/22 13:18	10/14/22 21:29	1
1,3-Dichlorobenzene	ND	F1	1.0	0.10	ug/L		10/12/22 13:18	10/14/22 21:29	1
1,4-Dichlorobenzene	ND	F1	1.0	0.064	ug/L		10/12/22 13:18	10/14/22 21:29	1
1-Methylnaphthalene	ND	F1	0.20	0.058	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,3,4,6-Tetrachlorophenol	ND	F1	1.0	0.34	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.53	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,4,5-Trichlorophenol	ND	F1	1.0	0.26	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,4,6-Trichlorophenol	ND	F1	1.0	0.23	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,4-Dichlorophenol	ND	F1	0.20	0.053	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,4-Dimethylphenol	ND	F1	1.0	0.17	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,4-Dinitrophenol	ND	F1	10	1.6	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,4-Dinitrotoluene	ND	F1	1.0	0.37	ug/L		10/12/22 13:18	10/14/22 21:29	1
2,6-Dinitrotoluene	ND		1.0	0.18	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>2-Chloronaphthalene</b>	<b>0.077</b>	<b>J F1</b>	0.20	0.061	ug/L		10/12/22 13:18	10/14/22 21:29	1
2-Chlorophenol	ND	F1	1.0	0.13	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>2-Methylnaphthalene</b>	<b>0.067</b>	<b>J F1</b>	0.20	0.065	ug/L		10/12/22 13:18	10/14/22 21:29	1
2-Methylphenol	ND	F1	1.0	0.31	ug/L		10/12/22 13:18	10/14/22 21:29	1
2-Nitroaniline	ND		5.2	0.57	ug/L		10/12/22 13:18	10/14/22 21:29	1
2-Nitrophenol	ND	F1	1.0	0.20	ug/L		10/12/22 13:18	10/14/22 21:29	1
3,3'-Dichlorobenzidine	ND	F1	1.0	0.61	ug/L		10/12/22 13:18	10/14/22 21:29	1
3-Nitroaniline	ND	F1	5.2	0.46	ug/L		10/12/22 13:18	10/14/22 21:29	1
4,6-Dinitro-2-methylphenol	ND	F1	5.2	1.5	ug/L		10/12/22 13:18	10/14/22 21:29	1
4-Bromophenyl phenyl ether	ND		1.0	0.33	ug/L		10/12/22 13:18	10/14/22 21:29	1
4-Chloro-3-methylphenol	ND		1.0	0.29	ug/L		10/12/22 13:18	10/14/22 21:29	1
4-Chloroaniline	ND	F1	1.0	0.39	ug/L		10/12/22 13:18	10/14/22 21:29	1
4-Chlorophenyl phenyl ether	ND	F1	1.0	0.23	ug/L		10/12/22 13:18	10/14/22 21:29	1
4-Nitroaniline	ND	F1	5.2	0.38	ug/L		10/12/22 13:18	10/14/22 21:29	1
4-Nitrophenol	ND		5.2	0.98	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Acenaphthene</b>	<b>0.073</b>	<b>J F1</b>	0.20	0.068	ug/L		10/12/22 13:18	10/14/22 21:29	1
Acenaphthylene	ND	F1	0.20	0.068	ug/L		10/12/22 13:18	10/14/22 21:29	1
Anthracene	ND	F1	0.20	0.051	ug/L		10/12/22 13:18	10/14/22 21:29	1
Benzo[a]anthracene	ND		0.20	0.078	ug/L		10/12/22 13:18	10/14/22 21:29	1
Benzo[a]pyrene	ND	F1	0.20	0.055	ug/L		10/12/22 13:18	10/14/22 21:29	1
Benzo[b]fluoranthene	ND	F1	0.20	0.10	ug/L		10/12/22 13:18	10/14/22 21:29	1
Benzo[g,h,i]perylene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/14/22 21:29	1
Benzo[k]fluoranthene	ND	F1	0.20	0.092	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Benzoic acid</b>	<b>1.8</b>	<b>J</b>	5.2	0.96	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Benzyl alcohol</b>	<b>1.5</b>		1.0	0.17	ug/L		10/12/22 13:18	10/14/22 21:29	1
Bis(2-chloroethoxy)methane	ND	F1	1.0	0.16	ug/L		10/12/22 13:18	10/14/22 21:29	1
Bis(2-chloroethyl)ether	ND	F1	0.20	0.042	ug/L		10/12/22 13:18	10/14/22 21:29	1
Bis(2-ethylhexyl) phthalate	ND		10	6.5	ug/L		10/12/22 13:18	10/14/22 21:29	1
bis(chloroisopropyl) ether	ND		0.20	0.060	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Butyl benzyl phthalate</b>	<b>1.3</b>		1.0	0.48	ug/L		10/12/22 13:18	10/14/22 21:29	1
Chrysene	ND	F1	0.20	0.084	ug/L		10/12/22 13:18	10/14/22 21:29	1
Dibenz(a,h)anthracene	ND		0.20	0.075	ug/L		10/12/22 13:18	10/14/22 21:29	1
Dibenzofuran	ND	F1	1.0	0.20	ug/L		10/12/22 13:18	10/14/22 21:29	1
Diethyl phthalate	ND	F1	1.0	0.59	ug/L		10/12/22 13:18	10/14/22 21:29	1
Dimethyl phthalate	ND	F1	1.0	0.21	ug/L		10/12/22 13:18	10/14/22 21:29	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-06C-100522**

**Lab Sample ID: 180-145689-2**

Date Collected: 10/05/22 10:59

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Di-n-butyl phthalate</b>	<b>2.1</b>	<b>F1</b>	1.0	0.77	ug/L		10/12/22 13:18	10/14/22 21:29	1
Di-n-octyl phthalate	ND		1.0	0.71	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Fluoranthene</b>	<b>0.066</b>	<b>J F1</b>	0.20	0.063	ug/L		10/12/22 13:18	10/14/22 21:29	1
Fluorene	ND	F1	0.20	0.072	ug/L		10/12/22 13:18	10/14/22 21:29	1
Hexachlorobenzene	ND	F1	0.20	0.058	ug/L		10/12/22 13:18	10/14/22 21:29	1
Hexachlorobutadiene	ND	F1	0.20	0.072	ug/L		10/12/22 13:18	10/14/22 21:29	1
Hexachlorocyclopentadiene	ND	F1	1.0	0.52	ug/L		10/12/22 13:18	10/14/22 21:29	1
Hexachloroethane	ND	F1	1.0	0.14	ug/L		10/12/22 13:18	10/14/22 21:29	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.089	ug/L		10/12/22 13:18	10/14/22 21:29	1
Isophorone	ND	F1	1.0	0.20	ug/L		10/12/22 13:18	10/14/22 21:29	1
Methylphenol, 3 & 4	ND	F1	1.0	0.39	ug/L		10/12/22 13:18	10/14/22 21:29	1
Nitrobenzene	ND		2.1	0.52	ug/L		10/12/22 13:18	10/14/22 21:29	1
N-Nitrosodi-n-propylamine	ND		0.20	0.074	ug/L		10/12/22 13:18	10/14/22 21:29	1
N-Nitrosodiphenylamine	ND	F1	1.0	0.12	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Phenanthrene</b>	<b>0.34</b>	<b>F1</b>	0.20	0.057	ug/L		10/12/22 13:18	10/14/22 21:29	1
Phenol	ND	F1	1.0	0.51	ug/L		10/12/22 13:18	10/14/22 21:29	1
<b>Pyrene</b>	<b>0.056</b>	<b>J</b>	0.20	0.056	ug/L		10/12/22 13:18	10/14/22 21:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		23 - 128	10/12/22 13:18	10/14/22 21:29	1
2-Fluorobiphenyl	67		20 - 105	10/12/22 13:18	10/14/22 21:29	1
2-Fluorophenol (Surr)	58		20 - 105	10/12/22 13:18	10/14/22 21:29	1
Nitrobenzene-d5 (Surr)	75		20 - 107	10/12/22 13:18	10/14/22 21:29	1
Phenol-d5 (Surr)	60		20 - 106	10/12/22 13:18	10/14/22 21:29	1
Terphenyl-d14 (Surr)	84		22 - 120	10/12/22 13:18	10/14/22 21:29	1

**Client Sample ID: SUPE-W-12A-100522**

**Lab Sample ID: 180-145689-3**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 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			10/15/22 14:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 14:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 14:26	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 14:26	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 14:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 14:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 14:26	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 14:26	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 14:26	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 14:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 14:26	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 14:26	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 14:26	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 14:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		10/15/22 14:26	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-12A-100522**

**Lab Sample ID: 180-145689-3**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		73 - 120		10/15/22 14:26	1
Dibromofluoromethane (Surr)	98		75 - 123		10/15/22 14:26	1
Toluene-d8 (Surr)	100		80 - 120		10/15/22 14:26	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.2	0.40	ug/L		10/11/22 08:43	10/13/22 19:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	123		24 - 146	10/11/22 08:43	10/13/22 19:56	1
2-Fluorobiphenyl	114		37 - 120	10/11/22 08:43	10/13/22 19:56	1
2-Fluorophenol (Surr)	60		10 - 120	10/11/22 08:43	10/13/22 19:56	1
Nitrobenzene-d5 (Surr)	87		26 - 120	10/11/22 08:43	10/13/22 19:56	1
Phenol-d5 (Surr)	42		11 - 120	10/11/22 08:43	10/13/22 19:56	1
p-Terphenyl-d14	117		64 - 127	10/11/22 08:43	10/13/22 19:56	1

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/12/22 13:18	10/14/22 22:33	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/12/22 13:18	10/14/22 22:33	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/12/22 13:18	10/14/22 22:33	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/12/22 13:18	10/14/22 22:33	1
1-Methylnaphthalene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/12/22 13:18	10/14/22 22:33	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/12/22 13:18	10/14/22 22:33	1
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/12/22 13:18	10/14/22 22:33	1
2-Chlorophenol	ND		1.1	0.14	ug/L		10/12/22 13:18	10/14/22 22:33	1
2-Methylnaphthalene	ND		0.21	0.067	ug/L		10/12/22 13:18	10/14/22 22:33	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/12/22 13:18	10/14/22 22:33	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/12/22 13:18	10/14/22 22:33	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/12/22 13:18	10/14/22 22:33	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/12/22 13:18	10/14/22 22:33	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/12/22 13:18	10/14/22 22:33	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/12/22 13:18	10/14/22 22:33	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/12/22 13:18	10/14/22 22:33	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/12/22 13:18	10/14/22 22:33	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/12/22 13:18	10/14/22 22:33	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/12/22 13:18	10/14/22 22:33	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/12/22 13:18	10/14/22 22:33	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/12/22 13:18	10/14/22 22:33	1
Acenaphthene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/14/22 22:33	1
Acenaphthylene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/14/22 22:33	1
<b>Anthracene</b>	<b>0.10</b>	<b>J</b>	0.21	0.053	ug/L		10/12/22 13:18	10/14/22 22:33	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-12A-100522**

**Lab Sample ID: 180-145689-3**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/12/22 13:18	10/14/22 22:33	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/12/22 13:18	10/14/22 22:33	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/12/22 13:18	10/14/22 22:33	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/14/22 22:33	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/12/22 13:18	10/14/22 22:33	1
Benzoic acid	ND		5.4	1.0	ug/L		10/12/22 13:18	10/14/22 22:33	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/14/22 22:33	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/12/22 13:18	10/14/22 22:33	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/12/22 13:18	10/14/22 22:33	1
Bis(2-ethylhexyl) phthalate	ND		11	6.8	ug/L		10/12/22 13:18	10/14/22 22:33	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/12/22 13:18	10/14/22 22:33	1
Butyl benzyl phthalate	ND		1.1	0.50	ug/L		10/12/22 13:18	10/14/22 22:33	1
Chrysene	ND		0.21	0.088	ug/L		10/12/22 13:18	10/14/22 22:33	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/12/22 13:18	10/14/22 22:33	1
Dibenzofuran	ND		1.1	0.21	ug/L		10/12/22 13:18	10/14/22 22:33	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/12/22 13:18	10/14/22 22:33	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/12/22 13:18	10/14/22 22:33	1
<b>Di-n-butyl phthalate</b>	<b>1.7</b>		1.1	0.81	ug/L		10/12/22 13:18	10/14/22 22:33	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/12/22 13:18	10/14/22 22:33	1
Fluoranthene	ND		0.21	0.065	ug/L		10/12/22 13:18	10/14/22 22:33	1
Fluorene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/14/22 22:33	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/14/22 22:33	1
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/14/22 22:33	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/12/22 13:18	10/14/22 22:33	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/12/22 13:18	10/14/22 22:33	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/12/22 13:18	10/14/22 22:33	1
Isophorone	ND		1.1	0.20	ug/L		10/12/22 13:18	10/14/22 22:33	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/12/22 13:18	10/14/22 22:33	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/12/22 13:18	10/14/22 22:33	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/12/22 13:18	10/14/22 22:33	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/12/22 13:18	10/14/22 22:33	1
<b>Phenanthrene</b>	<b>0.093</b>	<b>J</b>	0.21	0.060	ug/L		10/12/22 13:18	10/14/22 22:33	1
Phenol	ND		1.1	0.53	ug/L		10/12/22 13:18	10/14/22 22:33	1
Pyrene	ND		0.21	0.059	ug/L		10/12/22 13:18	10/14/22 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	48		23 - 128	10/12/22 13:18	10/14/22 22:33	1
2-Fluorobiphenyl	39		20 - 105	10/12/22 13:18	10/14/22 22:33	1
2-Fluorophenol (Surr)	36		20 - 105	10/12/22 13:18	10/14/22 22:33	1
Nitrobenzene-d5 (Surr)	44		20 - 107	10/12/22 13:18	10/14/22 22:33	1
Phenol-d5 (Surr)	38		20 - 106	10/12/22 13:18	10/14/22 22:33	1
Terphenyl-d14 (Surr)	55		22 - 120	10/12/22 13:18	10/14/22 22:33	1

**Client Sample ID: SUPE-W-30C-100422**

**Lab Sample ID: 180-145689-4**

Date Collected: 10/04/22 18:32

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 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			10/11/22 15:25	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-30C-100422**

**Lab Sample ID: 180-145689-4**

Date Collected: 10/04/22 18:32

Matrix: Water

Date Received: 10/06/22 09:01

## Method: SW846 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			10/11/22 15:25	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/22 15:25	1
Benzene	ND		1.0	0.41	ug/L			10/11/22 15:25	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/22 15:25	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/22 15:25	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/22 15:25	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/22 15:25	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/22 15:25	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/22 15:25	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/22 15:25	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/22 15:25	1
Styrene	ND		1.0	0.73	ug/L			10/11/22 15:25	1
Toluene	ND		1.0	0.51	ug/L			10/11/22 15:25	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/22 15:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		77 - 120		10/11/22 15:25	1
4-Bromofluorobenzene (Surr)	90		73 - 120		10/11/22 15:25	1
Dibromofluoromethane (Surr)	92		75 - 123		10/11/22 15:25	1
Toluene-d8 (Surr)	85		80 - 120		10/11/22 15:25	1

## Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	0.46	J	1.0	0.34	ug/L		10/11/22 08:43	10/13/22 20:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	99		24 - 146	10/11/22 08:43	10/13/22 20:23	1
2-Fluorobiphenyl	99		37 - 120	10/11/22 08:43	10/13/22 20:23	1
2-Fluorophenol (Surr)	50		10 - 120	10/11/22 08:43	10/13/22 20:23	1
Nitrobenzene-d5 (Surr)	74		26 - 120	10/11/22 08:43	10/13/22 20:23	1
Phenol-d5 (Surr)	34		11 - 120	10/11/22 08:43	10/13/22 20:23	1
p-Terphenyl-d14	95		64 - 127	10/11/22 08:43	10/13/22 20:23	1

## Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.13	ug/L		10/08/22 17:39	10/13/22 23:44	1
1,2-Dichlorobenzene	ND		1.0	0.095	ug/L		10/08/22 17:39	10/13/22 23:44	1
1,3-Dichlorobenzene	ND		1.0	0.099	ug/L		10/08/22 17:39	10/13/22 23:44	1
1,4-Dichlorobenzene	ND		1.0	0.061	ug/L		10/08/22 17:39	10/13/22 23:44	1
1-Methylnaphthalene	ND		0.19	0.056	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.33	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.51	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,4,5-Trichlorophenol	ND		1.0	0.25	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,4,6-Trichlorophenol	ND		1.0	0.22	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,4-Dichlorophenol	ND		0.19	0.051	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,4-Dinitrophenol	ND		10	1.5	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,4-Dinitrotoluene	ND		1.0	0.35	ug/L		10/08/22 17:39	10/13/22 23:44	1
2,6-Dinitrotoluene	ND		1.0	0.17	ug/L		10/08/22 17:39	10/13/22 23:44	1
2-Chloronaphthalene	ND		0.19	0.059	ug/L		10/08/22 17:39	10/13/22 23:44	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-30C-100422**

**Lab Sample ID: 180-145689-4**

Date Collected: 10/04/22 18:32

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		1.0	0.13	ug/L		10/08/22 17:39	10/13/22 23:44	1
2-Methylnaphthalene	ND		0.19	0.062	ug/L		10/08/22 17:39	10/13/22 23:44	1
2-Methylphenol	ND		1.0	0.30	ug/L		10/08/22 17:39	10/13/22 23:44	1
2-Nitroaniline	ND		5.0	0.55	ug/L		10/08/22 17:39	10/13/22 23:44	1
2-Nitrophenol	ND	+	1.0	0.19	ug/L		10/08/22 17:39	10/13/22 23:44	1
3,3'-Dichlorobenzidine	ND		1.0	0.58	ug/L		10/08/22 17:39	10/13/22 23:44	1
3-Nitroaniline	ND		5.0	0.44	ug/L		10/08/22 17:39	10/13/22 23:44	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.5	ug/L		10/08/22 17:39	10/13/22 23:44	1
4-Bromophenyl phenyl ether	ND		1.0	0.32	ug/L		10/08/22 17:39	10/13/22 23:44	1
4-Chloro-3-methylphenol	ND		1.0	0.28	ug/L		10/08/22 17:39	10/13/22 23:44	1
4-Chloroaniline	ND		1.0	0.38	ug/L		10/08/22 17:39	10/13/22 23:44	1
4-Chlorophenyl phenyl ether	ND		1.0	0.22	ug/L		10/08/22 17:39	10/13/22 23:44	1
4-Nitroaniline	ND		5.0	0.36	ug/L		10/08/22 17:39	10/13/22 23:44	1
4-Nitrophenol	ND		5.0	0.94	ug/L		10/08/22 17:39	10/13/22 23:44	1
Acenaphthene	ND		0.19	0.065	ug/L		10/08/22 17:39	10/13/22 23:44	1
Acenaphthylene	ND		0.19	0.065	ug/L		10/08/22 17:39	10/13/22 23:44	1
<b>Anthracene</b>	<b>0.20</b>		0.19	0.049	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzo[a]anthracene	ND		0.19	0.075	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzo[b]fluoranthene	ND		0.19	0.097	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzo[g,h,i]perylene	ND		0.19	0.069	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzo[k]fluoranthene	ND		0.19	0.088	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzoic acid	ND		5.0	0.92	ug/L		10/08/22 17:39	10/13/22 23:44	1
Benzyl alcohol	ND		1.0	0.16	ug/L		10/08/22 17:39	10/13/22 23:44	1
Bis(2-chloroethoxy)methane	ND		1.0	0.15	ug/L		10/08/22 17:39	10/13/22 23:44	1
Bis(2-chloroethyl)ether	ND		0.19	0.040	ug/L		10/08/22 17:39	10/13/22 23:44	1
Bis(2-ethylhexyl) phthalate	ND	+	10	6.2	ug/L		10/08/22 17:39	10/13/22 23:44	1
bis(chloroisopropyl) ether	ND		0.19	0.058	ug/L		10/08/22 17:39	10/13/22 23:44	1
Butyl benzyl phthalate	ND	+	1.0	0.46	ug/L		10/08/22 17:39	10/13/22 23:44	1
Chrysene	ND		0.19	0.081	ug/L		10/08/22 17:39	10/13/22 23:44	1
Dibenz(a,h)anthracene	ND		0.19	0.072	ug/L		10/08/22 17:39	10/13/22 23:44	1
Dibenzofuran	ND		1.0	0.19	ug/L		10/08/22 17:39	10/13/22 23:44	1
Diethyl phthalate	ND		1.0	0.57	ug/L		10/08/22 17:39	10/13/22 23:44	1
Dimethyl phthalate	ND		1.0	0.20	ug/L		10/08/22 17:39	10/13/22 23:44	1
<b>Di-n-butyl phthalate</b>	<b>1.7</b>		1.0	0.74	ug/L		10/08/22 17:39	10/13/22 23:44	1
Di-n-octyl phthalate	ND	+	1.0	0.69	ug/L		10/08/22 17:39	10/13/22 23:44	1
Fluoranthene	ND		0.19	0.060	ug/L		10/08/22 17:39	10/13/22 23:44	1
Fluorene	ND		0.19	0.069	ug/L		10/08/22 17:39	10/13/22 23:44	1
Hexachlorobenzene	ND		0.19	0.056	ug/L		10/08/22 17:39	10/13/22 23:44	1
Hexachlorobutadiene	ND		0.19	0.069	ug/L		10/08/22 17:39	10/13/22 23:44	1
Hexachlorocyclopentadiene	ND	+	1.0	0.50	ug/L		10/08/22 17:39	10/13/22 23:44	1
Hexachloroethane	ND		1.0	0.13	ug/L		10/08/22 17:39	10/13/22 23:44	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		10/08/22 17:39	10/13/22 23:44	1
Isophorone	ND		1.0	0.19	ug/L		10/08/22 17:39	10/13/22 23:44	1
Methylphenol, 3 & 4	ND		1.0	0.37	ug/L		10/08/22 17:39	10/13/22 23:44	1
Nitrobenzene	ND		2.0	0.50	ug/L		10/08/22 17:39	10/13/22 23:44	1
N-Nitrosodi-n-propylamine	ND		0.19	0.071	ug/L		10/08/22 17:39	10/13/22 23:44	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/08/22 17:39	10/13/22 23:44	1
<b>Phenanthrene</b>	<b>0.12</b>	<b>J</b>	0.19	0.055	ug/L		10/08/22 17:39	10/13/22 23:44	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-W-30C-100422**

**Lab Sample ID: 180-145689-4**

Date Collected: 10/04/22 18:32

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		1.0	0.49	ug/L		10/08/22 17:39	10/13/22 23:44	1
Pyrene	ND		0.19	0.054	ug/L		10/08/22 17:39	10/13/22 23:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	47		23 - 128				10/08/22 17:39	10/13/22 23:44	1
2-Fluorobiphenyl	50		20 - 105				10/08/22 17:39	10/13/22 23:44	1
2-Fluorophenol (Surr)	43		20 - 105				10/08/22 17:39	10/13/22 23:44	1
Nitrobenzene-d5 (Surr)	56		20 - 107				10/08/22 17:39	10/13/22 23:44	1
Phenol-d5 (Surr)	37		20 - 106				10/08/22 17:39	10/13/22 23:44	1
Terphenyl-d14 (Surr)	41		22 - 120				10/08/22 17:39	10/13/22 23:44	1

**Client Sample ID: SUPE-EB1-100422**

**Lab Sample ID: 180-145689-5**

Date Collected: 10/04/22 19:10

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 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			10/11/22 15:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/22 15:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/22 15:47	1
Benzene	ND		1.0	0.41	ug/L			10/11/22 15:47	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/22 15:47	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/22 15:47	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/22 15:47	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/22 15:47	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/22 15:47	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/22 15:47	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/22 15:47	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/22 15:47	1
Styrene	ND		1.0	0.73	ug/L			10/11/22 15:47	1
Toluene	ND		1.0	0.51	ug/L			10/11/22 15:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/22 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		77 - 120					10/11/22 15:47	1
4-Bromofluorobenzene (Surr)	89		73 - 120					10/11/22 15:47	1
Dibromofluoromethane (Surr)	90		75 - 123					10/11/22 15:47	1
Toluene-d8 (Surr)	89		80 - 120					10/11/22 15:47	1

**Method: SW846 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		10/11/22 08:43	10/13/22 20:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	102		24 - 146				10/11/22 08:43	10/13/22 20:51	1
2-Fluorobiphenyl	109		37 - 120				10/11/22 08:43	10/13/22 20:51	1
2-Fluorophenol (Surr)	54		10 - 120				10/11/22 08:43	10/13/22 20:51	1
Nitrobenzene-d5 (Surr)	81		26 - 120				10/11/22 08:43	10/13/22 20:51	1
Phenol-d5 (Surr)	39		11 - 120				10/11/22 08:43	10/13/22 20:51	1
p-Terphenyl-d14	117		64 - 127				10/11/22 08:43	10/13/22 20:51	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-EB1-100422**

**Lab Sample ID: 180-145689-5**

Date Collected: 10/04/22 19:10

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.14	ug/L		10/08/22 17:39	10/14/22 00:05	1
1,2-Dichlorobenzene	ND		1.0	0.099	ug/L		10/08/22 17:39	10/14/22 00:05	1
1,3-Dichlorobenzene	ND		1.0	0.10	ug/L		10/08/22 17:39	10/14/22 00:05	1
1,4-Dichlorobenzene	ND		1.0	0.064	ug/L		10/08/22 17:39	10/14/22 00:05	1
1-Methylnaphthalene	ND		0.20	0.058	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.34	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.53	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,4,5-Trichlorophenol	ND		1.0	0.26	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,4,6-Trichlorophenol	ND		1.0	0.23	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,4-Dichlorophenol	ND		0.20	0.053	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,4-Dinitrophenol	ND		10	1.6	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,4-Dinitrotoluene	ND		1.0	0.37	ug/L		10/08/22 17:39	10/14/22 00:05	1
2,6-Dinitrotoluene	ND		1.0	0.18	ug/L		10/08/22 17:39	10/14/22 00:05	1
2-Chloronaphthalene	ND		0.20	0.061	ug/L		10/08/22 17:39	10/14/22 00:05	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/08/22 17:39	10/14/22 00:05	1
2-Methylnaphthalene	ND		0.20	0.065	ug/L		10/08/22 17:39	10/14/22 00:05	1
2-Methylphenol	ND		1.0	0.31	ug/L		10/08/22 17:39	10/14/22 00:05	1
2-Nitroaniline	ND		5.2	0.57	ug/L		10/08/22 17:39	10/14/22 00:05	1
2-Nitrophenol	ND	+	1.0	0.20	ug/L		10/08/22 17:39	10/14/22 00:05	1
3,3'-Dichlorobenzidine	ND		1.0	0.61	ug/L		10/08/22 17:39	10/14/22 00:05	1
3-Nitroaniline	ND		5.2	0.46	ug/L		10/08/22 17:39	10/14/22 00:05	1
4,6-Dinitro-2-methylphenol	ND		5.2	1.5	ug/L		10/08/22 17:39	10/14/22 00:05	1
4-Bromophenyl phenyl ether	ND		1.0	0.33	ug/L		10/08/22 17:39	10/14/22 00:05	1
4-Chloro-3-methylphenol	ND		1.0	0.29	ug/L		10/08/22 17:39	10/14/22 00:05	1
4-Chloroaniline	ND		1.0	0.39	ug/L		10/08/22 17:39	10/14/22 00:05	1
4-Chlorophenyl phenyl ether	ND		1.0	0.23	ug/L		10/08/22 17:39	10/14/22 00:05	1
4-Nitroaniline	ND		5.2	0.38	ug/L		10/08/22 17:39	10/14/22 00:05	1
4-Nitrophenol	ND		5.2	0.98	ug/L		10/08/22 17:39	10/14/22 00:05	1
Acenaphthene	ND		0.20	0.068	ug/L		10/08/22 17:39	10/14/22 00:05	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/22 17:39	10/14/22 00:05	1
Anthracene	ND		0.20	0.051	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzo[a]anthracene	ND		0.20	0.078	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzo[a]pyrene	ND		0.20	0.055	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzo[b]fluoranthene	ND		0.20	0.10	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzo[g,h,i]perylene	ND		0.20	0.072	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzoic acid	ND		5.2	0.96	ug/L		10/08/22 17:39	10/14/22 00:05	1
Benzyl alcohol	ND		1.0	0.17	ug/L		10/08/22 17:39	10/14/22 00:05	1
Bis(2-chloroethoxy)methane	ND		1.0	0.16	ug/L		10/08/22 17:39	10/14/22 00:05	1
Bis(2-chloroethyl)ether	ND		0.20	0.042	ug/L		10/08/22 17:39	10/14/22 00:05	1
Bis(2-ethylhexyl) phthalate	ND	+	10	6.5	ug/L		10/08/22 17:39	10/14/22 00:05	1
bis(chloroisopropyl) ether	ND		0.20	0.060	ug/L		10/08/22 17:39	10/14/22 00:05	1
Butyl benzyl phthalate	ND	+	1.0	0.48	ug/L		10/08/22 17:39	10/14/22 00:05	1
Chrysene	ND		0.20	0.084	ug/L		10/08/22 17:39	10/14/22 00:05	1
Dibenz(a,h)anthracene	ND		0.20	0.075	ug/L		10/08/22 17:39	10/14/22 00:05	1
Dibenzofuran	ND		1.0	0.20	ug/L		10/08/22 17:39	10/14/22 00:05	1
Diethyl phthalate	ND		1.0	0.59	ug/L		10/08/22 17:39	10/14/22 00:05	1
Dimethyl phthalate	ND		1.0	0.21	ug/L		10/08/22 17:39	10/14/22 00:05	1

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# Client Sample Results

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

Job ID: 180-145689-1

**Client Sample ID: SUPE-EB1-100422**

**Lab Sample ID: 180-145689-5**

Date Collected: 10/04/22 19:10

Matrix: Water

Date Received: 10/06/22 09:01

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Di-n-butyl phthalate</b>	<b>1.5</b>		1.0	0.77	ug/L		10/08/22 17:39	10/14/22 00:05	1
Di-n-octyl phthalate	ND	*+	1.0	0.71	ug/L		10/08/22 17:39	10/14/22 00:05	1
Fluoranthene	ND		0.20	0.063	ug/L		10/08/22 17:39	10/14/22 00:05	1
Fluorene	ND		0.20	0.072	ug/L		10/08/22 17:39	10/14/22 00:05	1
Hexachlorobenzene	ND		0.20	0.058	ug/L		10/08/22 17:39	10/14/22 00:05	1
Hexachlorobutadiene	ND		0.20	0.072	ug/L		10/08/22 17:39	10/14/22 00:05	1
Hexachlorocyclopentadiene	ND	*+	1.0	0.52	ug/L		10/08/22 17:39	10/14/22 00:05	1
Hexachloroethane	ND		1.0	0.14	ug/L		10/08/22 17:39	10/14/22 00:05	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.089	ug/L		10/08/22 17:39	10/14/22 00:05	1
Isophorone	ND		1.0	0.20	ug/L		10/08/22 17:39	10/14/22 00:05	1
Methylphenol, 3 & 4	ND		1.0	0.39	ug/L		10/08/22 17:39	10/14/22 00:05	1
Nitrobenzene	ND		2.1	0.52	ug/L		10/08/22 17:39	10/14/22 00:05	1
N-Nitrosodi-n-propylamine	ND		0.20	0.074	ug/L		10/08/22 17:39	10/14/22 00:05	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/08/22 17:39	10/14/22 00:05	1
<b>Phenanthrene</b>	<b>0.13</b>	<b>J</b>	0.20	0.057	ug/L		10/08/22 17:39	10/14/22 00:05	1
Phenol	ND		1.0	0.51	ug/L		10/08/22 17:39	10/14/22 00:05	1
Pyrene	ND		0.20	0.056	ug/L		10/08/22 17:39	10/14/22 00:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	54		23 - 128	10/08/22 17:39	10/14/22 00:05	1
2-Fluorobiphenyl	54		20 - 105	10/08/22 17:39	10/14/22 00:05	1
2-Fluorophenol (Surr)	49		20 - 105	10/08/22 17:39	10/14/22 00:05	1
Nitrobenzene-d5 (Surr)	63		20 - 107	10/08/22 17:39	10/14/22 00:05	1
Phenol-d5 (Surr)	46		20 - 106	10/08/22 17:39	10/14/22 00:05	1
Terphenyl-d14 (Surr)	69		22 - 120	10/08/22 17:39	10/14/22 00:05	1

# QC Sample Results

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

Job ID: 180-145689-1

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

**Lab Sample ID: MB 480-644817/10**  
**Matrix: Water**  
**Analysis Batch: 644817**

**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			10/11/22 12:45	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/22 12:45	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/22 12:45	1
Benzene	ND		1.0	0.41	ug/L			10/11/22 12:45	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/22 12:45	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/22 12:45	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/22 12:45	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/22 12:45	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/22 12:45	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/22 12:45	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/22 12:45	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/22 12:45	1
Styrene	ND		1.0	0.73	ug/L			10/11/22 12:45	1
Toluene	ND		1.0	0.51	ug/L			10/11/22 12:45	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/22 12:45	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	89		77 - 120		10/11/22 12:45	1
4-Bromofluorobenzene (Surr)	93		73 - 120		10/11/22 12:45	1
Dibromofluoromethane (Surr)	89		75 - 123		10/11/22 12:45	1
Toluene-d8 (Surr)	90		80 - 120		10/11/22 12:45	1

**Lab Sample ID: LCS 480-644817/58**  
**Matrix: Water**  
**Analysis Batch: 644817**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trimethylbenzene	25.0	22.9		ug/L		92	76 - 121
1,3,5-Trimethylbenzene	25.0	22.7		ug/L		91	77 - 121
Benzene	25.0	23.0		ug/L		92	71 - 124
Chloromethane	25.0	20.4		ug/L		82	68 - 124
Ethylbenzene	25.0	21.7		ug/L		87	77 - 123
Methyl tert-butyl ether	25.0	23.7		ug/L		95	77 - 120
m-Xylene & p-Xylene	25.0	21.9		ug/L		87	76 - 122
Naphthalene	25.0	23.4		ug/L		94	66 - 125
n-Butylbenzene	25.0	22.4		ug/L		90	71 - 128
N-Propylbenzene	25.0	22.7		ug/L		91	75 - 127
o-Xylene	25.0	22.3		ug/L		89	76 - 122
Styrene	25.0	22.6		ug/L		90	80 - 120
Toluene	25.0	22.2		ug/L		89	80 - 122
Xylenes, Total	50.0	44.2		ug/L		88	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		77 - 120
4-Bromofluorobenzene (Surr)	90		73 - 120
Dibromofluoromethane (Surr)	95		75 - 123
Toluene-d8 (Surr)	90		80 - 120

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# QC Sample Results

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

Job ID: 180-145689-1

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

**Lab Sample ID: MB 480-645602/7**  
**Matrix: Water**  
**Analysis Batch: 645602**

**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			10/15/22 13:15	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 13:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 13:15	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 13:15	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 13:15	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 13:15	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 13:15	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 13:15	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 13:15	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 13:15	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 13:15	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 13:15	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 13:15	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 13:15	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 13:15	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		10/15/22 13:15	1
4-Bromofluorobenzene (Surr)	99		73 - 120		10/15/22 13:15	1
Dibromofluoromethane (Surr)	98		75 - 123		10/15/22 13:15	1
Toluene-d8 (Surr)	96		80 - 120		10/15/22 13:15	1

**Lab Sample ID: LCS 480-645602/5**  
**Matrix: Water**  
**Analysis Batch: 645602**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trimethylbenzene	25.0	23.2		ug/L		93	76 - 121
1,3,5-Trimethylbenzene	25.0	23.9		ug/L		96	77 - 121
Benzene	25.0	23.1		ug/L		92	71 - 124
Chloromethane	25.0	23.4		ug/L		94	68 - 124
Ethylbenzene	25.0	23.5		ug/L		94	77 - 123
Methyl tert-butyl ether	25.0	22.8		ug/L		91	77 - 120
m-Xylene & p-Xylene	25.0	23.5		ug/L		94	76 - 122
Naphthalene	25.0	23.2		ug/L		93	66 - 125
n-Butylbenzene	25.0	23.4		ug/L		94	71 - 128
N-Propylbenzene	25.0	23.6		ug/L		94	75 - 127
o-Xylene	25.0	23.6		ug/L		94	76 - 122
Styrene	25.0	25.1		ug/L		100	80 - 120
Toluene	25.0	22.4		ug/L		90	80 - 122
Xylenes, Total	50.0	47.1		ug/L		94	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	97		75 - 123
Toluene-d8 (Surr)	99		80 - 120

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# QC Sample Results

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

Job ID: 180-145689-1

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

**Lab Sample ID: MB 480-645737/7**  
**Matrix: Water**  
**Analysis Batch: 645737**

**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			10/17/22 11:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/17/22 11:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/17/22 11:05	1
Benzene	ND		1.0	0.41	ug/L			10/17/22 11:05	1
Chloromethane	ND		1.0	0.35	ug/L			10/17/22 11:05	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/17/22 11:05	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/17/22 11:05	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/17/22 11:05	1
Naphthalene	ND		1.0	0.43	ug/L			10/17/22 11:05	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/17/22 11:05	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/17/22 11:05	1
o-Xylene	ND		1.0	0.76	ug/L			10/17/22 11:05	1
Styrene	ND		1.0	0.73	ug/L			10/17/22 11:05	1
Toluene	ND		1.0	0.51	ug/L			10/17/22 11:05	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/17/22 11:05	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	93		77 - 120		10/17/22 11:05	1
4-Bromofluorobenzene (Surr)	97		73 - 120		10/17/22 11:05	1
Dibromofluoromethane (Surr)	94		75 - 123		10/17/22 11:05	1
Toluene-d8 (Surr)	100		80 - 120		10/17/22 11:05	1

**Lab Sample ID: LCS 480-645737/5**  
**Matrix: Water**  
**Analysis Batch: 645737**

**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	21.5		ug/L		86	73 - 126
1,2,4-Trimethylbenzene	25.0	25.1		ug/L		100	76 - 121
1,3,5-Trimethylbenzene	25.0	25.3		ug/L		101	77 - 121
Benzene	25.0	24.3		ug/L		97	71 - 124
Chloromethane	25.0	24.3		ug/L		97	68 - 124
Ethylbenzene	25.0	23.8		ug/L		95	77 - 123
Methyl tert-butyl ether	25.0	21.4		ug/L		85	77 - 120
m-Xylene & p-Xylene	25.0	24.1		ug/L		96	76 - 122
Naphthalene	25.0	26.5		ug/L		106	66 - 125
n-Butylbenzene	25.0	25.9		ug/L		104	71 - 128
N-Propylbenzene	25.0	25.8		ug/L		103	75 - 127
o-Xylene	25.0	23.5		ug/L		94	76 - 122
Styrene	25.0	24.7		ug/L		99	80 - 120
Toluene	25.0	23.7		ug/L		95	80 - 122
Xylenes, Total	50.0	47.6		ug/L		95	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	91		77 - 120
4-Bromofluorobenzene (Surr)	96		73 - 120
Dibromofluoromethane (Surr)	93		75 - 123
Toluene-d8 (Surr)	99		80 - 120

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# QC Sample Results

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

Job ID: 180-145689-1

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

**Lab Sample ID: 180-145689-2 MS**

**Matrix: Water**

**Analysis Batch: 645737**

**Client Sample ID: SUPE-W-06C-100522**

**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	22.7		ug/L		91	73 - 126
1,2,4-Trimethylbenzene	ND		25.0	24.4		ug/L		98	76 - 121
1,3,5-Trimethylbenzene	ND		25.0	24.2		ug/L		97	77 - 121
Benzene	ND		25.0	25.1		ug/L		100	71 - 124
Chloromethane	ND		25.0	26.2		ug/L		105	68 - 124
Ethylbenzene	ND		25.0	24.6		ug/L		98	77 - 123
Methyl tert-butyl ether	ND		25.0	26.5		ug/L		106	77 - 120
m-Xylene & p-Xylene	ND		25.0	25.4		ug/L		101	76 - 122
Naphthalene	ND		25.0	25.9		ug/L		104	66 - 125
n-Butylbenzene	ND		25.0	24.9		ug/L		100	71 - 128
N-Propylbenzene	ND		25.0	24.7		ug/L		99	75 - 127
o-Xylene	ND		25.0	25.0		ug/L		100	76 - 122
Styrene	ND		25.0	26.4		ug/L		105	80 - 120
Toluene	ND		25.0	24.6		ug/L		98	80 - 122
Xylenes, Total	ND		50.0	50.4		ug/L		101	76 - 122

Surrogate	MS %Recovery	MS Qualifier	MS Limits
1,2-Dichloroethane-d4 (Surr)	98		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	101		75 - 123
Toluene-d8 (Surr)	101		80 - 120

**Lab Sample ID: 180-145689-2 MSD**

**Matrix: Water**

**Analysis Batch: 645737**

**Client Sample ID: SUPE-W-06C-100522**

**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	22.4		ug/L		90	73 - 126	1	15
1,2,4-Trimethylbenzene	ND		25.0	25.8		ug/L		103	76 - 121	6	20
1,3,5-Trimethylbenzene	ND		25.0	25.4		ug/L		102	77 - 121	5	20
Benzene	ND		25.0	24.7		ug/L		99	71 - 124	2	13
Chloromethane	ND		25.0	25.4		ug/L		101	68 - 124	3	15
Ethylbenzene	ND		25.0	25.7		ug/L		103	77 - 123	4	15
Methyl tert-butyl ether	ND		25.0	25.0		ug/L		100	77 - 120	6	37
m-Xylene & p-Xylene	ND		25.0	26.0		ug/L		104	76 - 122	2	16
Naphthalene	ND		25.0	26.5		ug/L		106	66 - 125	2	20
n-Butylbenzene	ND		25.0	26.3		ug/L		105	71 - 128	5	15
N-Propylbenzene	ND		25.0	26.1		ug/L		104	75 - 127	5	15
o-Xylene	ND		25.0	25.9		ug/L		104	76 - 122	3	16
Styrene	ND		25.0	26.6		ug/L		107	80 - 120	1	20
Toluene	ND		25.0	24.9		ug/L		100	80 - 122	1	15
Xylenes, Total	ND		50.0	51.9		ug/L		104	76 - 122	3	16

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	92		77 - 120
4-Bromofluorobenzene (Surr)	99		73 - 120
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	99		80 - 120

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# QC Sample Results

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

Job ID: 180-145689-1

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

**Lab Sample ID: MB 480-644801/1-A**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 644801**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pentachlorophenol	ND		1.0	0.34	ug/L		10/11/22 08:43	10/13/22 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		24 - 146				10/11/22 08:43	10/13/22 17:09	1
2-Fluorobiphenyl	99		37 - 120				10/11/22 08:43	10/13/22 17:09	1
2-Fluorophenol (Surr)	51		10 - 120				10/11/22 08:43	10/13/22 17:09	1
Nitrobenzene-d5 (Surr)	80		26 - 120				10/11/22 08:43	10/13/22 17:09	1
Phenol-d5 (Surr)	35		11 - 120				10/11/22 08:43	10/13/22 17:09	1
p-Terphenyl-d14	106		64 - 127				10/11/22 08:43	10/13/22 17:09	1

**Lab Sample ID: LCS 480-644801/2-A**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 644801**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Pentachlorophenol	16.0	14.4		ug/L		90	10 - 131
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	111		24 - 146				
2-Fluorobiphenyl	102		37 - 120				
2-Fluorophenol (Surr)	54		10 - 120				
Nitrobenzene-d5 (Surr)	82		26 - 120				
Phenol-d5 (Surr)	39		11 - 120				
p-Terphenyl-d14	105		64 - 127				

**Lab Sample ID: 180-145689-2 MS**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: SUPE-W-06C-100522**  
**Prep Type: Total/NA**  
**Prep Batch: 644801**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Pentachlorophenol	ND		18.2	15.8		ug/L		87	23 - 149
Surrogate	%Recovery	Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	104		24 - 146						
2-Fluorobiphenyl	96		37 - 120						
2-Fluorophenol (Surr)	52		10 - 120						
Nitrobenzene-d5 (Surr)	77		26 - 120						
Phenol-d5 (Surr)	39		11 - 120						
p-Terphenyl-d14	85		64 - 127						

**Lab Sample ID: 180-145689-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: SUPE-W-06C-100522**  
**Prep Type: Total/NA**  
**Prep Batch: 644801**

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Pentachlorophenol	ND		18.0	17.0		ug/L		95	23 - 149	7	37

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# QC Sample Results

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

Job ID: 180-145689-1

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

**Lab Sample ID: 180-145689-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: SUPE-W-06C-100522**  
**Prep Type: Total/NA**  
**Prep Batch: 644801**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	115		24 - 146
2-Fluorobiphenyl	101		37 - 120
2-Fluorophenol (Surr)	54		10 - 120
Nitrobenzene-d5 (Surr)	82		26 - 120
Phenol-d5 (Surr)	41		11 - 120
p-Terphenyl-d14	90		64 - 127

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 180-414522/1-A**  
**Matrix: Water**  
**Analysis Batch: 414968**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.13	ug/L		10/08/22 17:39	10/13/22 14:39	1
1,2-Dichlorobenzene	ND		1.0	0.095	ug/L		10/08/22 17:39	10/13/22 14:39	1
1,3-Dichlorobenzene	ND		1.0	0.099	ug/L		10/08/22 17:39	10/13/22 14:39	1
1,4-Dichlorobenzene	ND		1.0	0.061	ug/L		10/08/22 17:39	10/13/22 14:39	1
1-Methylnaphthalene	ND		0.19	0.056	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.33	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.51	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,4,5-Trichlorophenol	ND		1.0	0.25	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,4,6-Trichlorophenol	ND		1.0	0.22	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,4-Dichlorophenol	ND		0.19	0.051	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,4-Dinitrophenol	ND		10	1.5	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,4-Dinitrotoluene	ND		1.0	0.35	ug/L		10/08/22 17:39	10/13/22 14:39	1
2,6-Dinitrotoluene	ND		1.0	0.17	ug/L		10/08/22 17:39	10/13/22 14:39	1
2-Chloronaphthalene	ND		0.19	0.059	ug/L		10/08/22 17:39	10/13/22 14:39	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/08/22 17:39	10/13/22 14:39	1
2-Methylnaphthalene	ND		0.19	0.062	ug/L		10/08/22 17:39	10/13/22 14:39	1
2-Methylphenol	ND		1.0	0.30	ug/L		10/08/22 17:39	10/13/22 14:39	1
2-Nitroaniline	ND		5.0	0.55	ug/L		10/08/22 17:39	10/13/22 14:39	1
2-Nitrophenol	ND		1.0	0.19	ug/L		10/08/22 17:39	10/13/22 14:39	1
3,3'-Dichlorobenzidine	ND		1.0	0.58	ug/L		10/08/22 17:39	10/13/22 14:39	1
3-Nitroaniline	ND		5.0	0.44	ug/L		10/08/22 17:39	10/13/22 14:39	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.5	ug/L		10/08/22 17:39	10/13/22 14:39	1
4-Bromophenyl phenyl ether	ND		1.0	0.32	ug/L		10/08/22 17:39	10/13/22 14:39	1
4-Chloro-3-methylphenol	ND		1.0	0.28	ug/L		10/08/22 17:39	10/13/22 14:39	1
4-Chloroaniline	ND		1.0	0.38	ug/L		10/08/22 17:39	10/13/22 14:39	1
4-Chlorophenyl phenyl ether	ND		1.0	0.22	ug/L		10/08/22 17:39	10/13/22 14:39	1
4-Nitroaniline	ND		5.0	0.36	ug/L		10/08/22 17:39	10/13/22 14:39	1
4-Nitrophenol	ND		5.0	0.94	ug/L		10/08/22 17:39	10/13/22 14:39	1
Acenaphthene	ND		0.19	0.065	ug/L		10/08/22 17:39	10/13/22 14:39	1
Acenaphthylene	ND		0.19	0.065	ug/L		10/08/22 17:39	10/13/22 14:39	1
Anthracene	ND		0.19	0.049	ug/L		10/08/22 17:39	10/13/22 14:39	1
Benzo[a]anthracene	ND		0.19	0.075	ug/L		10/08/22 17:39	10/13/22 14:39	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		10/08/22 17:39	10/13/22 14:39	1
Benzo[b]fluoranthene	ND		0.19	0.097	ug/L		10/08/22 17:39	10/13/22 14:39	1

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-414522/1-A**  
**Matrix: Water**  
**Analysis Batch: 414968**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.19	0.069	ug/L		10/08/22 17:39	10/13/22 14:39	1
Benzo[k]fluoranthene	ND		0.19	0.088	ug/L		10/08/22 17:39	10/13/22 14:39	1
Benzoic acid	ND		5.0	0.92	ug/L		10/08/22 17:39	10/13/22 14:39	1
Benzyl alcohol	ND		1.0	0.16	ug/L		10/08/22 17:39	10/13/22 14:39	1
Bis(2-chloroethoxy)methane	ND		1.0	0.15	ug/L		10/08/22 17:39	10/13/22 14:39	1
Bis(2-chloroethyl)ether	ND		0.19	0.040	ug/L		10/08/22 17:39	10/13/22 14:39	1
Bis(2-ethylhexyl) phthalate	ND		10	6.2	ug/L		10/08/22 17:39	10/13/22 14:39	1
bis(chloroisopropyl) ether	ND		0.19	0.058	ug/L		10/08/22 17:39	10/13/22 14:39	1
Butyl benzyl phthalate	ND		1.0	0.46	ug/L		10/08/22 17:39	10/13/22 14:39	1
Chrysene	ND		0.19	0.081	ug/L		10/08/22 17:39	10/13/22 14:39	1
Dibenz(a,h)anthracene	ND		0.19	0.072	ug/L		10/08/22 17:39	10/13/22 14:39	1
Dibenzofuran	ND		1.0	0.19	ug/L		10/08/22 17:39	10/13/22 14:39	1
Diethyl phthalate	ND		1.0	0.57	ug/L		10/08/22 17:39	10/13/22 14:39	1
Dimethyl phthalate	ND		1.0	0.20	ug/L		10/08/22 17:39	10/13/22 14:39	1
Di-n-butyl phthalate	ND		1.0	0.74	ug/L		10/08/22 17:39	10/13/22 14:39	1
Di-n-octyl phthalate	ND		1.0	0.69	ug/L		10/08/22 17:39	10/13/22 14:39	1
Fluoranthene	ND		0.19	0.060	ug/L		10/08/22 17:39	10/13/22 14:39	1
Fluorene	ND		0.19	0.069	ug/L		10/08/22 17:39	10/13/22 14:39	1
Hexachlorobenzene	ND		0.19	0.056	ug/L		10/08/22 17:39	10/13/22 14:39	1
Hexachlorobutadiene	ND		0.19	0.069	ug/L		10/08/22 17:39	10/13/22 14:39	1
Hexachlorocyclopentadiene	ND		1.0	0.50	ug/L		10/08/22 17:39	10/13/22 14:39	1
Hexachloroethane	ND		1.0	0.13	ug/L		10/08/22 17:39	10/13/22 14:39	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		10/08/22 17:39	10/13/22 14:39	1
Isophorone	ND		1.0	0.19	ug/L		10/08/22 17:39	10/13/22 14:39	1
Methylphenol, 3 & 4	ND		1.0	0.37	ug/L		10/08/22 17:39	10/13/22 14:39	1
Nitrobenzene	ND		2.0	0.50	ug/L		10/08/22 17:39	10/13/22 14:39	1
N-Nitrosodi-n-propylamine	ND		0.19	0.071	ug/L		10/08/22 17:39	10/13/22 14:39	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/08/22 17:39	10/13/22 14:39	1
Phenanthrene	ND		0.19	0.055	ug/L		10/08/22 17:39	10/13/22 14:39	1
Phenol	ND		1.0	0.49	ug/L		10/08/22 17:39	10/13/22 14:39	1
Pyrene	ND		0.19	0.054	ug/L		10/08/22 17:39	10/13/22 14:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	68		23 - 128	10/08/22 17:39	10/13/22 14:39	1
2-Fluorobiphenyl	75		20 - 105	10/08/22 17:39	10/13/22 14:39	1
2-Fluorophenol (Surr)	76		20 - 105	10/08/22 17:39	10/13/22 14:39	1
Nitrobenzene-d5 (Surr)	87		20 - 107	10/08/22 17:39	10/13/22 14:39	1
Phenol-d5 (Surr)	70		20 - 106	10/08/22 17:39	10/13/22 14:39	1
Terphenyl-d14 (Surr)	54		22 - 120	10/08/22 17:39	10/13/22 14:39	1

**Lab Sample ID: LCS 180-414522/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	20.0	17.3		ug/L		87	51 - 100
1,2-Dichlorobenzene	20.0	17.0		ug/L		85	51 - 100
1,3-Dichlorobenzene	20.0	17.4		ug/L		87	51 - 100

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-414522/2-A**

**Matrix: Water**

**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 414522**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	20.0	17.1		ug/L		85	52 - 100
1-Methylnaphthalene	20.0	16.9		ug/L		85	53 - 100
2,3,4,6-Tetrachlorophenol	20.0	16.7		ug/L		83	50 - 100
2,4,5-Trichlorophenol	20.0	18.3		ug/L		92	55 - 100
2,4,6-Trichlorophenol	20.0	19.1		ug/L		96	54 - 100
2,4-Dichlorophenol	20.0	17.7		ug/L		89	55 - 100
2,4-Dimethylphenol	20.0	18.3		ug/L		91	51 - 100
2,4-Dinitrophenol	40.0	30.4		ug/L		76	32 - 100
2,4-Dinitrotoluene	20.0	18.7		ug/L		94	56 - 100
2,6-Dinitrotoluene	20.0	19.5		ug/L		97	56 - 101
2-Chloronaphthalene	20.0	18.1		ug/L		90	52 - 100
2-Chlorophenol	20.0	17.9		ug/L		90	53 - 100
2-Methylnaphthalene	20.0	18.5		ug/L		92	53 - 100
2-Methylphenol	20.0	17.5		ug/L		88	51 - 100
2-Nitroaniline	20.0	20.4		ug/L		102	47 - 104
2-Nitrophenol	20.0	20.6	*+	ug/L		103	56 - 100
3,3'-Dichlorobenzidine	20.0	15.3		ug/L		77	42 - 100
3-Nitroaniline	20.0	19.0		ug/L		95	54 - 100
4,6-Dinitro-2-methylphenol	40.0	35.1		ug/L		88	48 - 100
4-Bromophenyl phenyl ether	20.0	17.7		ug/L		88	50 - 100
4-Chloro-3-methylphenol	20.0	17.4		ug/L		87	47 - 105
4-Chloroaniline	20.0	16.7		ug/L		84	48 - 100
4-Chlorophenyl phenyl ether	20.0	16.9		ug/L		84	52 - 100
4-Nitroaniline	20.0	18.4		ug/L		92	54 - 100
4-Nitrophenol	40.0	36.0		ug/L		90	37 - 120
Acenaphthene	20.0	16.9		ug/L		85	51 - 100
Acenaphthylene	20.0	17.0		ug/L		85	54 - 100
Anthracene	20.0	17.4		ug/L		87	54 - 100
Benzo[a]anthracene	20.0	18.3		ug/L		91	52 - 100
Benzo[a]pyrene	20.0	18.0		ug/L		90	52 - 100
Benzo[b]fluoranthene	20.0	18.2		ug/L		91	50 - 100
Benzo[g,h,i]perylene	20.0	18.3		ug/L		92	53 - 100
Benzo[k]fluoranthene	20.0	18.7		ug/L		93	49 - 100
Benzoic acid	20.0	18.6		ug/L		93	31 - 122
Benzyl alcohol	20.0	16.9		ug/L		85	33 - 107
Bis(2-chloroethoxy)methane	20.0	16.2		ug/L		81	49 - 100
Bis(2-chloroethyl)ether	20.0	17.2		ug/L		86	46 - 100
Bis(2-ethylhexyl) phthalate	20.0	21.7	*+	ug/L		108	52 - 101
bis(chloroisopropyl) ether	20.0	16.7		ug/L		83	29 - 102
Butyl benzyl phthalate	20.0	20.7	*+	ug/L		103	52 - 100
Chrysene	20.0	16.5		ug/L		83	51 - 100
Dibenz(a,h)anthracene	20.0	19.2		ug/L		96	52 - 101
Dibenzofuran	20.0	16.8		ug/L		84	53 - 100
Diethyl phthalate	20.0	16.5		ug/L		82	52 - 100
Dimethyl phthalate	20.0	17.0		ug/L		85	55 - 100
Di-n-butyl phthalate	20.0	18.0		ug/L		90	57 - 100
Di-n-octyl phthalate	20.0	22.3	*+	ug/L		112	41 - 100
Fluoranthene	20.0	16.4		ug/L		82	56 - 100
Fluorene	20.0	17.2		ug/L		86	53 - 100

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-414522/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobenzene	20.0	16.6		ug/L		83	46 - 100
Hexachlorobutadiene	20.0	17.5		ug/L		87	42 - 101
Hexachlorocyclopentadiene	20.0	21.4	*+	ug/L		107	38 - 102
Hexachloroethane	20.0	17.6		ug/L		88	46 - 100
Indeno[1,2,3-cd]pyrene	20.0	18.7		ug/L		94	54 - 100
Isophorone	20.0	17.4		ug/L		87	50 - 100
Methylphenol, 3 & 4	20.0	16.6		ug/L		83	51 - 100
Nitrobenzene	20.0	19.5		ug/L		97	47 - 100
N-Nitrosodi-n-propylamine	20.0	17.9		ug/L		90	43 - 103
N-Nitrosodiphenylamine	20.0	18.7		ug/L		93	53 - 100
Phenanthrene	20.0	17.6		ug/L		88	53 - 100
Phenol	20.0	17.1		ug/L		85	49 - 100
Pyrene	20.0	18.9		ug/L		95	53 - 100

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
2,4,6-Tribromophenol (Surr)	87		23 - 128
2-Fluorobiphenyl	85		20 - 105
2-Fluorophenol (Surr)	87		20 - 105
Nitrobenzene-d5 (Surr)	99		20 - 107
Phenol-d5 (Surr)	83		20 - 106
Terphenyl-d14 (Surr)	86		22 - 120

**Lab Sample ID: LCSD 180-414522/3-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	20.0	16.6		ug/L		83	51 - 100	4	15
1,2-Dichlorobenzene	20.0	16.2		ug/L		81	51 - 100	5	16
1,3-Dichlorobenzene	20.0	16.3		ug/L		82	51 - 100	6	15
1,4-Dichlorobenzene	20.0	16.4		ug/L		82	52 - 100	4	15
1-Methylnaphthalene	20.0	15.7		ug/L		78	53 - 100	8	15
2,3,4,6-Tetrachlorophenol	20.0	16.3		ug/L		82	50 - 100	2	21
2,4,5-Trichlorophenol	20.0	18.4		ug/L		92	55 - 100	0	18
2,4,6-Trichlorophenol	20.0	18.5		ug/L		92	54 - 100	3	16
2,4-Dichlorophenol	20.0	17.0		ug/L		85	55 - 100	4	15
2,4-Dimethylphenol	20.0	17.8		ug/L		89	51 - 100	2	16
2,4-Dinitrophenol	40.0	28.8		ug/L		72	32 - 100	5	19
2,4-Dinitrotoluene	20.0	18.2		ug/L		91	56 - 100	3	16
2,6-Dinitrotoluene	20.0	18.9		ug/L		94	56 - 101	3	16
2-Chloronaphthalene	20.0	17.4		ug/L		87	52 - 100	4	15
2-Chlorophenol	20.0	16.6		ug/L		83	53 - 100	7	17
2-Methylnaphthalene	20.0	17.7		ug/L		89	53 - 100	4	15
2-Methylphenol	20.0	16.3		ug/L		82	51 - 100	7	16
2-Nitroaniline	20.0	19.8		ug/L		99	47 - 104	3	18
2-Nitrophenol	20.0	20.1	*+	ug/L		101	56 - 100	2	15
3,3'-Dichlorobenzidine	20.0	14.6		ug/L		73	42 - 100	5	15
3-Nitroaniline	20.0	18.3		ug/L		91	54 - 100	4	15

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 180-414522/3-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
4,6-Dinitro-2-methylphenol	40.0	34.2		ug/L		86	48 - 100	3	15	
4-Bromophenyl phenyl ether	20.0	18.0		ug/L		90	50 - 100	2	15	
4-Chloro-3-methylphenol	20.0	16.6		ug/L		83	47 - 105	5	18	
4-Chloroaniline	20.0	15.8		ug/L		79	48 - 100	6	15	
4-Chlorophenyl phenyl ether	20.0	16.8		ug/L		84	52 - 100	1	16	
4-Nitroaniline	20.0	17.6		ug/L		88	54 - 100	4	16	
4-Nitrophenol	40.0	36.0		ug/L		90	37 - 120	0	18	
Acenaphthene	20.0	16.8		ug/L		84	51 - 100	1	15	
Acenaphthylene	20.0	17.1		ug/L		86	54 - 100	1	16	
Anthracene	20.0	17.2		ug/L		86	54 - 100	1	15	
Benzo[a]anthracene	20.0	17.8		ug/L		89	52 - 100	3	15	
Benzo[a]pyrene	20.0	17.6		ug/L		88	52 - 100	2	16	
Benzo[b]fluoranthene	20.0	18.8		ug/L		94	50 - 100	4	15	
Benzo[g,h,i]perylene	20.0	17.4		ug/L		87	53 - 100	5	15	
Benzo[k]fluoranthene	20.0	17.1		ug/L		86	49 - 100	9	20	
Benzoic acid	20.0	18.2		ug/L		91	31 - 122	3	32	
Benzyl alcohol	20.0	15.9		ug/L		80	33 - 107	6	35	
Bis(2-chloroethoxy)methane	20.0	15.8		ug/L		79	49 - 100	3	15	
Bis(2-chloroethyl)ether	20.0	15.7		ug/L		79	46 - 100	9	17	
Bis(2-ethylhexyl) phthalate	20.0	21.4	*+	ug/L		107	52 - 101	2	15	
bis(chloroisopropyl) ether	20.0	15.4		ug/L		77	29 - 102	8	16	
Butyl benzyl phthalate	20.0	21.2	*+	ug/L		106	52 - 100	3	15	
Chrysene	20.0	16.6		ug/L		83	51 - 100	1	15	
Dibenz(a,h)anthracene	20.0	18.4		ug/L		92	52 - 101	4	15	
Dibenzofuran	20.0	16.3		ug/L		82	53 - 100	3	16	
Diethyl phthalate	20.0	16.1		ug/L		80	52 - 100	2	15	
Dimethyl phthalate	20.0	16.5		ug/L		82	55 - 100	3	15	
Di-n-butyl phthalate	20.0	18.1		ug/L		90	57 - 100	1	15	
Di-n-octyl phthalate	20.0	21.0	*+	ug/L		105	41 - 100	6	17	
Fluoranthene	20.0	16.1		ug/L		81	56 - 100	2	15	
Fluorene	20.0	16.7		ug/L		84	53 - 100	3	17	
Hexachlorobenzene	20.0	16.6		ug/L		83	46 - 100	0	15	
Hexachlorobutadiene	20.0	16.9		ug/L		84	42 - 101	3	15	
Hexachlorocyclopentadiene	20.0	20.7	*+	ug/L		104	38 - 102	3	16	
Hexachloroethane	20.0	16.6		ug/L		83	46 - 100	6	16	
Indeno[1,2,3-cd]pyrene	20.0	17.7		ug/L		89	54 - 100	5	16	
Isophorone	20.0	16.4		ug/L		82	50 - 100	6	15	
Methylphenol, 3 & 4	20.0	15.5		ug/L		78	51 - 100	7	18	
Nitrobenzene	20.0	19.5		ug/L		97	47 - 100	0	16	
N-Nitrosodi-n-propylamine	20.0	16.6		ug/L		83	43 - 103	8	16	
N-Nitrosodiphenylamine	20.0	18.5		ug/L		92	53 - 100	1	16	
Phenanthrene	20.0	16.8		ug/L		84	53 - 100	4	15	
Phenol	20.0	15.8		ug/L		79	49 - 100	8	17	
Pyrene	20.0	19.1		ug/L		95	53 - 100	1	15	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	86		23 - 128
2-Fluorobiphenyl	84		20 - 105

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 180-414522/3-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 414522**

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>LCSD Limits</i>
2-Fluorophenol (Surr)	83		20 - 105
Nitrobenzene-d5 (Surr)	97		20 - 107
Phenol-d5 (Surr)	78		20 - 106
Terphenyl-d14 (Surr)	89		22 - 120

**Lab Sample ID: MB 180-414851/1-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

<b>Analyte</b>	<b>MB Result</b>	<b>MB Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2,4-Trichlorobenzene	ND		1.0	0.13	ug/L		10/12/22 13:18	10/14/22 13:18	1
1,2-Dichlorobenzene	ND		1.0	0.095	ug/L		10/12/22 13:18	10/14/22 13:18	1
1,3-Dichlorobenzene	ND		1.0	0.099	ug/L		10/12/22 13:18	10/14/22 13:18	1
1,4-Dichlorobenzene	ND		1.0	0.061	ug/L		10/12/22 13:18	10/14/22 13:18	1
1-Methylnaphthalene	ND		0.19	0.056	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.33	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.51	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4,5-Trichlorophenol	ND		1.0	0.25	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4,6-Trichlorophenol	ND		1.0	0.22	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dichlorophenol	ND		0.19	0.051	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dinitrophenol	ND		10	1.5	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dinitrotoluene	ND		1.0	0.35	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,6-Dinitrotoluene	ND		1.0	0.17	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Chloronaphthalene	ND		0.19	0.059	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Methylnaphthalene	ND		0.19	0.062	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Methylphenol	ND		1.0	0.30	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Nitroaniline	ND		5.0	0.55	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Nitrophenol	ND		1.0	0.19	ug/L		10/12/22 13:18	10/14/22 13:18	1
3,3'-Dichlorobenzidine	ND		1.0	0.58	ug/L		10/12/22 13:18	10/14/22 13:18	1
3-Nitroaniline	ND		5.0	0.44	ug/L		10/12/22 13:18	10/14/22 13:18	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.5	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Bromophenyl phenyl ether	ND		1.0	0.32	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Chloro-3-methylphenol	ND		1.0	0.28	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Chloroaniline	ND		1.0	0.38	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Chlorophenyl phenyl ether	ND		1.0	0.22	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Nitroaniline	ND		5.0	0.36	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Nitrophenol	ND		5.0	0.94	ug/L		10/12/22 13:18	10/14/22 13:18	1
Acenaphthene	ND		0.19	0.065	ug/L		10/12/22 13:18	10/14/22 13:18	1
Acenaphthylene	ND		0.19	0.065	ug/L		10/12/22 13:18	10/14/22 13:18	1
Anthracene	ND		0.19	0.049	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[a]anthracene	ND		0.19	0.075	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[b]fluoranthene	ND		0.19	0.097	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[g,h,i]perylene	ND		0.19	0.069	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[k]fluoranthene	ND		0.19	0.088	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzoic acid	ND		5.0	0.92	ug/L		10/12/22 13:18	10/14/22 13:18	1

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-414851/1-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		1.0	0.16	ug/L		10/12/22 13:18	10/14/22 13:18	1
Bis(2-chloroethoxy)methane	ND		1.0	0.15	ug/L		10/12/22 13:18	10/14/22 13:18	1
Bis(2-chloroethyl)ether	ND		0.19	0.040	ug/L		10/12/22 13:18	10/14/22 13:18	1
Bis(2-ethylhexyl) phthalate	ND		10	6.2	ug/L		10/12/22 13:18	10/14/22 13:18	1
bis(chloroisopropyl) ether	ND		0.19	0.058	ug/L		10/12/22 13:18	10/14/22 13:18	1
Butyl benzyl phthalate	ND		1.0	0.46	ug/L		10/12/22 13:18	10/14/22 13:18	1
Chrysene	ND		0.19	0.081	ug/L		10/12/22 13:18	10/14/22 13:18	1
Dibenz(a,h)anthracene	ND		0.19	0.072	ug/L		10/12/22 13:18	10/14/22 13:18	1
Dibenzofuran	ND		1.0	0.19	ug/L		10/12/22 13:18	10/14/22 13:18	1
Diethyl phthalate	ND		1.0	0.57	ug/L		10/12/22 13:18	10/14/22 13:18	1
Dimethyl phthalate	ND		1.0	0.20	ug/L		10/12/22 13:18	10/14/22 13:18	1
Di-n-butyl phthalate	ND		1.0	0.74	ug/L		10/12/22 13:18	10/14/22 13:18	1
Di-n-octyl phthalate	ND		1.0	0.69	ug/L		10/12/22 13:18	10/14/22 13:18	1
Fluoranthene	ND		0.19	0.060	ug/L		10/12/22 13:18	10/14/22 13:18	1
Fluorene	ND		0.19	0.069	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachlorobenzene	ND		0.19	0.056	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachlorobutadiene	ND		0.19	0.069	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachlorocyclopentadiene	ND		1.0	0.50	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachloroethane	ND		1.0	0.13	ug/L		10/12/22 13:18	10/14/22 13:18	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		10/12/22 13:18	10/14/22 13:18	1
Isophorone	ND		1.0	0.19	ug/L		10/12/22 13:18	10/14/22 13:18	1
Methylphenol, 3 & 4	ND		1.0	0.37	ug/L		10/12/22 13:18	10/14/22 13:18	1
Nitrobenzene	ND		2.0	0.50	ug/L		10/12/22 13:18	10/14/22 13:18	1
N-Nitrosodi-n-propylamine	ND		0.19	0.071	ug/L		10/12/22 13:18	10/14/22 13:18	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/12/22 13:18	10/14/22 13:18	1
Phenanthrene	ND		0.19	0.055	ug/L		10/12/22 13:18	10/14/22 13:18	1
Phenol	ND		1.0	0.49	ug/L		10/12/22 13:18	10/14/22 13:18	1
Pyrene	ND		0.19	0.054	ug/L		10/12/22 13:18	10/14/22 13:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		23 - 128	10/12/22 13:18	10/14/22 13:18	1
2-Fluorobiphenyl	90		20 - 105	10/12/22 13:18	10/14/22 13:18	1
2-Fluorophenol (Surr)	93		20 - 105	10/12/22 13:18	10/14/22 13:18	1
Nitrobenzene-d5 (Surr)	104		20 - 107	10/12/22 13:18	10/14/22 13:18	1
Phenol-d5 (Surr)	88		20 - 106	10/12/22 13:18	10/14/22 13:18	1
Terphenyl-d14 (Surr)	69		22 - 120	10/12/22 13:18	10/14/22 13:18	1

**Lab Sample ID: LCS 180-414851/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	20.0	15.3		ug/L		77	51 - 100
1,2-Dichlorobenzene	20.0	15.5		ug/L		77	51 - 100
1,3-Dichlorobenzene	20.0	15.7		ug/L		78	51 - 100
1,4-Dichlorobenzene	20.0	15.6		ug/L		78	52 - 100
1-Methylnaphthalene	20.0	15.2		ug/L		76	53 - 100
2,3,4,6-Tetrachlorophenol	20.0	15.5		ug/L		78	50 - 100

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-414851/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	20.0	16.9		ug/L		85	55 - 100
2,4,6-Trichlorophenol	20.0	17.3		ug/L		87	54 - 100
2,4-Dichlorophenol	20.0	16.0		ug/L		80	55 - 100
2,4-Dimethylphenol	20.0	16.3		ug/L		81	51 - 100
2,4-Dinitrophenol	40.0	28.3		ug/L		71	32 - 100
2,4-Dinitrotoluene	20.0	17.3		ug/L		86	56 - 100
2,6-Dinitrotoluene	20.0	17.2		ug/L		86	56 - 101
2-Chloronaphthalene	20.0	16.4		ug/L		82	52 - 100
2-Chlorophenol	20.0	16.0		ug/L		80	53 - 100
2-Methylnaphthalene	20.0	17.3		ug/L		86	53 - 100
2-Methylphenol	20.0	15.7		ug/L		79	51 - 100
2-Nitroaniline	20.0	18.7		ug/L		93	47 - 104
2-Nitrophenol	20.0	18.9		ug/L		94	56 - 100
3,3'-Dichlorobenzidine	20.0	14.5		ug/L		72	42 - 100
3-Nitroaniline	20.0	17.3		ug/L		87	54 - 100
4,6-Dinitro-2-methylphenol	40.0	32.7		ug/L		82	48 - 100
4-Bromophenyl phenyl ether	20.0	16.7		ug/L		83	50 - 100
4-Chloro-3-methylphenol	20.0	15.9		ug/L		79	47 - 105
4-Chloroaniline	20.0	15.0		ug/L		75	48 - 100
4-Chlorophenyl phenyl ether	20.0	15.7		ug/L		79	52 - 100
4-Nitroaniline	20.0	17.0		ug/L		85	54 - 100
4-Nitrophenol	40.0	33.2		ug/L		83	37 - 120
Acenaphthene	20.0	15.6		ug/L		78	51 - 100
Acenaphthylene	20.0	16.2		ug/L		81	54 - 100
Anthracene	20.0	16.3		ug/L		82	54 - 100
Benzo[a]anthracene	20.0	16.8		ug/L		84	52 - 100
Benzo[a]pyrene	20.0	16.4		ug/L		82	52 - 100
Benzo[b]fluoranthene	20.0	17.6		ug/L		88	50 - 100
Benzo[g,h,i]perylene	20.0	16.1		ug/L		81	53 - 100
Benzo[k]fluoranthene	20.0	16.3		ug/L		82	49 - 100
Benzoic acid	20.0	17.4		ug/L		87	31 - 122
Benzyl alcohol	20.0	15.6		ug/L		78	33 - 107
Bis(2-chloroethoxy)methane	20.0	14.8		ug/L		74	49 - 100
Bis(2-chloroethyl)ether	20.0	15.2		ug/L		76	46 - 100
Bis(2-ethylhexyl) phthalate	20.0	20.2		ug/L		101	52 - 101
bis(chloroisopropyl) ether	20.0	15.2		ug/L		76	29 - 102
Butyl benzyl phthalate	20.0	19.7		ug/L		99	52 - 100
Chrysene	20.0	15.5		ug/L		78	51 - 100
Dibenz(a,h)anthracene	20.0	16.6		ug/L		83	52 - 101
Dibenzofuran	20.0	15.3		ug/L		76	53 - 100
Diethyl phthalate	20.0	15.3		ug/L		77	52 - 100
Dimethyl phthalate	20.0	15.4		ug/L		77	55 - 100
Di-n-butyl phthalate	20.0	16.9		ug/L		85	57 - 100
Di-n-octyl phthalate	20.0	19.7		ug/L		98	41 - 100
Fluoranthene	20.0	15.8		ug/L		79	56 - 100
Fluorene	20.0	15.7		ug/L		78	53 - 100
Hexachlorobenzene	20.0	15.8		ug/L		79	46 - 100
Hexachlorobutadiene	20.0	15.7		ug/L		79	42 - 101
Hexachlorocyclopentadiene	20.0	19.6		ug/L		98	38 - 102

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-414851/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachloroethane	20.0	16.1		ug/L		80	46 - 100
Indeno[1,2,3-cd]pyrene	20.0	16.7		ug/L		83	54 - 100
Isophorone	20.0	16.0		ug/L		80	50 - 100
Methylphenol, 3 & 4	20.0	15.2		ug/L		76	51 - 100
Nitrobenzene	20.0	18.3		ug/L		91	47 - 100
N-Nitrosodi-n-propylamine	20.0	16.5		ug/L		83	43 - 103
N-Nitrosodiphenylamine	20.0	17.8		ug/L		89	53 - 100
Phenanthrene	20.0	16.1		ug/L		81	53 - 100
Phenol	20.0	15.7		ug/L		78	49 - 100
Pyrene	20.0	18.0		ug/L		90	53 - 100

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	84		23 - 128
2-Fluorobiphenyl	79		20 - 105
2-Fluorophenol (Surr)	81		20 - 105
Nitrobenzene-d5 (Surr)	91		20 - 107
Phenol-d5 (Surr)	79		20 - 106
Terphenyl-d14 (Surr)	84		22 - 120

**Lab Sample ID: 180-145689-2 MS**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: SUPE-W-06C-100522**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	ND	F1	20.8	6.59	F1	ug/L		32	51 - 100
1,2-Dichlorobenzene	ND	F1	20.8	5.84	F1	ug/L		28	51 - 100
1,3-Dichlorobenzene	ND	F1	20.8	5.19	F1	ug/L		25	51 - 100
1,4-Dichlorobenzene	ND	F1	20.8	5.42	F1	ug/L		26	52 - 100
1-Methylnaphthalene	ND	F1	20.8	8.53	F1	ug/L		41	53 - 100
2,3,4,6-Tetrachlorophenol	ND	F1	20.8	9.42	F1	ug/L		45	50 - 100
2,4,5-Trichlorophenol	ND	F1	20.8	10.3	F1	ug/L		49	55 - 100
2,4,6-Trichlorophenol	ND	F1	20.8	10.4	F1	ug/L		50	54 - 100
2,4-Dichlorophenol	ND	F1	20.8	9.73	F1	ug/L		47	55 - 100
2,4-Dimethylphenol	ND	F1	20.8	6.44	F1	ug/L		31	51 - 100
2,4-Dinitrophenol	ND	F1	41.7	12.0	F1	ug/L		29	32 - 100
2,4-Dinitrotoluene	ND	F1	20.8	10.9	F1	ug/L		52	56 - 100
2,6-Dinitrotoluene	ND		20.8	12.7		ug/L		61	56 - 101
2-Chloronaphthalene	0.077	J F1	20.8	9.24	F1	ug/L		44	52 - 100
2-Chlorophenol	ND	F1	20.8	9.21	F1	ug/L		44	53 - 100
2-Methylnaphthalene	0.067	J F1	20.8	9.18	F1	ug/L		44	53 - 100
2-Methylphenol	ND	F1	20.8	9.24	F1	ug/L		44	51 - 100
2-Nitroaniline	ND		20.8	12.3		ug/L		59	47 - 104
2-Nitrophenol	ND	F1	20.8	11.4	F1	ug/L		55	56 - 100
3,3'-Dichlorobenzidine	ND	F1	20.8	3.73	F1	ug/L		18	42 - 100
3-Nitroaniline	ND	F1	20.8	10.1	F1	ug/L		48	54 - 100
4,6-Dinitro-2-methylphenol	ND	F1	41.7	14.2	F1	ug/L		34	48 - 100
4-Bromophenyl phenyl ether	ND		20.8	10.5		ug/L		50	50 - 100
4-Chloro-3-methylphenol	ND		20.8	10.3		ug/L		49	47 - 105

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-145689-2 MS

Matrix: Water

Analysis Batch: 415129

Client Sample ID: SUPE-W-06C-100522

Prep Type: Total/NA

Prep Batch: 414851

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				
4-Chloroaniline	ND	F1	20.8	7.03	F1	ug/L		34	48 - 100
4-Chlorophenyl phenyl ether	ND	F1	20.8	9.25	F1	ug/L		44	52 - 100
4-Nitroaniline	ND	F1	20.8	10.3	F1	ug/L		49	54 - 100
4-Nitrophenol	ND		41.7	21.4		ug/L		51	37 - 120
Acenaphthene	0.073	J F1	20.8	9.38	F1	ug/L		45	51 - 100
Acenaphthylene	ND	F1	20.8	9.40	F1	ug/L		45	54 - 100
Anthracene	ND	F1	20.8	9.09	F1	ug/L		44	54 - 100
Benzo[a]anthracene	ND		20.8	11.0		ug/L		53	52 - 100
Benzo[a]pyrene	ND	F1	20.8	9.11	F1	ug/L		44	52 - 100
Benzo[b]fluoranthene	ND	F1	20.8	9.56	F1	ug/L		46	50 - 100
Benzo[g,h,i]perylene	ND		20.8	13.4		ug/L		64	53 - 100
Benzo[k]fluoranthene	ND	F1	20.8	8.69	F1	ug/L		42	49 - 100
Benzoic acid	1.8	J	20.8	13.5		ug/L		56	31 - 122
Benzyl alcohol	1.5		20.8	11.6		ug/L		48	33 - 107
Bis(2-chloroethoxy)methane	ND	F1	20.8	8.86	F1	ug/L		43	49 - 100
Bis(2-chloroethyl)ether	ND	F1	20.8	9.09	F1	ug/L		44	46 - 100
Bis(2-ethylhexyl) phthalate	ND		20.8	16.3		ug/L		78	52 - 101
bis(chloroisopropyl) ether	ND		20.8	8.62		ug/L		41	29 - 102
Butyl benzyl phthalate	1.3		20.8	14.9		ug/L		65	52 - 100
Chrysene	ND	F1	20.8	9.24	F1	ug/L		44	51 - 100
Dibenz(a,h)anthracene	ND		20.8	13.2		ug/L		63	52 - 101
Dibenzofuran	ND	F1	20.8	9.22	F1	ug/L		44	53 - 100
Diethyl phthalate	ND	F1	20.8	9.81	F1	ug/L		47	52 - 100
Dimethyl phthalate	ND	F1	20.8	10.2	F1	ug/L		49	55 - 100
Di-n-butyl phthalate	2.1	F1	20.8	11.7	F1	ug/L		46	57 - 100
Di-n-octyl phthalate	ND		20.8	12.2		ug/L		58	41 - 100
Fluoranthene	0.066	J F1	20.8	8.08	F1	ug/L		38	56 - 100
Fluorene	ND	F1	20.8	9.60	F1	ug/L		46	53 - 100
Hexachlorobenzene	ND	F1	20.8	9.30	F1	ug/L		45	46 - 100
Hexachlorobutadiene	ND	F1	20.8	5.60	F1	ug/L		27	42 - 101
Hexachlorocyclopentadiene	ND	F1	20.8	1.43	F1	ug/L		7	38 - 102
Hexachloroethane	ND	F1	20.8	4.81	F1	ug/L		23	46 - 100
Indeno[1,2,3-cd]pyrene	ND		20.8	12.8		ug/L		61	54 - 100
Isophorone	ND	F1	20.8	9.94	F1	ug/L		48	50 - 100
Methylphenol, 3 & 4	ND	F1	20.8	9.52	F1	ug/L		46	51 - 100
Nitrobenzene	ND		20.8	11.0		ug/L		53	47 - 100
N-Nitrosodi-n-propylamine	ND		20.8	9.85		ug/L		47	43 - 103
N-Nitrosodiphenylamine	ND	F1	20.8	9.27	F1	ug/L		45	53 - 100
Phenanthrene	0.34	F1	20.8	10.3	F1	ug/L		48	53 - 100
Phenol	ND	F1	20.8	9.11	F1	ug/L		44	49 - 100
Pyrene	0.056	J	20.8	11.6		ug/L		56	53 - 100
	<b>MS MS</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
2,4,6-Tribromophenol (Surr)	74		23 - 128						
2-Fluorobiphenyl	57		20 - 105						
2-Fluorophenol (Surr)	59		20 - 105						
Nitrobenzene-d5 (Surr)	75		20 - 107						
Phenol-d5 (Surr)	65		20 - 106						

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-145689-2 MS**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: SUPE-W-06C-100522**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Surrogate	%Recovery	MS MS Qualifier	Limits
Terphenyl-d14 (Surr)	83		22 - 120

**Lab Sample ID: 180-145689-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: SUPE-W-06C-100522**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
1,2,4-Trichlorobenzene	ND	F1	20.8	6.64	F1	ug/L		32	51 - 100	1	15
1,2-Dichlorobenzene	ND	F1	20.8	6.05	F1	ug/L		29	51 - 100	3	16
1,3-Dichlorobenzene	ND	F1	20.8	5.58	F1	ug/L		27	51 - 100	7	15
1,4-Dichlorobenzene	ND	F1	20.8	5.79	F1	ug/L		28	52 - 100	7	15
1-Methylnaphthalene	ND	F1	20.8	8.62	F1	ug/L		41	53 - 100	1	15
2,3,4,6-Tetrachlorophenol	ND	F1	20.8	9.72	F1	ug/L		47	50 - 100	3	21
2,4,5-Trichlorophenol	ND	F1	20.8	10.8	F1	ug/L		52	55 - 100	5	18
2,4,6-Trichlorophenol	ND	F1	20.8	10.9	F1	ug/L		52	54 - 100	4	16
2,4-Dichlorophenol	ND	F1	20.8	9.75	F1	ug/L		47	55 - 100	0	15
2,4-Dimethylphenol	ND	F1	20.8	7.00	F1	ug/L		34	51 - 100	8	16
2,4-Dinitrophenol	ND	F1	41.7	13.5		ug/L		33	32 - 100	12	19
2,4-Dinitrotoluene	ND	F1	20.8	11.5	F1	ug/L		55	56 - 100	5	16
2,6-Dinitrotoluene	ND		20.8	13.8		ug/L		66	56 - 101	8	16
2-Chloronaphthalene	0.077	J F1	20.8	9.67	F1	ug/L		46	52 - 100	5	15
2-Chlorophenol	ND	F1	20.8	9.59	F1	ug/L		46	53 - 100	4	17
2-Methylnaphthalene	0.067	J F1	20.8	9.36	F1	ug/L		45	53 - 100	2	15
2-Methylphenol	ND	F1	20.8	9.79	F1	ug/L		47	51 - 100	6	16
2-Nitroaniline	ND		20.8	12.1		ug/L		58	47 - 104	1	18
2-Nitrophenol	ND	F1	20.8	11.4	F1	ug/L		55	56 - 100	0	15
3,3'-Dichlorobenzidine	ND	F1	20.8	3.65	F1	ug/L		17	42 - 100	2	15
3-Nitroaniline	ND	F1	20.8	9.84	F1	ug/L		47	54 - 100	3	15
4,6-Dinitro-2-methylphenol	ND	F1	41.7	15.5	F1	ug/L		37	48 - 100	9	15
4-Bromophenyl phenyl ether	ND		20.8	10.7		ug/L		51	50 - 100	2	15
4-Chloro-3-methylphenol	ND		20.8	10.2		ug/L		49	47 - 105	1	18
4-Chloroaniline	ND	F1	20.8	7.27	F1	ug/L		35	48 - 100	3	15
4-Chlorophenyl phenyl ether	ND	F1	20.8	9.98	F1	ug/L		48	52 - 100	8	16
4-Nitroaniline	ND	F1	20.8	10.5	F1	ug/L		50	54 - 100	2	16
4-Nitrophenol	ND		41.7	21.8		ug/L		52	37 - 120	2	18
Acenaphthene	0.073	J F1	20.8	9.78	F1	ug/L		47	51 - 100	4	15
Acenaphthylene	ND	F1	20.8	9.79	F1	ug/L		47	54 - 100	4	16
Anthracene	ND	F1	20.8	9.82	F1	ug/L		47	54 - 100	8	15
Benzo[a]anthracene	ND		20.8	11.2		ug/L		54	52 - 100	2	15
Benzo[a]pyrene	ND	F1	20.8	9.53	F1	ug/L		46	52 - 100	5	16
Benzo[b]fluoranthene	ND	F1	20.8	10.1	F1	ug/L		48	50 - 100	5	15
Benzo[g,h,i]perylene	ND		20.8	14.1		ug/L		68	53 - 100	5	15
Benzo[k]fluoranthene	ND	F1	20.8	8.68	F1	ug/L		42	49 - 100	0	20
Benzoic acid	1.8	J	20.8	13.3		ug/L		55	31 - 122	1	32
Benzyl alcohol	1.5		20.8	11.4		ug/L		47	33 - 107	2	35
Bis(2-chloroethoxy)methane	ND	F1	20.8	9.29	F1	ug/L		45	49 - 100	5	15
Bis(2-chloroethyl)ether	ND	F1	20.8	9.39	F1	ug/L		45	46 - 100	3	17
Bis(2-ethylhexyl) phthalate	ND		20.8	17.2		ug/L		83	52 - 101	6	15

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# QC Sample Results

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

Job ID: 180-145689-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 180-145689-2 MSD**

**Client Sample ID: SUPE-W-06C-100522**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 415129**

**Prep Batch: 414851**

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits	RPD		
bis(chloroisopropyl) ether	ND		20.8	9.12		ug/L		44	29 - 102	6	16	
Butyl benzyl phthalate	1.3		20.8	15.2		ug/L		67	52 - 100	2	15	
Chrysene	ND	F1	20.8	9.75	F1	ug/L		47	51 - 100	5	15	
Dibenz(a,h)anthracene	ND		20.8	14.3		ug/L		69	52 - 101	9	15	
Dibenzofuran	ND	F1	20.8	9.51	F1	ug/L		46	53 - 100	3	16	
Diethyl phthalate	ND	F1	20.8	10.7	F1	ug/L		51	52 - 100	8	15	
Dimethyl phthalate	ND	F1	20.8	10.8	F1	ug/L		52	55 - 100	6	15	
Di-n-butyl phthalate	2.1	F1	20.8	12.5	F1	ug/L		50	57 - 100	7	15	
Di-n-octyl phthalate	ND		20.8	12.0		ug/L		58	41 - 100	2	17	
Fluoranthene	0.066	J F1	20.8	8.39	F1	ug/L		40	56 - 100	4	15	
Fluorene	ND	F1	20.8	10.2	F1	ug/L		49	53 - 100	6	17	
Hexachlorobenzene	ND	F1	20.8	9.62		ug/L		46	46 - 100	3	15	
Hexachlorobutadiene	ND	F1	20.8	5.97	F1	ug/L		29	42 - 101	6	15	
Hexachlorocyclopentadiene	ND	F1	20.8	1.55	F1	ug/L		7	38 - 102	8	16	
Hexachloroethane	ND	F1	20.8	5.16	F1	ug/L		25	46 - 100	7	16	
Indeno[1,2,3-cd]pyrene	ND		20.8	13.9		ug/L		67	54 - 100	8	16	
Isophorone	ND	F1	20.8	10.6		ug/L		51	50 - 100	6	15	
Methylphenol, 3 & 4	ND	F1	20.8	9.87	F1	ug/L		47	51 - 100	4	18	
Nitrobenzene	ND		20.8	11.0		ug/L		53	47 - 100	0	16	
N-Nitrosodi-n-propylamine	ND		20.8	10.2		ug/L		49	43 - 103	3	16	
N-Nitrosodiphenylamine	ND	F1	20.8	9.42	F1	ug/L		45	53 - 100	2	16	
Phenanthrene	0.34	F1	20.8	10.8	F1	ug/L		50	53 - 100	5	15	
Phenol	ND	F1	20.8	9.24	F1	ug/L		44	49 - 100	1	17	
Pyrene	0.056	J	20.8	12.3		ug/L		59	53 - 100	5	15	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	81		23 - 128
2-Fluorobiphenyl	60		20 - 105
2-Fluorophenol (Surr)	63		20 - 105
Nitrobenzene-d5 (Surr)	77		20 - 107
Phenol-d5 (Surr)	66		20 - 106
Terphenyl-d14 (Surr)	84		22 - 120



# QC Association Summary

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

Job ID: 180-145689-1

## GC/MS VOA

### Analysis Batch: 644817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-4	SUPE-W-30C-100422	Total/NA	Water	8260C	
180-145689-5	SUPE-EB1-100422	Total/NA	Water	8260C	
MB 480-644817/10	Method Blank	Total/NA	Water	8260C	
LCS 480-644817/58	Lab Control Sample	Total/NA	Water	8260C	

### Analysis Batch: 645602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-1	SUPE-W-06A-100522	Total/NA	Water	8260C	
180-145689-2	SUPE-W-06C-100522	Total/NA	Water	8260C	
180-145689-3	SUPE-W-12A-100522	Total/NA	Water	8260C	
MB 480-645602/7	Method Blank	Total/NA	Water	8260C	
LCS 480-645602/5	Lab Control Sample	Total/NA	Water	8260C	

### Analysis Batch: 645737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-645737/7	Method Blank	Total/NA	Water	8260C	
LCS 480-645737/5	Lab Control Sample	Total/NA	Water	8260C	
180-145689-2 MS	SUPE-W-06C-100522	Total/NA	Water	8260C	
180-145689-2 MSD	SUPE-W-06C-100522	Total/NA	Water	8260C	

## GC/MS Semi VOA

### Prep Batch: 414522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-4	SUPE-W-30C-100422	Total/NA	Water	3520C	
180-145689-5	SUPE-EB1-100422	Total/NA	Water	3520C	
MB 180-414522/1-A	Method Blank	Total/NA	Water	3520C	
LCS 180-414522/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 180-414522/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Prep Batch: 414851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-1	SUPE-W-06A-100522	Total/NA	Water	3520C	
180-145689-2	SUPE-W-06C-100522	Total/NA	Water	3520C	
180-145689-3	SUPE-W-12A-100522	Total/NA	Water	3520C	
MB 180-414851/1-A	Method Blank	Total/NA	Water	3520C	
LCS 180-414851/2-A	Lab Control Sample	Total/NA	Water	3520C	
180-145689-2 MS	SUPE-W-06C-100522	Total/NA	Water	3520C	
180-145689-2 MSD	SUPE-W-06C-100522	Total/NA	Water	3520C	

### Analysis Batch: 414968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-4	SUPE-W-30C-100422	Total/NA	Water	EPA 8270E LL	414522
180-145689-5	SUPE-EB1-100422	Total/NA	Water	EPA 8270E LL	414522
MB 180-414522/1-A	Method Blank	Total/NA	Water	EPA 8270E LL	414522

### Analysis Batch: 415129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-2	SUPE-W-06C-100522	Total/NA	Water	EPA 8270E LL	414851
180-145689-3	SUPE-W-12A-100522	Total/NA	Water	EPA 8270E LL	414851
MB 180-414851/1-A	Method Blank	Total/NA	Water	EPA 8270E LL	414851

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# QC Association Summary

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

Job ID: 180-145689-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 415129 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-414522/2-A	Lab Control Sample	Total/NA	Water	EPA 8270E LL	414522
LCS 180-414851/2-A	Lab Control Sample	Total/NA	Water	EPA 8270E LL	414851
LCSD 180-414522/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 8270E LL	414522
180-145689-2 MS	SUPE-W-06C-100522	Total/NA	Water	EPA 8270E LL	414851
180-145689-2 MSD	SUPE-W-06C-100522	Total/NA	Water	EPA 8270E LL	414851

### Analysis Batch: 415201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-1	SUPE-W-06A-100522	Total/NA	Water	EPA 8270E LL	414851

### Prep Batch: 644801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-1	SUPE-W-06A-100522	Total/NA	Water	3510C	
180-145689-2	SUPE-W-06C-100522	Total/NA	Water	3510C	
180-145689-3	SUPE-W-12A-100522	Total/NA	Water	3510C	
180-145689-4	SUPE-W-30C-100422	Total/NA	Water	3510C	
180-145689-5	SUPE-EB1-100422	Total/NA	Water	3510C	
MB 480-644801/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-644801/2-A	Lab Control Sample	Total/NA	Water	3510C	
180-145689-2 MS	SUPE-W-06C-100522	Total/NA	Water	3510C	
180-145689-2 MSD	SUPE-W-06C-100522	Total/NA	Water	3510C	

### Analysis Batch: 645323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145689-1	SUPE-W-06A-100522	Total/NA	Water	8270D LL	644801
180-145689-2	SUPE-W-06C-100522	Total/NA	Water	8270D LL	644801
180-145689-3	SUPE-W-12A-100522	Total/NA	Water	8270D LL	644801
180-145689-4	SUPE-W-30C-100422	Total/NA	Water	8270D LL	644801
180-145689-5	SUPE-EB1-100422	Total/NA	Water	8270D LL	644801
MB 480-644801/1-A	Method Blank	Total/NA	Water	8270D LL	644801
LCS 480-644801/2-A	Lab Control Sample	Total/NA	Water	8270D LL	644801
180-145689-2 MS	SUPE-W-06C-100522	Total/NA	Water	8270D LL	644801
180-145689-2 MSD	SUPE-W-06C-100522	Total/NA	Water	8270D LL	644801

**Chain of Custody Record TestAmerica Duluth SC**

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3019 Venture Way  
Cedar Falls, IA 50613  
Phone (319) 277-2401 Fax (319) 277-2425

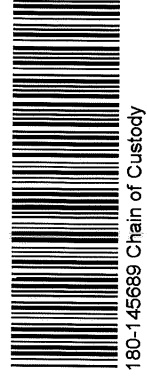
Client Information  
 Client Contact: Marie Ferrick  
 Phone: 412-279-3363  
 Company: Field & Technical Services  
 Address: 200 Third Avenue  
 City: Carnegie  
 State, Zip: PA 15106  
 Phone: 412-279-3363  
 Email: mfernick.2006@f-ts.com  
 Project Name: Superior 202225A Sampling.001  
 Site: Superior

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #: OM-0556-22  
 SSON#:   
 Lab PM: Marie Ferrick  
 E-Mail:   
 Carrier Tracking No(s):   
 COC No:   
 Page of   
 Job #

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Minerals, Swabs, Overlays, Impression, Aural)	Field Filtered Sample (Yes or No)	Retention/MS/MP (Yes or No)	Analysis Requested	Special Instructions/Note:
SUPE-W-06A-100522	10/15/22	0905	G	W	X	X	8260C-V0A+naphtha (Buffalo)	
SUPE-MS/MSD-100522	10/15/22	1059	G	W	X	X	8270DLL-RCP (Buffalo) (CL)	
SUPE-W-06C-100522	10/15/22	1059	G	W	X	X		
SUPE-W-12A-100522	10/15/22	1300	G	W	X	X		
SUPE-W-30C-100422	10/14/22	1832	G	W	X	X		
SUPE-E81-100422	10/14/22	1910	G	W	X	X		

SHIPPING: 0.00  
 SPECIAL: 0.00  
 HANDLING: 0.00  
 TOTAL: 0.00  
 Ref: Field & Technica Date: 05Oct22  
 Dep: Wgt: 75.00 LBS  
 DV: 0.00  
 Site: PRIORITY OVERNIGHT  
 TRC K: 4546 9365 8920  
 Sves: PRIORITY OVERNIGHT  
 TRC K: 4546 9365 8931

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Relinquished by: Marie Ferrick  
 Date/Time: 10/15/22, 1354  
 Company: FTS  
 Relinquished by: Shane Lindquist  
 Date/Time: 10/15/22, 1500  
 Company: FTS  
 Relinquished by: [Signature]  
 Date/Time: 10-7-22  
 Company: [Signature]  
 Custody Seal No.: 990  
 Cooler Temperature(s) °C and Other Remarks



**Eurofins Cedar Falls** *Buffalo*

3019 Venture Way  
Cedar Falls, IA 50613  
Phone (319) 277-2401 Fax (319) 277-2425

**TestAmerica Duluth SC**  
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Environment Testing  
America

**Chain of Custody Record**

Client Information		Sampler	Lab PM:	Carrier Tracking No(s)	COC No:		
Client Contact: <b>Beizer East, Inc</b>		<b>Marie Ferrick</b>					
Company: <b>Field &amp; Technical Services</b>		Phone: <b>412-279-3363</b>	E-Mail:				
Address: <b>200 Third Ave</b>		Due Date Requested:					
City: <b>Carnegie</b>		TAT Requested (days):					
State Zip: <b>PA 15106</b>		PO #:					
Phone: <b>412-279-3363</b>		WO #:					
Email: <b>mferrick.2006@f-t.com</b>		Project #:					
Project Name: <b>Superior 2022 2SA Sampling.001</b>		SSOW#:					
Site: <b>Superior</b>							
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Residue, Swab, Concentration, In-Phase, Analyt)	Field Filtered Sample (Yes or No)	Analysis Requested	Preservation Codes:
SUPE-W-06A-100522	10/15/22	0905	G	W			A - HCL M - Hexane N - None O - ASH2O2 P - Na2CO3 Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NiCl2 W - pH 4.5 X - EDTA Y - other (specify)
SUPE - MS/MSD - 100522	10/15/22	1059	G	W			
SUPE - W-06C - 100522	10/15/22	1059	G	W			
SUPE - W-12A - 100522	10/15/22	1300	G	W			
SUPE - W-30C - 100422	10/14/22	1832	G	W			
SUPE - EB1 - 100422	10/14/22	1910	G	W			
<p><b>Analysis Requested</b></p> <p>8270D - SVGC (less negative Chicago) (250mL)</p>							
<p><b>Special Instructions/Note:</b></p> <p>Total Number of Containers</p>							

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Return To Client	<input checked="" type="checkbox"/> Disposal By Lab
<input type="checkbox"/> Deliverable Requested: I, II, III, IV, Other (specify)	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown
<input type="checkbox"/> Empty Kit Relinquished by	<input type="checkbox"/> Radiological	Special Instructions/QC Requirements:	
Relinquished by: <b>Marie Ferrick</b>	Date/Time: <b>10/15/22 1354</b>	Company: <b>FTS</b>	Method of Shipment:
Relinquished by: <b>Shane Lindquist</b>	Date/Time: <b>10/15/22 1500</b>	Company: <b>FTS</b>	Received by: <b>Shane Lindquist</b>
Relinquished by:	Date/Time:	Company:	Received by: <b>Marie Ferrick</b>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: <b>990</b>	



ORIGIN ID:DKKA (716) 691-2600  
SAMPLE RECEIPT  
EUROFINS BUFFALO  
10 HAZELWOOD DR

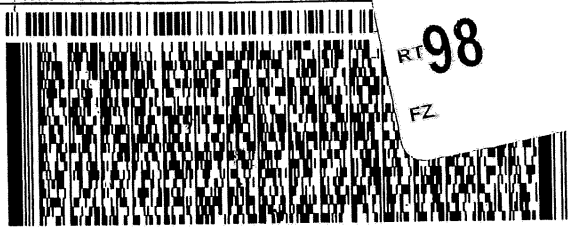
SHIP DATE: 06OCT22  
ACTWGT: 44.60 LB  
CAD: 846654/CAFE3616  
DIMS: 26x15x14 IN

AMHERST, NY 14228  
UNITED STATES US

BILL SENDER

TO **SAMPLE MGT.**  
**EUROFINS PITTSBURGH**  
**301 ALPHA DRIVE**  
**RIDC PARK**  
**PITTSBURGH PA 15238**

(412) 983-7058  
REF: TA PITTSBURG



TRK# 5754 0127 9178  
0201

FRI - 07 OCT 10:30A  
PRIORITY OVERNIGHT

**NA AGCA**

15238  
PA-US PIT

Uncorrected temp 1.3 °C  
Thermometer ID 20  
SF 0.0 Initials Bl

T-WI-SR-001 effective 7/26/13



180-145689 Waybill

*Buffalo*

<b>Client Information</b>		Sampler: <i>Marie Ferrick</i>		Lab PM:		Carrier Tracking No(s)		COC No:	
Client Contact: <i>Deazer East, Inc</i>		Phone: <i>412-279-3363</i>		E-Mail:				Page: _____	
Company: <i>Field &amp; Technical Services</i>								Page of _____	
Address: <i>200 Third Avenue</i>		Due Date Requested:		<b>Analysis Requested</b>		<b>Preservation Codes:</b> A - HCL          M - Hexane B - NaOH        N - None C - Zr 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)		Job #	
City: <i>Carnegie</i>		TAT Requested (days):							
State, Zip: <i>PA 15106</i>		PO #:							
Phone: <i>412-279-3363</i>		WO #:							
Email: <i>mferrick.2006@f-ts.com</i>		SSOW#:							
Project Name: <i>Superior 202225A Sampling.001</i>		Project #: <i>OM-0556-22</i>							
Site: <i>Superior</i>									

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT= tissue, AA=Air)	Field Filtered Sample (Yes or No)	Retention (M/D/Y)		Total Number of containers	Special Instructions/Note:
						8270DLL-PCP (Buffalo) (IL)	8260C-Voatnaphtha (Buffalo)		
<i>SUPE-W-06A-100522</i>	<i>10/5/22</i>	<i>0905</i>	<i>G</i>	<i>W</i>	<i>N</i>	<i>N</i>	<i>2 3</i>		
<i>SUPE-MS/MSD-100522</i>	<i>10/5/22</i>	<i>1059</i>	<i>G</i>	<i>W</i>	<i>N</i>	<i>Y</i>	<i>4 6</i>		
<i>SUPE-W-06C-100522</i>	<i>10/5/22</i>	<i>1059</i>	<i>G</i>	<i>W</i>	<i>N</i>	<i>N</i>	<i>2 3</i>		
<i>SUPE-W-12A-100522</i>	<i>10/5/22</i>	<i>1300</i>	<i>G</i>	<i>W</i>	<i>N</i>	<i>N</i>	<i>2 3</i>		
<i>SUPE-W-30C-100422</i>	<i>10/4/22</i>	<i>1832</i>	<i>G</i>	<i>W</i>	<i>N</i>	<i>N</i>	<i>2 3</i>		
<i>SUPE-EB1-100422</i>	<i>10/4/22</i>	<i>1910</i>	<i>G</i>	<i>W</i>	<i>N</i>	<i>N</i>	<i>2 3</i>		



180-145689 Chain of Custody

Ref: Field & Technica Date: 05Oct22 Dep:                                  Wgt: 48.50 LBS Dv:                                      0.00	SHIPPING: 0.00 SPECIAL: 0.00 HANDLING: 0.00 TOTAL: 0.00	Ref: Field & Technica Date: 05Oct22 Dep:                                  Wgt: 75.00 LBS Dv:                                      0.00	SHIPPING: 0.00 SPECIAL: 0.00 HANDLING: 0.00 TOTAL: 0.00
--	--	--	--

<b>Possible Hazard Identification</b> <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
--	---

Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:
--	---------------------------------------

Empty Kit Relinquished by: <i>Marie Ferrick</i>	Date: <i>10/5/22 1354</i>	Company: <i>FTS</i>	Time:	Method of Shipment:
Relinquished by: <i>Shane Lindquist</i>	Date/Time: <i>10/5/22 1500</i>	Company: <i>FTS</i>	Received by: <i>Shane Lindquist</i>	Date/Time: <i>10/5/22 1354</i>
			Received by: <i>Matthew Livols</i>	Date/Time: <i>10/5/22 1500</i>
				Date/Time: <i>10/6/22 1030</i>

Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No: _____	Cooler Temperature(s) °C and Other Remarks: <i>14 0.9 #1 ICE</i>
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10/20/2022



# Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-145689-1

**Login Number: 145689**

**List Source: Eurofins Pittsburgh**

**List Number: 1**

**Creator: Abernathy, Eric L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
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.	N/A	
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.	N/A	



# FTS, LLC

**DATE:** October 26, 2022

**FROM:** Kendra Chintella

**SUBJECT:** Superior Groundwater

**SAMPLE DELIVERY GROUP (SDG):** 180-145919-1

**SAMPLES:** SUPE-W-12CR-100622, SUPE-W-30A-100622, SUPE-EB3-100622, SUPE-W-10AR2-100622, SUPE-W-18D-100622, TRIP BLANK

**ANALYSES:** Method 8260C (VOCs), 8270E LL (SVOCs), 8270D LL (Pentachlorophenol)

**LABORATORY:** Eurofins Laboratories, Buffalo, Pittsburgh

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: Butyl benzyl phthalate was detected below the QL in the equipment blank and the results in samples W-12CR, W-30A, W-10AR2, and W-18D were qualified as not detected at the QL. Di-n-butyl phthalate was detected below the QL in the equipment blank and the results in samples W-12CR, W-30A, W-10AR2, and W-18D were qualified "J+". Phenanthrene was detected below the QL in the equipment blank and the result in sample W-12CR was qualified not detected at the QL. The phenanthrene results in samples W-30A, W-10AR2, and W-18D were qualified "J+".
- Surrogate Recoveries  
Noncompliance: None
- Matrix Spike/Matrix Spike Duplicate  
Noncompliance: None
- Laboratory Control Sample  
Noncompliance: None



## ANALYTICAL REPORT

Eurofins Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-145919-1

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:  
10/21/2022 2:55:21 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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.

PA Lab ID: 02-00416



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# Case Narrative

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

Job ID: 180-145919-1

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## Job ID: 180-145919-1

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### Laboratory: Eurofins Pittsburgh

#### Narrative

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#### Job Narrative 180-145919-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/8/2022 12:51 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.7° C.

#### Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

The following samples were listed on the Chain of Custody (COC); however, no samples were received for VOA analysis:  
SUPE-W-18D-100622

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method 8270E LL: The continuing calibration verification (CCV) associated with batch 180-415371 recovered above the upper control limit for 2-Nitroaniline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: CCVIS 180-415371/3.

Method 8270E LL: The continuing calibration verification (CCV) analyzed in 180-415371 was outside the method criteria for the following analyte: Nitrobenzene-d5 (Surr). As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E LL: The following samples were diluted to bring the concentration of target analytes within the calibration range: SUPE-W-30A-100622 and SUPE-W-10AR2-100622. Elevated reporting limits (RLs) are provided.

Method 8270E LL: The continuing calibration verification (CCV) analyzed in 180-415542 was outside the method criteria for the following analyte: Nitrobenzene-d5 (Surr). As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270E LL: The continuing calibration verification (CCV) associated with batch 180-415542 recovered above the upper control limit for 2,3,5,6-Tetrachlorophenol, 2-Nitroaniline, Bis(2-ethylhexyl) phthalate, Butyl benzyl phthalate and Di-n-octyl phthalate 2-Nitroaniline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: CCVIS 180-415542/3.

Method 8270D LL: The following samples were diluted due to the nature of the sample matrix: SUPE-W-30A-100622 and SUPE-W-10AR2-100622. Elevated reporting limits (RLs) are provided.

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

#### Organic Prep

Method 3510C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: SUPE-W-12CR-100622, 180-145919-A-1 MS and 180-145919-A-1 MSD.

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

# Definitions/Glossary

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

Job ID: 180-145919-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

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

Job ID: 180-145919-1

## Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998027800	08-31-23

## Laboratory: Eurofins Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998310390	08-31-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Sample Summary

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

Job ID: 180-145919-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-145919-1	SUPE-W-12CR-100622	Water	10/06/22 09:50	10/08/22 12:51
180-145919-2	SUPE-W-30A-100622	Water	10/06/22 11:51	10/08/22 12:51
180-145919-3	SUPE-EB3-100622	Water	10/06/22 13:48	10/08/22 12:51
180-145919-4	SUPE-W-10AR2-100622	Water	10/06/22 13:48	10/08/22 12:51
180-145919-5	SUPE-W-18D-100622	Water	10/06/22 15:24	10/08/22 12:51
180-145919-6	TRIP BLANK	Water	10/06/22 00:00	10/08/22 12:51

1

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# Method Summary

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

Job ID: 180-145919-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET BUF
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	EET PIT
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PIT
5030C	Purge and Trap	SW846	EET BUF

**Protocol References:**

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

**Laboratory References:**

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058



# Lab Chronicle

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-12CR-100622**

**Lab Sample ID: 180-145919-1**

Date Collected: 10/06/22 09:50

Matrix: Water

Date Received: 10/08/22 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645516	10/14/22 16:03	CB	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			500 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/13/22 23:11	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415242	10/17/22 21:33	VVP	EET PIT
Instrument ID: CH731										

**Client Sample ID: SUPE-W-30A-100622**

**Lab Sample ID: 180-145919-2**

Date Collected: 10/06/22 11:51

Matrix: Water

Date Received: 10/08/22 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645516	10/14/22 16:26	CB	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			930 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		10	1 mL	1 mL	645323	10/13/22 23:39	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415371	10/18/22 12:13	VVP	EET PIT
Instrument ID: CH733										
Total/NA	Prep	3520C	DL		230 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL	DL	2	1 mL	1 mL	415542	10/19/22 13:06	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-EB3-100622**

**Lab Sample ID: 180-145919-3**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645516	10/14/22 16:49	CB	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			940 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/14/22 00:06	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415371	10/18/22 12:35	VVP	EET PIT
Instrument ID: CH733										



# Lab Chronicle

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-10AR2-100622**

**Lab Sample ID: 180-145919-4**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645516	10/14/22 17:12	CB	EET BUF
Instrument ID: HP5973N										
Total/NA	Prep	3510C			950 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		5	1 mL	1 mL	645323	10/14/22 00:34	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			220 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415371	10/18/22 12:56	VVP	EET PIT
Instrument ID: CH733										
Total/NA	Prep	3520C	DL		220 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL	DL	5	1 mL	1 mL	415542	10/19/22 13:27	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-W-18D-100622**

**Lab Sample ID: 180-145919-5**

Date Collected: 10/06/22 15:24

Matrix: Water

Date Received: 10/08/22 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			940 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/14/22 01:02	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			250 mL	250 uL	415011	10/13/22 14:30	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415371	10/18/22 13:18	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 180-145919-6**

Date Collected: 10/06/22 00:00

Matrix: Water

Date Received: 10/08/22 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645516	10/14/22 17:35	CB	EET BUF
Instrument ID: HP5973N										

**Laboratory References:**

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Lab Chronicle

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

Job ID: 180-145919-1

## Analyst References:

Lab: EET BUF

Batch Type: Prep

JMP = Jacob Pollock

Batch Type: Analysis

CB = Christa Baker

RJS = Robert Schick

Lab: EET PIT

Batch Type: Prep

BJT = Bill Trout

Batch Type: Analysis

VVP = Vincent Piccolino

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-12CR-100622**

**Lab Sample ID: 180-145919-1**

Date Collected: 10/06/22 09:50

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 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			10/14/22 16:03	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/14/22 16:03	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/14/22 16:03	1
Benzene	ND		1.0	0.41	ug/L			10/14/22 16:03	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/22 16:03	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/22 16:03	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/22 16:03	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/14/22 16:03	1
Naphthalene	ND		1.0	0.43	ug/L			10/14/22 16:03	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/14/22 16:03	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/14/22 16:03	1
o-Xylene	ND		1.0	0.76	ug/L			10/14/22 16:03	1
Styrene	ND		1.0	0.73	ug/L			10/14/22 16:03	1
Toluene	ND		1.0	0.51	ug/L			10/14/22 16:03	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/22 16:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120					10/14/22 16:03	1
4-Bromofluorobenzene (Surr)	98		73 - 120					10/14/22 16:03	1
Dibromofluoromethane (Surr)	95		75 - 123					10/14/22 16:03	1
Toluene-d8 (Surr)	100		80 - 120					10/14/22 16:03	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		2.0	0.68	ug/L		10/12/22 09:00	10/13/22 23:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	103		24 - 146				10/12/22 09:00	10/13/22 23:11	1
2-Fluorobiphenyl	100		37 - 120				10/12/22 09:00	10/13/22 23:11	1
2-Fluorophenol (Surr)	68		10 - 120				10/12/22 09:00	10/13/22 23:11	1
Nitrobenzene-d5 (Surr)	75		26 - 120				10/12/22 09:00	10/13/22 23:11	1
Phenol-d5 (Surr)	52		11 - 120				10/12/22 09:00	10/13/22 23:11	1
p-Terphenyl-d14	101		64 - 127				10/12/22 09:00	10/13/22 23:11	1

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/13/22 14:30	10/17/22 21:33	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/13/22 14:30	10/17/22 21:33	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/13/22 14:30	10/17/22 21:33	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/13/22 14:30	10/17/22 21:33	1
1-Methylnaphthalene	ND		0.21	0.061	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/13/22 14:30	10/17/22 21:33	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/13/22 14:30	10/17/22 21:33	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-12CR-100622**

**Lab Sample ID: 180-145919-1**

Date Collected: 10/06/22 09:50

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/13/22 14:30	10/17/22 21:33	1
2-Chlorophenol	ND		1.1	0.14	ug/L		10/13/22 14:30	10/17/22 21:33	1
2-Methylnaphthalene	ND		0.21	0.067	ug/L		10/13/22 14:30	10/17/22 21:33	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/13/22 14:30	10/17/22 21:33	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/13/22 14:30	10/17/22 21:33	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/13/22 14:30	10/17/22 21:33	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/13/22 14:30	10/17/22 21:33	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/13/22 14:30	10/17/22 21:33	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/13/22 14:30	10/17/22 21:33	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/13/22 14:30	10/17/22 21:33	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/13/22 14:30	10/17/22 21:33	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/13/22 14:30	10/17/22 21:33	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/13/22 14:30	10/17/22 21:33	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/13/22 14:30	10/17/22 21:33	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/13/22 14:30	10/17/22 21:33	1
Acenaphthene	ND		0.21	0.071	ug/L		10/13/22 14:30	10/17/22 21:33	1
Acenaphthylene	ND		0.21	0.071	ug/L		10/13/22 14:30	10/17/22 21:33	1
<b>Anthracene</b>	<b>0.064</b>	<b>J</b>	0.21	0.053	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzoic acid	ND		5.4	1.0	ug/L		10/13/22 14:30	10/17/22 21:33	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/13/22 14:30	10/17/22 21:33	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/13/22 14:30	10/17/22 21:33	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/13/22 14:30	10/17/22 21:33	1
Bis(2-ethylhexyl) phthalate	ND		11	6.8	ug/L		10/13/22 14:30	10/17/22 21:33	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/13/22 14:30	10/17/22 21:33	1
<b>Butyl benzyl phthalate</b>	<b>0.54</b>	<b>J</b>	1.1	0.50	ug/L		10/13/22 14:30	10/17/22 21:33	1
Chrysene	ND		0.21	0.088	ug/L		10/13/22 14:30	10/17/22 21:33	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/13/22 14:30	10/17/22 21:33	1
Dibenzofuran	ND		1.1	0.21	ug/L		10/13/22 14:30	10/17/22 21:33	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/13/22 14:30	10/17/22 21:33	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/13/22 14:30	10/17/22 21:33	1
<b>Di-n-butyl phthalate</b>	<b>1.4</b>		1.1	0.81	ug/L		10/13/22 14:30	10/17/22 21:33	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/13/22 14:30	10/17/22 21:33	1
Fluoranthene	ND		0.21	0.065	ug/L		10/13/22 14:30	10/17/22 21:33	1
Fluorene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/17/22 21:33	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/13/22 14:30	10/17/22 21:33	1
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/17/22 21:33	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/13/22 14:30	10/17/22 21:33	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/13/22 14:30	10/17/22 21:33	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/13/22 14:30	10/17/22 21:33	1
Isophorone	ND		1.1	0.20	ug/L		10/13/22 14:30	10/17/22 21:33	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/13/22 14:30	10/17/22 21:33	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/13/22 14:30	10/17/22 21:33	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/13/22 14:30	10/17/22 21:33	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/13/22 14:30	10/17/22 21:33	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-12CR-100622**

**Lab Sample ID: 180-145919-1**

Date Collected: 10/06/22 09:50

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Phenanthrene</b>	<b>0.12</b>	<b>J</b>	0.21	0.060	ug/L		10/13/22 14:30	10/17/22 21:33	1
Phenol	ND		1.1	0.53	ug/L		10/13/22 14:30	10/17/22 21:33	1
Pyrene	ND		0.21	0.059	ug/L		10/13/22 14:30	10/17/22 21:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	51		23 - 128				10/13/22 14:30	10/17/22 21:33	1
2-Fluorobiphenyl	40		20 - 105				10/13/22 14:30	10/17/22 21:33	1
2-Fluorophenol (Surr)	38		20 - 105				10/13/22 14:30	10/17/22 21:33	1
Nitrobenzene-d5 (Surr)	40		20 - 107				10/13/22 14:30	10/17/22 21:33	1
Phenol-d5 (Surr)	40		20 - 106				10/13/22 14:30	10/17/22 21:33	1
Terphenyl-d14 (Surr)	47		22 - 120				10/13/22 14:30	10/17/22 21:33	1

**Client Sample ID: SUPE-W-30A-100622**

**Lab Sample ID: 180-145919-2**

Date Collected: 10/06/22 11:51

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 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			10/14/22 16:26	1
<b>1,2,4-Trimethylbenzene</b>	<b>6.4</b>		1.0	0.75	ug/L			10/14/22 16:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/14/22 16:26	1
<b>Benzene</b>	<b>13</b>		1.0	0.41	ug/L			10/14/22 16:26	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/22 16:26	1
<b>Ethylbenzene</b>	<b>27</b>		1.0	0.74	ug/L			10/14/22 16:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/22 16:26	1
<b>m-Xylene &amp; p-Xylene</b>	<b>6.1</b>		2.0	0.66	ug/L			10/14/22 16:26	1
<b>Naphthalene</b>	<b>19</b>		1.0	0.43	ug/L			10/14/22 16:26	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/14/22 16:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/14/22 16:26	1
<b>o-Xylene</b>	<b>6.8</b>		1.0	0.76	ug/L			10/14/22 16:26	1
Styrene	ND		1.0	0.73	ug/L			10/14/22 16:26	1
<b>Toluene</b>	<b>2.6</b>		1.0	0.51	ug/L			10/14/22 16:26	1
<b>Xylenes, Total</b>	<b>13</b>		2.0	0.66	ug/L			10/14/22 16:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		77 - 120					10/14/22 16:26	1
4-Bromofluorobenzene (Surr)	102		73 - 120					10/14/22 16:26	1
Dibromofluoromethane (Surr)	102		75 - 123					10/14/22 16:26	1
Toluene-d8 (Surr)	98		80 - 120					10/14/22 16:26	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		11	3.7	ug/L		10/12/22 09:00	10/13/22 23:39	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	118		24 - 146				10/12/22 09:00	10/13/22 23:39	10
2-Fluorobiphenyl	111		37 - 120				10/12/22 09:00	10/13/22 23:39	10
2-Fluorophenol (Surr)	54		10 - 120				10/12/22 09:00	10/13/22 23:39	10
Nitrobenzene-d5 (Surr)	88		26 - 120				10/12/22 09:00	10/13/22 23:39	10
Phenol-d5 (Surr)	31		11 - 120				10/12/22 09:00	10/13/22 23:39	10
p-Terphenyl-d14	105		64 - 127				10/12/22 09:00	10/13/22 23:39	10

Eurofins Pittsburgh

# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-30A-100622**

**Lab Sample ID: 180-145919-2**

Date Collected: 10/06/22 11:51

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:13	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/13/22 14:30	10/18/22 12:13	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/13/22 14:30	10/18/22 12:13	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>1-Methylnaphthalene</b>	<b>15</b>		0.21	0.061	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/13/22 14:30	10/18/22 12:13	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/13/22 14:30	10/18/22 12:13	1
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/13/22 14:30	10/18/22 12:13	1
2-Chlorophenol	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:13	1
2-Methylnaphthalene	ND		0.21	0.067	ug/L		10/13/22 14:30	10/18/22 12:13	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/13/22 14:30	10/18/22 12:13	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/13/22 14:30	10/18/22 12:13	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/13/22 14:30	10/18/22 12:13	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/13/22 14:30	10/18/22 12:13	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/13/22 14:30	10/18/22 12:13	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/13/22 14:30	10/18/22 12:13	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/13/22 14:30	10/18/22 12:13	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/13/22 14:30	10/18/22 12:13	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/13/22 14:30	10/18/22 12:13	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/13/22 14:30	10/18/22 12:13	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/13/22 14:30	10/18/22 12:13	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Acenaphthene</b>	<b>45 E</b>		0.21	0.071	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Acenaphthylene</b>	<b>0.56</b>		0.21	0.071	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Anthracene</b>	<b>0.71</b>		0.21	0.053	ug/L		10/13/22 14:30	10/18/22 12:13	1
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/13/22 14:30	10/18/22 12:13	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/13/22 14:30	10/18/22 12:13	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/13/22 14:30	10/18/22 12:13	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/18/22 12:13	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Benzoic acid</b>	<b>1.7 J</b>		5.4	1.0	ug/L		10/13/22 14:30	10/18/22 12:13	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/13/22 14:30	10/18/22 12:13	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/13/22 14:30	10/18/22 12:13	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/13/22 14:30	10/18/22 12:13	1
Bis(2-ethylhexyl) phthalate	ND		11	6.8	ug/L		10/13/22 14:30	10/18/22 12:13	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Butyl benzyl phthalate</b>	<b>0.66 J</b>		1.1	0.50	ug/L		10/13/22 14:30	10/18/22 12:13	1
Chrysene	ND		0.21	0.088	ug/L		10/13/22 14:30	10/18/22 12:13	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Dibenzofuran</b>	<b>17</b>		1.1	0.21	ug/L		10/13/22 14:30	10/18/22 12:13	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/13/22 14:30	10/18/22 12:13	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/13/22 14:30	10/18/22 12:13	1

# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-30A-100622**

**Lab Sample ID: 180-145919-2**

Date Collected: 10/06/22 11:51

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Di-n-butyl phthalate</b>	<b>1.2</b>		1.1	0.81	ug/L		10/13/22 14:30	10/18/22 12:13	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Fluoranthene</b>	<b>1.3</b>		0.21	0.065	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Fluorene</b>	<b>14</b>		0.21	0.075	ug/L		10/13/22 14:30	10/18/22 12:13	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/13/22 14:30	10/18/22 12:13	1
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/18/22 12:13	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/13/22 14:30	10/18/22 12:13	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:13	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/13/22 14:30	10/18/22 12:13	1
Isophorone	ND		1.1	0.20	ug/L		10/13/22 14:30	10/18/22 12:13	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/13/22 14:30	10/18/22 12:13	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/13/22 14:30	10/18/22 12:13	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/13/22 14:30	10/18/22 12:13	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Phenanthrene</b>	<b>5.4</b>		0.21	0.060	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Phenol</b>	<b>1.0 J</b>		1.1	0.53	ug/L		10/13/22 14:30	10/18/22 12:13	1
<b>Pyrene</b>	<b>0.90</b>		0.21	0.059	ug/L		10/13/22 14:30	10/18/22 12:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		23 - 128	10/13/22 14:30	10/18/22 12:13	1
2-Fluorobiphenyl	47		20 - 105	10/13/22 14:30	10/18/22 12:13	1
2-Fluorophenol (Surr)	45		20 - 105	10/13/22 14:30	10/18/22 12:13	1
Nitrobenzene-d5 (Surr)	57		20 - 107	10/13/22 14:30	10/18/22 12:13	1
Phenol-d5 (Surr)	49		20 - 106	10/13/22 14:30	10/18/22 12:13	1
Terphenyl-d14 (Surr)	64		22 - 120	10/13/22 14:30	10/18/22 12:13	1

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.2	0.28	ug/L		10/13/22 14:30	10/19/22 13:06	2
1,2-Dichlorobenzene	ND		2.2	0.21	ug/L		10/13/22 14:30	10/19/22 13:06	2
1,3-Dichlorobenzene	ND		2.2	0.22	ug/L		10/13/22 14:30	10/19/22 13:06	2
1,4-Dichlorobenzene	ND		2.2	0.13	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>1-Methylnaphthalene</b>	<b>13</b>		0.41	0.12	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,3,4,6-Tetrachlorophenol	ND		2.2	0.71	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,3,5,6-Tetrachlorophenol	ND		2.2	1.1	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,4,5-Trichlorophenol	ND		2.2	0.55	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,4,6-Trichlorophenol	ND		2.2	0.49	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,4-Dichlorophenol	ND		0.41	0.11	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,4-Dimethylphenol	ND		2.2	0.36	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,4-Dinitrophenol	ND		2.2	3.3	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,4-Dinitrotoluene	ND		2.2	0.77	ug/L		10/13/22 14:30	10/19/22 13:06	2
2,6-Dinitrotoluene	ND		2.2	0.38	ug/L		10/13/22 14:30	10/19/22 13:06	2
2-Chloronaphthalene	ND		0.41	0.13	ug/L		10/13/22 14:30	10/19/22 13:06	2
2-Chlorophenol	ND		2.2	0.28	ug/L		10/13/22 14:30	10/19/22 13:06	2
2-Methylnaphthalene	ND		0.41	0.13	ug/L		10/13/22 14:30	10/19/22 13:06	2
2-Methylphenol	ND		2.2	0.65	ug/L		10/13/22 14:30	10/19/22 13:06	2
2-Nitroaniline	ND		11	1.2	ug/L		10/13/22 14:30	10/19/22 13:06	2
2-Nitrophenol	ND		2.2	0.42	ug/L		10/13/22 14:30	10/19/22 13:06	2
3,3'-Dichlorobenzidine	ND		2.2	1.3	ug/L		10/13/22 14:30	10/19/22 13:06	2
3-Nitroaniline	ND		11	0.95	ug/L		10/13/22 14:30	10/19/22 13:06	2

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-30A-100622**

**Lab Sample ID: 180-145919-2**

Date Collected: 10/06/22 11:51

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		11	3.2	ug/L		10/13/22 14:30	10/19/22 13:06	2
4-Bromophenyl phenyl ether	ND		2.2	0.69	ug/L		10/13/22 14:30	10/19/22 13:06	2
4-Chloro-3-methylphenol	ND		2.2	0.60	ug/L		10/13/22 14:30	10/19/22 13:06	2
4-Chloroaniline	ND		2.2	0.82	ug/L		10/13/22 14:30	10/19/22 13:06	2
4-Chlorophenyl phenyl ether	ND		2.2	0.48	ug/L		10/13/22 14:30	10/19/22 13:06	2
4-Nitroaniline	ND		11	0.79	ug/L		10/13/22 14:30	10/19/22 13:06	2
4-Nitrophenol	ND		11	2.0	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Acenaphthene</b>	<b>39</b>		0.41	0.14	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Acenaphthylene</b>	<b>0.51</b>		0.41	0.14	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Anthracene</b>	<b>0.65</b>		0.41	0.11	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzo[a]anthracene	ND		0.41	0.16	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzo[a]pyrene	ND		0.41	0.12	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzo[b]fluoranthene	ND		0.41	0.21	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzo[g,h,i]perylene	ND		0.41	0.15	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzo[k]fluoranthene	ND		0.41	0.19	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzoic acid	ND		11	2.0	ug/L		10/13/22 14:30	10/19/22 13:06	2
Benzyl alcohol	ND		2.2	0.35	ug/L		10/13/22 14:30	10/19/22 13:06	2
Bis(2-chloroethoxy)methane	ND		2.2	0.33	ug/L		10/13/22 14:30	10/19/22 13:06	2
Bis(2-chloroethyl)ether	ND		0.41	0.087	ug/L		10/13/22 14:30	10/19/22 13:06	2
Bis(2-ethylhexyl) phthalate	ND		22	14	ug/L		10/13/22 14:30	10/19/22 13:06	2
bis(chloroisopropyl) ether	ND		0.41	0.13	ug/L		10/13/22 14:30	10/19/22 13:06	2
Butyl benzyl phthalate	ND		2.2	1.0	ug/L		10/13/22 14:30	10/19/22 13:06	2
Chrysene	ND		0.41	0.18	ug/L		10/13/22 14:30	10/19/22 13:06	2
Dibenz(a,h)anthracene	ND		0.41	0.16	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Dibenzofuran</b>	<b>15</b>		2.2	0.41	ug/L		10/13/22 14:30	10/19/22 13:06	2
Diethyl phthalate	ND		2.2	1.2	ug/L		10/13/22 14:30	10/19/22 13:06	2
Dimethyl phthalate	ND		2.2	0.43	ug/L		10/13/22 14:30	10/19/22 13:06	2
Di-n-butyl phthalate	ND		2.2	1.6	ug/L		10/13/22 14:30	10/19/22 13:06	2
Di-n-octyl phthalate	ND		2.2	1.5	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Fluoranthene</b>	<b>1.2</b>		0.41	0.13	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Fluorene</b>	<b>12</b>		0.41	0.15	ug/L		10/13/22 14:30	10/19/22 13:06	2
Hexachlorobenzene	ND		0.41	0.12	ug/L		10/13/22 14:30	10/19/22 13:06	2
Hexachlorobutadiene	ND		0.41	0.15	ug/L		10/13/22 14:30	10/19/22 13:06	2
Hexachlorocyclopentadiene	ND		2.2	1.1	ug/L		10/13/22 14:30	10/19/22 13:06	2
Hexachloroethane	ND		2.2	0.29	ug/L		10/13/22 14:30	10/19/22 13:06	2
Indeno[1,2,3-cd]pyrene	ND		0.41	0.18	ug/L		10/13/22 14:30	10/19/22 13:06	2
Isophorone	ND		2.2	0.41	ug/L		10/13/22 14:30	10/19/22 13:06	2
Methylphenol, 3 & 4	ND		2.2	0.81	ug/L		10/13/22 14:30	10/19/22 13:06	2
Nitrobenzene	ND		4.3	1.1	ug/L		10/13/22 14:30	10/19/22 13:06	2
N-Nitrosodi-n-propylamine	ND		0.41	0.15	ug/L		10/13/22 14:30	10/19/22 13:06	2
N-Nitrosodiphenylamine	ND		2.2	0.26	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Phenanthrene</b>	<b>4.7</b>		0.41	0.12	ug/L		10/13/22 14:30	10/19/22 13:06	2
Phenol	ND		2.2	1.1	ug/L		10/13/22 14:30	10/19/22 13:06	2
<b>Pyrene</b>	<b>0.70</b>		0.41	0.12	ug/L		10/13/22 14:30	10/19/22 13:06	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	63		23 - 128				10/13/22 14:30	10/19/22 13:06	2
2-Fluorobiphenyl	65		20 - 105				10/13/22 14:30	10/19/22 13:06	2
2-Fluorophenol (Surr)	61		20 - 105				10/13/22 14:30	10/19/22 13:06	2
Nitrobenzene-d5 (Surr)	76		20 - 107				10/13/22 14:30	10/19/22 13:06	2

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-30A-100622**

**Lab Sample ID: 180-145919-2**

Date Collected: 10/06/22 11:51

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	60		20 - 106	10/13/22 14:30	10/19/22 13:06	2
Terphenyl-d14 (Surr)	70		22 - 120	10/13/22 14:30	10/19/22 13:06	2

**Client Sample ID: SUPE-EB3-100622**

**Lab Sample ID: 180-145919-3**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 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			10/14/22 16:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/14/22 16:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/14/22 16:49	1
Benzene	ND		1.0	0.41	ug/L			10/14/22 16:49	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/22 16:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/22 16:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/22 16:49	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/14/22 16:49	1
Naphthalene	ND		1.0	0.43	ug/L			10/14/22 16:49	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/14/22 16:49	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/14/22 16:49	1
o-Xylene	ND		1.0	0.76	ug/L			10/14/22 16:49	1
Styrene	ND		1.0	0.73	ug/L			10/14/22 16:49	1
Toluene	ND		1.0	0.51	ug/L			10/14/22 16:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/22 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		10/14/22 16:49	1
4-Bromofluorobenzene (Surr)	105		73 - 120		10/14/22 16:49	1
Dibromofluoromethane (Surr)	96		75 - 123		10/14/22 16:49	1
Toluene-d8 (Surr)	99		80 - 120		10/14/22 16:49	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.1	0.36	ug/L		10/12/22 09:00	10/14/22 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		24 - 146	10/12/22 09:00	10/14/22 00:06	1
2-Fluorobiphenyl	98		37 - 120	10/12/22 09:00	10/14/22 00:06	1
2-Fluorophenol (Surr)	50		10 - 120	10/12/22 09:00	10/14/22 00:06	1
Nitrobenzene-d5 (Surr)	75		26 - 120	10/12/22 09:00	10/14/22 00:06	1
Phenol-d5 (Surr)	33		11 - 120	10/12/22 09:00	10/14/22 00:06	1
p-Terphenyl-d14	94		64 - 127	10/12/22 09:00	10/14/22 00:06	1

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:35	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/13/22 14:30	10/18/22 12:35	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/13/22 14:30	10/18/22 12:35	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/13/22 14:30	10/18/22 12:35	1
1-Methylnaphthalene	ND		0.21	0.061	ug/L		10/13/22 14:30	10/18/22 12:35	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-EB3-100622**

**Lab Sample ID: 180-145919-3**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/13/22 14:30	10/18/22 12:35	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/13/22 14:30	10/18/22 12:35	1
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/13/22 14:30	10/18/22 12:35	1
2-Chlorophenol	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:35	1
2-Methylnaphthalene	ND		0.21	0.067	ug/L		10/13/22 14:30	10/18/22 12:35	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/13/22 14:30	10/18/22 12:35	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/13/22 14:30	10/18/22 12:35	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/13/22 14:30	10/18/22 12:35	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/13/22 14:30	10/18/22 12:35	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/13/22 14:30	10/18/22 12:35	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/13/22 14:30	10/18/22 12:35	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/13/22 14:30	10/18/22 12:35	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/13/22 14:30	10/18/22 12:35	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/13/22 14:30	10/18/22 12:35	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/13/22 14:30	10/18/22 12:35	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/13/22 14:30	10/18/22 12:35	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/13/22 14:30	10/18/22 12:35	1
Acenaphthene	ND		0.21	0.071	ug/L		10/13/22 14:30	10/18/22 12:35	1
Acenaphthylene	ND		0.21	0.071	ug/L		10/13/22 14:30	10/18/22 12:35	1
Anthracene	ND		0.21	0.053	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzoic acid	ND		5.4	1.0	ug/L		10/13/22 14:30	10/18/22 12:35	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/13/22 14:30	10/18/22 12:35	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/13/22 14:30	10/18/22 12:35	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/13/22 14:30	10/18/22 12:35	1
Bis(2-ethylhexyl) phthalate	ND		11	6.8	ug/L		10/13/22 14:30	10/18/22 12:35	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/13/22 14:30	10/18/22 12:35	1
<b>Butyl benzyl phthalate</b>	<b>0.74</b>	<b>J</b>	1.1	0.50	ug/L		10/13/22 14:30	10/18/22 12:35	1
Chrysene	ND		0.21	0.088	ug/L		10/13/22 14:30	10/18/22 12:35	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/13/22 14:30	10/18/22 12:35	1
Dibenzofuran	ND		1.1	0.21	ug/L		10/13/22 14:30	10/18/22 12:35	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/13/22 14:30	10/18/22 12:35	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/13/22 14:30	10/18/22 12:35	1
<b>Di-n-butyl phthalate</b>	<b>1.0</b>	<b>J</b>	1.1	0.81	ug/L		10/13/22 14:30	10/18/22 12:35	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/13/22 14:30	10/18/22 12:35	1
Fluoranthene	ND		0.21	0.065	ug/L		10/13/22 14:30	10/18/22 12:35	1
Fluorene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/18/22 12:35	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/13/22 14:30	10/18/22 12:35	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-EB3-100622**

**Lab Sample ID: 180-145919-3**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/13/22 14:30	10/18/22 12:35	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/13/22 14:30	10/18/22 12:35	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:35	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/13/22 14:30	10/18/22 12:35	1
Isophorone	ND		1.1	0.20	ug/L		10/13/22 14:30	10/18/22 12:35	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/13/22 14:30	10/18/22 12:35	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/13/22 14:30	10/18/22 12:35	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/13/22 14:30	10/18/22 12:35	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/13/22 14:30	10/18/22 12:35	1
<b>Phenanthrene</b>	<b>0.14</b>	<b>J</b>	0.21	0.060	ug/L		10/13/22 14:30	10/18/22 12:35	1
Phenol	ND		1.1	0.53	ug/L		10/13/22 14:30	10/18/22 12:35	1
Pyrene	ND		0.21	0.059	ug/L		10/13/22 14:30	10/18/22 12:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	49		23 - 128				10/13/22 14:30	10/18/22 12:35	1
2-Fluorobiphenyl	51		20 - 105				10/13/22 14:30	10/18/22 12:35	1
2-Fluorophenol (Surr)	35		20 - 105				10/13/22 14:30	10/18/22 12:35	1
Nitrobenzene-d5 (Surr)	58		20 - 107				10/13/22 14:30	10/18/22 12:35	1
Phenol-d5 (Surr)	31		20 - 106				10/13/22 14:30	10/18/22 12:35	1
Terphenyl-d14 (Surr)	66		22 - 120				10/13/22 14:30	10/18/22 12:35	1

**Client Sample ID: SUPE-W-10AR2-100622**

**Lab Sample ID: 180-145919-4**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 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			10/14/22 17:12	1
<b>1,2,4-Trimethylbenzene</b>	<b>10</b>		1.0	0.75	ug/L			10/14/22 17:12	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/14/22 17:12	1
<b>Benzene</b>	<b>19</b>		1.0	0.41	ug/L			10/14/22 17:12	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/22 17:12	1
<b>Ethylbenzene</b>	<b>41</b>		1.0	0.74	ug/L			10/14/22 17:12	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/22 17:12	1
<b>m-Xylene &amp; p-Xylene</b>	<b>3.3</b>		2.0	0.66	ug/L			10/14/22 17:12	1
<b>Naphthalene</b>	<b>3.6</b>		1.0	0.43	ug/L			10/14/22 17:12	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/14/22 17:12	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/14/22 17:12	1
<b>o-Xylene</b>	<b>18</b>		1.0	0.76	ug/L			10/14/22 17:12	1
Styrene	ND		1.0	0.73	ug/L			10/14/22 17:12	1
<b>Toluene</b>	<b>2.4</b>		1.0	0.51	ug/L			10/14/22 17:12	1
<b>Xylenes, Total</b>	<b>21</b>		2.0	0.66	ug/L			10/14/22 17:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120					10/14/22 17:12	1
4-Bromofluorobenzene (Surr)	100		73 - 120					10/14/22 17:12	1
Dibromofluoromethane (Surr)	95		75 - 123					10/14/22 17:12	1
Toluene-d8 (Surr)	100		80 - 120					10/14/22 17:12	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-10AR2-100622**

**Lab Sample ID: 180-145919-4**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.3	1.8	ug/L		10/12/22 09:00	10/14/22 00:34	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2,4,6-Tribromophenol (Surr)	113		24 - 146				10/12/22 09:00	10/14/22 00:34	5
2-Fluorobiphenyl	94		37 - 120				10/12/22 09:00	10/14/22 00:34	5
2-Fluorophenol (Surr)	46		10 - 120				10/12/22 09:00	10/14/22 00:34	5
Nitrobenzene-d5 (Surr)	74		26 - 120				10/12/22 09:00	10/14/22 00:34	5
Phenol-d5 (Surr)	29		11 - 120				10/12/22 09:00	10/14/22 00:34	5
p-Terphenyl-d14	92		64 - 127				10/12/22 09:00	10/14/22 00:34	5

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.15	ug/L		10/13/22 14:30	10/18/22 12:56	1
1,2-Dichlorobenzene	ND		1.1	0.11	ug/L		10/13/22 14:30	10/18/22 12:56	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/13/22 14:30	10/18/22 12:56	1
1,4-Dichlorobenzene	ND		1.1	0.069	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>1-Methylnaphthalene</b>	<b>20</b>		0.22	0.064	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.37	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.58	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,4,5-Trichlorophenol	ND		1.1	0.29	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,4,6-Trichlorophenol	ND		1.1	0.25	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,4-Dichlorophenol	ND		0.22	0.058	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,4-Dimethylphenol	ND		1.1	0.19	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,4-Dinitrotoluene	ND		1.1	0.40	ug/L		10/13/22 14:30	10/18/22 12:56	1
2,6-Dinitrotoluene	ND		1.1	0.20	ug/L		10/13/22 14:30	10/18/22 12:56	1
2-Chloronaphthalene	ND		0.22	0.067	ug/L		10/13/22 14:30	10/18/22 12:56	1
2-Chlorophenol	ND		1.1	0.15	ug/L		10/13/22 14:30	10/18/22 12:56	1
2-Methylnaphthalene	ND		0.22	0.070	ug/L		10/13/22 14:30	10/18/22 12:56	1
2-Methylphenol	ND		1.1	0.34	ug/L		10/13/22 14:30	10/18/22 12:56	1
2-Nitroaniline	ND		5.7	0.62	ug/L		10/13/22 14:30	10/18/22 12:56	1
2-Nitrophenol	ND		1.1	0.22	ug/L		10/13/22 14:30	10/18/22 12:56	1
3,3'-Dichlorobenzidine	ND		1.1	0.66	ug/L		10/13/22 14:30	10/18/22 12:56	1
3-Nitroaniline	ND		5.7	0.50	ug/L		10/13/22 14:30	10/18/22 12:56	1
4,6-Dinitro-2-methylphenol	ND		5.7	1.7	ug/L		10/13/22 14:30	10/18/22 12:56	1
4-Bromophenyl phenyl ether	ND		1.1	0.36	ug/L		10/13/22 14:30	10/18/22 12:56	1
4-Chloro-3-methylphenol	ND		1.1	0.32	ug/L		10/13/22 14:30	10/18/22 12:56	1
4-Chloroaniline	ND		1.1	0.43	ug/L		10/13/22 14:30	10/18/22 12:56	1
4-Chlorophenyl phenyl ether	ND		1.1	0.25	ug/L		10/13/22 14:30	10/18/22 12:56	1
4-Nitroaniline	ND		5.7	0.41	ug/L		10/13/22 14:30	10/18/22 12:56	1
4-Nitrophenol	ND		5.7	1.1	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Acenaphthene</b>	<b>75 E</b>		0.22	0.074	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Acenaphthylene</b>	<b>1.0</b>		0.22	0.074	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Anthracene</b>	<b>0.67</b>		0.22	0.056	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Benzo[a]anthracene</b>	<b>0.16 J</b>		0.22	0.085	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Benzo[a]pyrene</b>	<b>0.062 J</b>		0.22	0.060	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Benzo[b]fluoranthene</b>	<b>0.25</b>		0.22	0.11	ug/L		10/13/22 14:30	10/18/22 12:56	1
Benzo[g,h,i]perylene	ND		0.22	0.078	ug/L		10/13/22 14:30	10/18/22 12:56	1
Benzo[k]fluoranthene	ND		0.22	0.10	ug/L		10/13/22 14:30	10/18/22 12:56	1
Benzoic acid	ND		5.7	1.0	ug/L		10/13/22 14:30	10/18/22 12:56	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-10AR2-100622**

**Lab Sample ID: 180-145919-4**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		1.1	0.19	ug/L		10/13/22 14:30	10/18/22 12:56	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/13/22 14:30	10/18/22 12:56	1
Bis(2-chloroethyl)ether	ND		0.22	0.045	ug/L		10/13/22 14:30	10/18/22 12:56	1
Bis(2-ethylhexyl) phthalate	ND		11	7.1	ug/L		10/13/22 14:30	10/18/22 12:56	1
bis(chloroisopropyl) ether	ND		0.22	0.066	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Butyl benzyl phthalate</b>	<b>0.72</b>	<b>J</b>	1.1	0.53	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Chrysene</b>	<b>0.22</b>		0.22	0.092	ug/L		10/13/22 14:30	10/18/22 12:56	1
Dibenz(a,h)anthracene	ND		0.22	0.082	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Dibenzofuran</b>	<b>17</b>		1.1	0.22	ug/L		10/13/22 14:30	10/18/22 12:56	1
Diethyl phthalate	ND		1.1	0.64	ug/L		10/13/22 14:30	10/18/22 12:56	1
Dimethyl phthalate	ND		1.1	0.23	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Di-n-butyl phthalate</b>	<b>1.2</b>		1.1	0.84	ug/L		10/13/22 14:30	10/18/22 12:56	1
Di-n-octyl phthalate	ND		1.1	0.78	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Fluoranthene</b>	<b>2.1</b>		0.22	0.068	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Fluorene</b>	<b>17</b>		0.22	0.078	ug/L		10/13/22 14:30	10/18/22 12:56	1
Hexachlorobenzene	ND		0.22	0.064	ug/L		10/13/22 14:30	10/18/22 12:56	1
Hexachlorobutadiene	ND		0.22	0.078	ug/L		10/13/22 14:30	10/18/22 12:56	1
Hexachlorocyclopentadiene	ND		1.1	0.56	ug/L		10/13/22 14:30	10/18/22 12:56	1
Hexachloroethane	ND		1.1	0.15	ug/L		10/13/22 14:30	10/18/22 12:56	1
Indeno[1,2,3-cd]pyrene	ND		0.22	0.097	ug/L		10/13/22 14:30	10/18/22 12:56	1
Isophorone	ND		1.1	0.21	ug/L		10/13/22 14:30	10/18/22 12:56	1
Methylphenol, 3 & 4	ND		1.1	0.42	ug/L		10/13/22 14:30	10/18/22 12:56	1
Nitrobenzene	ND		2.3	0.57	ug/L		10/13/22 14:30	10/18/22 12:56	1
N-Nitrosodi-n-propylamine	ND		0.22	0.081	ug/L		10/13/22 14:30	10/18/22 12:56	1
N-Nitrosodiphenylamine	ND		1.1	0.14	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Phenanthrene</b>	<b>0.58</b>		0.22	0.063	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Phenol</b>	<b>2.0</b>		1.1	0.55	ug/L		10/13/22 14:30	10/18/22 12:56	1
<b>Pyrene</b>	<b>1.4</b>		0.22	0.061	ug/L		10/13/22 14:30	10/18/22 12:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		23 - 128				10/13/22 14:30	10/18/22 12:56	1
2-Fluorobiphenyl	51		20 - 105				10/13/22 14:30	10/18/22 12:56	1
2-Fluorophenol (Surr)	48		20 - 105				10/13/22 14:30	10/18/22 12:56	1
Nitrobenzene-d5 (Surr)	62		20 - 107				10/13/22 14:30	10/18/22 12:56	1
Phenol-d5 (Surr)	53		20 - 106				10/13/22 14:30	10/18/22 12:56	1
Terphenyl-d14 (Surr)	61		22 - 120				10/13/22 14:30	10/18/22 12:56	1

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.7	0.74	ug/L		10/13/22 14:30	10/19/22 13:27	5
1,2-Dichlorobenzene	ND		5.7	0.54	ug/L		10/13/22 14:30	10/19/22 13:27	5
1,3-Dichlorobenzene	ND		5.7	0.56	ug/L		10/13/22 14:30	10/19/22 13:27	5
1,4-Dichlorobenzene	ND		5.7	0.35	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>1-Methylnaphthalene</b>	<b>17</b>		1.1	0.32	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,3,4,6-Tetrachlorophenol	ND		5.7	1.9	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,3,5,6-Tetrachlorophenol	ND		5.7	2.9	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,4,5-Trichlorophenol	ND		5.7	1.4	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,4,6-Trichlorophenol	ND		5.7	1.3	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,4-Dichlorophenol	ND		1.1	0.29	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,4-Dimethylphenol	ND		5.7	0.95	ug/L		10/13/22 14:30	10/19/22 13:27	5

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-10AR2-100622**

**Lab Sample ID: 180-145919-4**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		57	8.7	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,4-Dinitrotoluene	ND		5.7	2.0	ug/L		10/13/22 14:30	10/19/22 13:27	5
2,6-Dinitrotoluene	ND		5.7	0.98	ug/L		10/13/22 14:30	10/19/22 13:27	5
2-Chloronaphthalene	ND		1.1	0.34	ug/L		10/13/22 14:30	10/19/22 13:27	5
2-Chlorophenol	ND		5.7	0.73	ug/L		10/13/22 14:30	10/19/22 13:27	5
2-Methylnaphthalene	ND		1.1	0.35	ug/L		10/13/22 14:30	10/19/22 13:27	5
2-Methylphenol	ND		5.7	1.7	ug/L		10/13/22 14:30	10/19/22 13:27	5
2-Nitroaniline	ND		28	3.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
2-Nitrophenol	ND		5.7	1.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
3,3'-Dichlorobenzidine	ND		5.7	3.3	ug/L		10/13/22 14:30	10/19/22 13:27	5
3-Nitroaniline	ND		28	2.5	ug/L		10/13/22 14:30	10/19/22 13:27	5
4,6-Dinitro-2-methylphenol	ND		28	8.4	ug/L		10/13/22 14:30	10/19/22 13:27	5
4-Bromophenyl phenyl ether	ND		5.7	1.8	ug/L		10/13/22 14:30	10/19/22 13:27	5
4-Chloro-3-methylphenol	ND		5.7	1.6	ug/L		10/13/22 14:30	10/19/22 13:27	5
4-Chloroaniline	ND		5.7	2.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
4-Chlorophenyl phenyl ether	ND		5.7	1.3	ug/L		10/13/22 14:30	10/19/22 13:27	5
4-Nitroaniline	ND		28	2.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
4-Nitrophenol	ND		28	5.3	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Acenaphthene</b>	<b>62</b>		1.1	0.37	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Acenaphthylene</b>	<b>0.90</b>	<b>J</b>	1.1	0.37	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Anthracene</b>	<b>0.61</b>	<b>J</b>	1.1	0.28	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzo[a]anthracene	ND		1.1	0.43	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzo[a]pyrene	ND		1.1	0.30	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzo[b]fluoranthene	ND		1.1	0.55	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzo[g,h,i]perylene	ND		1.1	0.39	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzo[k]fluoranthene	ND		1.1	0.50	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzoic acid	ND		28	5.2	ug/L		10/13/22 14:30	10/19/22 13:27	5
Benzyl alcohol	ND		5.7	0.93	ug/L		10/13/22 14:30	10/19/22 13:27	5
Bis(2-chloroethoxy)methane	ND		5.7	0.86	ug/L		10/13/22 14:30	10/19/22 13:27	5
Bis(2-chloroethyl)ether	ND		1.1	0.23	ug/L		10/13/22 14:30	10/19/22 13:27	5
Bis(2-ethylhexyl) phthalate	ND		57	35	ug/L		10/13/22 14:30	10/19/22 13:27	5
bis(chloroisopropyl) ether	ND		1.1	0.33	ug/L		10/13/22 14:30	10/19/22 13:27	5
Butyl benzyl phthalate	ND		5.7	2.6	ug/L		10/13/22 14:30	10/19/22 13:27	5
Chrysene	ND		1.1	0.46	ug/L		10/13/22 14:30	10/19/22 13:27	5
Dibenz(a,h)anthracene	ND		1.1	0.41	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Dibenzofuran</b>	<b>15</b>		5.7	1.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
Diethyl phthalate	ND		5.7	3.2	ug/L		10/13/22 14:30	10/19/22 13:27	5
Dimethyl phthalate	ND		5.7	1.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
Di-n-butyl phthalate	ND		5.7	4.2	ug/L		10/13/22 14:30	10/19/22 13:27	5
Di-n-octyl phthalate	ND		5.7	3.9	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Fluoranthene</b>	<b>1.9</b>		1.1	0.34	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Fluorene</b>	<b>15</b>		1.1	0.39	ug/L		10/13/22 14:30	10/19/22 13:27	5
Hexachlorobenzene	ND		1.1	0.32	ug/L		10/13/22 14:30	10/19/22 13:27	5
Hexachlorobutadiene	ND		1.1	0.39	ug/L		10/13/22 14:30	10/19/22 13:27	5
Hexachlorocyclopentadiene	ND		5.7	2.8	ug/L		10/13/22 14:30	10/19/22 13:27	5
Hexachloroethane	ND		5.7	0.76	ug/L		10/13/22 14:30	10/19/22 13:27	5
Indeno[1,2,3-cd]pyrene	ND		1.1	0.48	ug/L		10/13/22 14:30	10/19/22 13:27	5
Isophorone	ND		5.7	1.1	ug/L		10/13/22 14:30	10/19/22 13:27	5
Methylphenol, 3 & 4	ND		5.7	2.1	ug/L		10/13/22 14:30	10/19/22 13:27	5

# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-10AR2-100622**

**Lab Sample ID: 180-145919-4**

Date Collected: 10/06/22 13:48

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) - DL (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND		11	2.8	ug/L		10/13/22 14:30	10/19/22 13:27	5
N-Nitrosodi-n-propylamine	ND		1.1	0.40	ug/L		10/13/22 14:30	10/19/22 13:27	5
N-Nitrosodiphenylamine	ND		5.7	0.68	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Phenanthrene</b>	<b>0.52</b>	<b>J</b>	1.1	0.31	ug/L		10/13/22 14:30	10/19/22 13:27	5
Phenol	ND		5.7	2.8	ug/L		10/13/22 14:30	10/19/22 13:27	5
<b>Pyrene</b>	<b>1.3</b>		1.1	0.31	ug/L		10/13/22 14:30	10/19/22 13:27	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	57		23 - 128				10/13/22 14:30	10/19/22 13:27	5
2-Fluorobiphenyl	70		20 - 105				10/13/22 14:30	10/19/22 13:27	5
2-Fluorophenol (Surr)	68		20 - 105				10/13/22 14:30	10/19/22 13:27	5
Nitrobenzene-d5 (Surr)	84		20 - 107				10/13/22 14:30	10/19/22 13:27	5
Phenol-d5 (Surr)	67		20 - 106				10/13/22 14:30	10/19/22 13:27	5
Terphenyl-d14 (Surr)	80		22 - 120				10/13/22 14:30	10/19/22 13:27	5

**Client Sample ID: SUPE-W-18D-100622**

**Lab Sample ID: 180-145919-5**

Date Collected: 10/06/22 15:24

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.1	0.36	ug/L		10/12/22 09:00	10/14/22 01:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	107		24 - 146				10/12/22 09:00	10/14/22 01:02	1
2-Fluorobiphenyl	99		37 - 120				10/12/22 09:00	10/14/22 01:02	1
2-Fluorophenol (Surr)	51		10 - 120				10/12/22 09:00	10/14/22 01:02	1
Nitrobenzene-d5 (Surr)	74		26 - 120				10/12/22 09:00	10/14/22 01:02	1
Phenol-d5 (Surr)	33		11 - 120				10/12/22 09:00	10/14/22 01:02	1
p-Terphenyl-d14	101		64 - 127				10/12/22 09:00	10/14/22 01:02	1

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.13	ug/L		10/13/22 14:30	10/18/22 13:18	1
1,2-Dichlorobenzene	ND		1.0	0.095	ug/L		10/13/22 14:30	10/18/22 13:18	1
1,3-Dichlorobenzene	ND		1.0	0.099	ug/L		10/13/22 14:30	10/18/22 13:18	1
1,4-Dichlorobenzene	ND		1.0	0.061	ug/L		10/13/22 14:30	10/18/22 13:18	1
1-Methylnaphthalene	ND		0.19	0.056	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.33	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.51	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,4,5-Trichlorophenol	ND		1.0	0.25	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,4,6-Trichlorophenol	ND		1.0	0.22	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,4-Dichlorophenol	ND		0.19	0.051	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,4-Dinitrophenol	ND		10	1.5	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,4-Dinitrotoluene	ND		1.0	0.35	ug/L		10/13/22 14:30	10/18/22 13:18	1
2,6-Dinitrotoluene	ND		1.0	0.17	ug/L		10/13/22 14:30	10/18/22 13:18	1
2-Chloronaphthalene	ND		0.19	0.059	ug/L		10/13/22 14:30	10/18/22 13:18	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/13/22 14:30	10/18/22 13:18	1
2-Methylnaphthalene	ND		0.19	0.062	ug/L		10/13/22 14:30	10/18/22 13:18	1
2-Methylphenol	ND		1.0	0.30	ug/L		10/13/22 14:30	10/18/22 13:18	1

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# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-18D-100622**

**Lab Sample ID: 180-145919-5**

Date Collected: 10/06/22 15:24

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		5.0	0.55	ug/L		10/13/22 14:30	10/18/22 13:18	1
2-Nitrophenol	ND		1.0	0.19	ug/L		10/13/22 14:30	10/18/22 13:18	1
3,3'-Dichlorobenzidine	ND		1.0	0.58	ug/L		10/13/22 14:30	10/18/22 13:18	1
3-Nitroaniline	ND		5.0	0.44	ug/L		10/13/22 14:30	10/18/22 13:18	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.5	ug/L		10/13/22 14:30	10/18/22 13:18	1
4-Bromophenyl phenyl ether	ND		1.0	0.32	ug/L		10/13/22 14:30	10/18/22 13:18	1
4-Chloro-3-methylphenol	ND		1.0	0.28	ug/L		10/13/22 14:30	10/18/22 13:18	1
4-Chloroaniline	ND		1.0	0.38	ug/L		10/13/22 14:30	10/18/22 13:18	1
4-Chlorophenyl phenyl ether	ND		1.0	0.22	ug/L		10/13/22 14:30	10/18/22 13:18	1
4-Nitroaniline	ND		5.0	0.36	ug/L		10/13/22 14:30	10/18/22 13:18	1
4-Nitrophenol	ND		5.0	0.94	ug/L		10/13/22 14:30	10/18/22 13:18	1
<b>Acenaphthene</b>	<b>0.073</b>	<b>J</b>	0.19	0.065	ug/L		10/13/22 14:30	10/18/22 13:18	1
Acenaphthylene	ND		0.19	0.065	ug/L		10/13/22 14:30	10/18/22 13:18	1
Anthracene	ND		0.19	0.049	ug/L		10/13/22 14:30	10/18/22 13:18	1
Benzo[a]anthracene	ND		0.19	0.075	ug/L		10/13/22 14:30	10/18/22 13:18	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		10/13/22 14:30	10/18/22 13:18	1
Benzo[b]fluoranthene	ND		0.19	0.097	ug/L		10/13/22 14:30	10/18/22 13:18	1
Benzo[g,h,i]perylene	ND		0.19	0.069	ug/L		10/13/22 14:30	10/18/22 13:18	1
Benzo[k]fluoranthene	ND		0.19	0.088	ug/L		10/13/22 14:30	10/18/22 13:18	1
<b>Benzoic acid</b>	<b>1.7</b>	<b>J</b>	5.0	0.92	ug/L		10/13/22 14:30	10/18/22 13:18	1
Benzyl alcohol	ND		1.0	0.16	ug/L		10/13/22 14:30	10/18/22 13:18	1
Bis(2-chloroethoxy)methane	ND		1.0	0.15	ug/L		10/13/22 14:30	10/18/22 13:18	1
Bis(2-chloroethyl)ether	ND		0.19	0.040	ug/L		10/13/22 14:30	10/18/22 13:18	1
Bis(2-ethylhexyl) phthalate	ND		10	6.2	ug/L		10/13/22 14:30	10/18/22 13:18	1
bis(chloroisopropyl) ether	ND		0.19	0.058	ug/L		10/13/22 14:30	10/18/22 13:18	1
<b>Butyl benzyl phthalate</b>	<b>0.65</b>	<b>J</b>	1.0	0.46	ug/L		10/13/22 14:30	10/18/22 13:18	1
Chrysene	ND		0.19	0.081	ug/L		10/13/22 14:30	10/18/22 13:18	1
Dibenz(a,h)anthracene	ND		0.19	0.072	ug/L		10/13/22 14:30	10/18/22 13:18	1
Dibenzofuran	ND		1.0	0.19	ug/L		10/13/22 14:30	10/18/22 13:18	1
Diethyl phthalate	ND		1.0	0.57	ug/L		10/13/22 14:30	10/18/22 13:18	1
Dimethyl phthalate	ND		1.0	0.20	ug/L		10/13/22 14:30	10/18/22 13:18	1
<b>Di-n-butyl phthalate</b>	<b>1.1</b>		1.0	0.74	ug/L		10/13/22 14:30	10/18/22 13:18	1
Di-n-octyl phthalate	ND		1.0	0.69	ug/L		10/13/22 14:30	10/18/22 13:18	1
Fluoranthene	ND		0.19	0.060	ug/L		10/13/22 14:30	10/18/22 13:18	1
Fluorene	ND		0.19	0.069	ug/L		10/13/22 14:30	10/18/22 13:18	1
Hexachlorobenzene	ND		0.19	0.056	ug/L		10/13/22 14:30	10/18/22 13:18	1
Hexachlorobutadiene	ND		0.19	0.069	ug/L		10/13/22 14:30	10/18/22 13:18	1
Hexachlorocyclopentadiene	ND		1.0	0.50	ug/L		10/13/22 14:30	10/18/22 13:18	1
Hexachloroethane	ND		1.0	0.13	ug/L		10/13/22 14:30	10/18/22 13:18	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		10/13/22 14:30	10/18/22 13:18	1
Isophorone	ND		1.0	0.19	ug/L		10/13/22 14:30	10/18/22 13:18	1
Methylphenol, 3 & 4	ND		1.0	0.37	ug/L		10/13/22 14:30	10/18/22 13:18	1
Naphthalene	ND		0.19	0.059	ug/L		10/13/22 14:30	10/18/22 13:18	1
Nitrobenzene	ND		2.0	0.50	ug/L		10/13/22 14:30	10/18/22 13:18	1
N-Nitrosodi-n-propylamine	ND		0.19	0.071	ug/L		10/13/22 14:30	10/18/22 13:18	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/13/22 14:30	10/18/22 13:18	1
<b>Phenanthrene</b>	<b>0.27</b>		0.19	0.055	ug/L		10/13/22 14:30	10/18/22 13:18	1
Phenol	ND		1.0	0.49	ug/L		10/13/22 14:30	10/18/22 13:18	1
Pyrene	ND		0.19	0.054	ug/L		10/13/22 14:30	10/18/22 13:18	1



# Client Sample Results

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

Job ID: 180-145919-1

**Client Sample ID: SUPE-W-18D-100622**

**Lab Sample ID: 180-145919-5**

Date Collected: 10/06/22 15:24

Matrix: Water

Date Received: 10/08/22 12:51

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	54		23 - 128	10/13/22 14:30	10/18/22 13:18	1
2-Fluorobiphenyl	51		20 - 105	10/13/22 14:30	10/18/22 13:18	1
2-Fluorophenol (Surr)	44		20 - 105	10/13/22 14:30	10/18/22 13:18	1
Nitrobenzene-d5 (Surr)	58		20 - 107	10/13/22 14:30	10/18/22 13:18	1
Phenol-d5 (Surr)	48		20 - 106	10/13/22 14:30	10/18/22 13:18	1
Terphenyl-d14 (Surr)	63		22 - 120	10/13/22 14:30	10/18/22 13:18	1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 180-145919-6**

Date Collected: 10/06/22 00:00

Matrix: Water

Date Received: 10/08/22 12:51

**Method: SW846 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			10/14/22 17:35	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/14/22 17:35	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/14/22 17:35	1
Benzene	ND		1.0	0.41	ug/L			10/14/22 17:35	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/22 17:35	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/22 17:35	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/22 17:35	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/14/22 17:35	1
Naphthalene	ND		1.0	0.43	ug/L			10/14/22 17:35	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/14/22 17:35	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/14/22 17:35	1
o-Xylene	ND		1.0	0.76	ug/L			10/14/22 17:35	1
Styrene	ND		1.0	0.73	ug/L			10/14/22 17:35	1
Toluene	ND		1.0	0.51	ug/L			10/14/22 17:35	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/22 17:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120		10/14/22 17:35	1
4-Bromofluorobenzene (Surr)	98		73 - 120		10/14/22 17:35	1
Dibromofluoromethane (Surr)	96		75 - 123		10/14/22 17:35	1
Toluene-d8 (Surr)	97		80 - 120		10/14/22 17:35	1

# QC Sample Results

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

Job ID: 180-145919-1

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

Lab Sample ID: MB 480-645516/7

Matrix: Water

Analysis Batch: 645516

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			10/14/22 15:28	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/14/22 15:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/14/22 15:28	1
Benzene	ND		1.0	0.41	ug/L			10/14/22 15:28	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/22 15:28	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/22 15:28	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/22 15:28	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/14/22 15:28	1
Naphthalene	ND		1.0	0.43	ug/L			10/14/22 15:28	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/14/22 15:28	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/14/22 15:28	1
o-Xylene	ND		1.0	0.76	ug/L			10/14/22 15:28	1
Styrene	ND		1.0	0.73	ug/L			10/14/22 15:28	1
Toluene	ND		1.0	0.51	ug/L			10/14/22 15:28	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/22 15:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	101		77 - 120		10/14/22 15:28	1
4-Bromofluorobenzene (Surr)	100		73 - 120		10/14/22 15:28	1
Dibromofluoromethane (Surr)	96		75 - 123		10/14/22 15:28	1
Toluene-d8 (Surr)	99		80 - 120		10/14/22 15:28	1

Lab Sample ID: LCS 480-645516/5

Matrix: Water

Analysis Batch: 645516

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	19.9		ug/L		80	73 - 126
1,2,4-Trimethylbenzene	25.0	22.6		ug/L		90	76 - 121
1,3,5-Trimethylbenzene	25.0	22.9		ug/L		92	77 - 121
Benzene	25.0	22.4		ug/L		89	71 - 124
Chloromethane	25.0	22.0		ug/L		88	68 - 124
Ethylbenzene	25.0	22.4		ug/L		89	77 - 123
Methyl tert-butyl ether	25.0	23.9		ug/L		96	77 - 120
m-Xylene & p-Xylene	25.0	22.5		ug/L		90	76 - 122
Naphthalene	25.0	22.8		ug/L		91	66 - 125
n-Butylbenzene	25.0	22.6		ug/L		91	71 - 128
N-Propylbenzene	25.0	23.1		ug/L		92	75 - 127
o-Xylene	25.0	22.8		ug/L		91	76 - 122
Styrene	25.0	24.0		ug/L		96	80 - 120
Toluene	25.0	22.0		ug/L		88	80 - 122
Xylenes, Total	50.0	45.3		ug/L		91	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		77 - 120
4-Bromofluorobenzene (Surr)	101		73 - 120
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	101		80 - 120

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# QC Sample Results

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

Job ID: 180-145919-1

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

**Lab Sample ID: MB 480-645029/1-A**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 645029**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Pentachlorophenol	ND		1.0	0.34	ug/L		10/12/22 09:00	10/13/22 21:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
2,4,6-Tribromophenol (Surr)	73		24 - 146			10/12/22 09:00	10/13/22 21:19	1	
2-Fluorobiphenyl	99		37 - 120			10/12/22 09:00	10/13/22 21:19	1	
2-Fluorophenol (Surr)	49		10 - 120			10/12/22 09:00	10/13/22 21:19	1	
Nitrobenzene-d5 (Surr)	73		26 - 120			10/12/22 09:00	10/13/22 21:19	1	
Phenol-d5 (Surr)	33		11 - 120			10/12/22 09:00	10/13/22 21:19	1	
p-Terphenyl-d14	101		64 - 127			10/12/22 09:00	10/13/22 21:19	1	

**Lab Sample ID: LCS 480-645029/2-A**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 645029**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Pentachlorophenol	16.0	13.5		ug/L		84	10 - 131
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	106		24 - 146				
2-Fluorobiphenyl	95		37 - 120				
2-Fluorophenol (Surr)	51		10 - 120				
Nitrobenzene-d5 (Surr)	79		26 - 120				
Phenol-d5 (Surr)	36		11 - 120				
p-Terphenyl-d14	94		64 - 127				

**Lab Sample ID: 180-145919-1 MS**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: SUPE-W-12CR-100622**  
**Prep Type: Total/NA**  
**Prep Batch: 645029**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Pentachlorophenol	ND		32.0	31.1		ug/L		97	23 - 149
Surrogate	%Recovery	Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	114		24 - 146						
2-Fluorobiphenyl	100		37 - 120						
2-Fluorophenol (Surr)	70		10 - 120						
Nitrobenzene-d5 (Surr)	81		26 - 120						
Phenol-d5 (Surr)	59		11 - 120						
p-Terphenyl-d14	101		64 - 127						

**Lab Sample ID: 180-145919-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: SUPE-W-12CR-100622**  
**Prep Type: Total/NA**  
**Prep Batch: 645029**

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Pentachlorophenol	ND		32.0	31.4		ug/L		98	23 - 149	1	37

# QC Sample Results

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

Job ID: 180-145919-1

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

Lab Sample ID: 180-145919-1 MSD

Matrix: Water

Analysis Batch: 645323

Client Sample ID: SUPE-W-12CR-100622

Prep Type: Total/NA

Prep Batch: 645029

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	111		24 - 146
2-Fluorobiphenyl	103		37 - 120
2-Fluorophenol (Surr)	71		10 - 120
Nitrobenzene-d5 (Surr)	84		26 - 120
Phenol-d5 (Surr)	60		11 - 120
p-Terphenyl-d14	102		64 - 127

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-415011/1-A

Matrix: Water

Analysis Batch: 415242

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 415011

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		1.0	0.13	ug/L		10/13/22 14:30	10/17/22 14:24	1
1,2-Dichlorobenzene	ND		1.0	0.095	ug/L		10/13/22 14:30	10/17/22 14:24	1
1,3-Dichlorobenzene	ND		1.0	0.099	ug/L		10/13/22 14:30	10/17/22 14:24	1
1,4-Dichlorobenzene	ND		1.0	0.061	ug/L		10/13/22 14:30	10/17/22 14:24	1
1-Methylnaphthalene	ND		0.19	0.056	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.33	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.51	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,4,5-Trichlorophenol	ND		1.0	0.25	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,4,6-Trichlorophenol	ND		1.0	0.22	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,4-Dichlorophenol	ND		0.19	0.051	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,4-Dinitrophenol	ND		10	1.5	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,4-Dinitrotoluene	ND		1.0	0.35	ug/L		10/13/22 14:30	10/17/22 14:24	1
2,6-Dinitrotoluene	ND		1.0	0.17	ug/L		10/13/22 14:30	10/17/22 14:24	1
2-Chloronaphthalene	ND		0.19	0.059	ug/L		10/13/22 14:30	10/17/22 14:24	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/13/22 14:30	10/17/22 14:24	1
2-Methylnaphthalene	ND		0.19	0.062	ug/L		10/13/22 14:30	10/17/22 14:24	1
2-Methylphenol	ND		1.0	0.30	ug/L		10/13/22 14:30	10/17/22 14:24	1
2-Nitroaniline	ND		5.0	0.55	ug/L		10/13/22 14:30	10/17/22 14:24	1
2-Nitrophenol	ND		1.0	0.19	ug/L		10/13/22 14:30	10/17/22 14:24	1
3,3'-Dichlorobenzidine	ND		1.0	0.58	ug/L		10/13/22 14:30	10/17/22 14:24	1
3-Nitroaniline	ND		5.0	0.44	ug/L		10/13/22 14:30	10/17/22 14:24	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.5	ug/L		10/13/22 14:30	10/17/22 14:24	1
4-Bromophenyl phenyl ether	ND		1.0	0.32	ug/L		10/13/22 14:30	10/17/22 14:24	1
4-Chloro-3-methylphenol	ND		1.0	0.28	ug/L		10/13/22 14:30	10/17/22 14:24	1
4-Chloroaniline	ND		1.0	0.38	ug/L		10/13/22 14:30	10/17/22 14:24	1
4-Chlorophenyl phenyl ether	ND		1.0	0.22	ug/L		10/13/22 14:30	10/17/22 14:24	1
4-Nitroaniline	ND		5.0	0.36	ug/L		10/13/22 14:30	10/17/22 14:24	1
4-Nitrophenol	ND		5.0	0.94	ug/L		10/13/22 14:30	10/17/22 14:24	1
Acenaphthene	ND		0.19	0.065	ug/L		10/13/22 14:30	10/17/22 14:24	1
Acenaphthylene	ND		0.19	0.065	ug/L		10/13/22 14:30	10/17/22 14:24	1
Anthracene	ND		0.19	0.049	ug/L		10/13/22 14:30	10/17/22 14:24	1
Benzo[a]anthracene	ND		0.19	0.075	ug/L		10/13/22 14:30	10/17/22 14:24	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		10/13/22 14:30	10/17/22 14:24	1
Benzo[b]fluoranthene	ND		0.19	0.097	ug/L		10/13/22 14:30	10/17/22 14:24	1

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# QC Sample Results

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

Job ID: 180-145919-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-415011/1-A**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 415242**

**Prep Batch: 415011**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzo[g,h,i]perylene	ND		0.19	0.069	ug/L		10/13/22 14:30	10/17/22 14:24	1
Benzo[k]fluoranthene	ND		0.19	0.088	ug/L		10/13/22 14:30	10/17/22 14:24	1
Benzoic acid	ND		5.0	0.92	ug/L		10/13/22 14:30	10/17/22 14:24	1
Benzyl alcohol	ND		1.0	0.16	ug/L		10/13/22 14:30	10/17/22 14:24	1
Bis(2-chloroethoxy)methane	ND		1.0	0.15	ug/L		10/13/22 14:30	10/17/22 14:24	1
Bis(2-chloroethyl)ether	ND		0.19	0.040	ug/L		10/13/22 14:30	10/17/22 14:24	1
Bis(2-ethylhexyl) phthalate	ND		10	6.2	ug/L		10/13/22 14:30	10/17/22 14:24	1
bis(chloroisopropyl) ether	ND		0.19	0.058	ug/L		10/13/22 14:30	10/17/22 14:24	1
Butyl benzyl phthalate	ND		1.0	0.46	ug/L		10/13/22 14:30	10/17/22 14:24	1
Chrysene	ND		0.19	0.081	ug/L		10/13/22 14:30	10/17/22 14:24	1
Dibenz(a,h)anthracene	ND		0.19	0.072	ug/L		10/13/22 14:30	10/17/22 14:24	1
Dibenzofuran	ND		1.0	0.19	ug/L		10/13/22 14:30	10/17/22 14:24	1
Diethyl phthalate	ND		1.0	0.57	ug/L		10/13/22 14:30	10/17/22 14:24	1
Dimethyl phthalate	ND		1.0	0.20	ug/L		10/13/22 14:30	10/17/22 14:24	1
Di-n-butyl phthalate	ND		1.0	0.74	ug/L		10/13/22 14:30	10/17/22 14:24	1
Di-n-octyl phthalate	ND		1.0	0.69	ug/L		10/13/22 14:30	10/17/22 14:24	1
Fluoranthene	ND		0.19	0.060	ug/L		10/13/22 14:30	10/17/22 14:24	1
Fluorene	ND		0.19	0.069	ug/L		10/13/22 14:30	10/17/22 14:24	1
Hexachlorobenzene	ND		0.19	0.056	ug/L		10/13/22 14:30	10/17/22 14:24	1
Hexachlorobutadiene	ND		0.19	0.069	ug/L		10/13/22 14:30	10/17/22 14:24	1
Hexachlorocyclopentadiene	ND		1.0	0.50	ug/L		10/13/22 14:30	10/17/22 14:24	1
Hexachloroethane	ND		1.0	0.13	ug/L		10/13/22 14:30	10/17/22 14:24	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		10/13/22 14:30	10/17/22 14:24	1
Isophorone	ND		1.0	0.19	ug/L		10/13/22 14:30	10/17/22 14:24	1
Methylphenol, 3 & 4	ND		1.0	0.37	ug/L		10/13/22 14:30	10/17/22 14:24	1
Naphthalene	ND		0.19	0.059	ug/L		10/13/22 14:30	10/17/22 14:24	1
Nitrobenzene	ND		2.0	0.50	ug/L		10/13/22 14:30	10/17/22 14:24	1
N-Nitrosodi-n-propylamine	ND		0.19	0.071	ug/L		10/13/22 14:30	10/17/22 14:24	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/13/22 14:30	10/17/22 14:24	1
Phenanthrene	ND		0.19	0.055	ug/L		10/13/22 14:30	10/17/22 14:24	1
Phenol	ND		1.0	0.49	ug/L		10/13/22 14:30	10/17/22 14:24	1
Pyrene	ND		0.19	0.054	ug/L		10/13/22 14:30	10/17/22 14:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	83		23 - 128	10/13/22 14:30	10/17/22 14:24	1
2-Fluorobiphenyl	64		20 - 105	10/13/22 14:30	10/17/22 14:24	1
2-Fluorophenol (Surr)	68		20 - 105	10/13/22 14:30	10/17/22 14:24	1
Nitrobenzene-d5 (Surr)	66		20 - 107	10/13/22 14:30	10/17/22 14:24	1
Phenol-d5 (Surr)	67		20 - 106	10/13/22 14:30	10/17/22 14:24	1
Terphenyl-d14 (Surr)	77		22 - 120	10/13/22 14:30	10/17/22 14:24	1

**Lab Sample ID: LCS 180-415011/2-A**

**Client Sample ID: Lab Control Sample**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 415242**

**Prep Batch: 415011**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	20.0	14.0		ug/L		70	51 - 100

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# QC Sample Results

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

Job ID: 180-145919-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-415011/2-A

Matrix: Water

Analysis Batch: 415242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 415011

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,3-Dichlorobenzene	20.0	13.6		ug/L		68	51 - 100
1,4-Dichlorobenzene	20.0	13.6		ug/L		68	52 - 100
1-Methylnaphthalene	20.0	14.8		ug/L		74	53 - 100
2,3,4,6-Tetrachlorophenol	20.0	15.8		ug/L		79	50 - 100
2,4,5-Trichlorophenol	20.0	15.3		ug/L		76	55 - 100
2,4,6-Trichlorophenol	20.0	15.2		ug/L		76	54 - 100
2,4-Dichlorophenol	20.0	15.5		ug/L		78	55 - 100
2,4-Dimethylphenol	20.0	14.6		ug/L		73	51 - 100
2,4-Dinitrophenol	40.0	15.4		ug/L		39	32 - 100
2,4-Dinitrotoluene	20.0	16.1		ug/L		81	56 - 100
2,6-Dinitrotoluene	20.0	14.6		ug/L		73	56 - 101
2-Chloronaphthalene	20.0	12.9		ug/L		65	52 - 100
2-Chlorophenol	20.0	14.3		ug/L		71	53 - 100
2-Methylnaphthalene	20.0	15.8		ug/L		79	53 - 100
2-Methylphenol	20.0	14.2		ug/L		71	51 - 100
2-Nitroaniline	20.0	15.0		ug/L		75	47 - 104
2-Nitrophenol	20.0	16.7		ug/L		83	56 - 100
3,3'-Dichlorobenzidine	20.0	13.3		ug/L		66	42 - 100
3-Nitroaniline	20.0	15.7		ug/L		78	54 - 100
4,6-Dinitro-2-methylphenol	40.0	22.7		ug/L		57	48 - 100
4-Bromophenyl phenyl ether	20.0	15.5		ug/L		78	50 - 100
4-Chloro-3-methylphenol	20.0	16.2		ug/L		81	47 - 105
4-Chloroaniline	20.0	14.6		ug/L		73	48 - 100
4-Chlorophenyl phenyl ether	20.0	14.1		ug/L		71	52 - 100
4-Nitroaniline	20.0	16.0		ug/L		80	54 - 100
4-Nitrophenol	40.0	31.7		ug/L		79	37 - 120
Acenaphthene	20.0	13.3		ug/L		66	51 - 100
Acenaphthylene	20.0	14.1		ug/L		71	54 - 100
Anthracene	20.0	15.4		ug/L		77	54 - 100
Benzo[a]anthracene	20.0	15.1		ug/L		76	52 - 100
Benzo[a]pyrene	20.0	13.4		ug/L		67	52 - 100
Benzo[b]fluoranthene	20.0	12.7		ug/L		63	50 - 100
Benzo[g,h,i]perylene	20.0	15.3		ug/L		77	53 - 100
Benzo[k]fluoranthene	20.0	12.1		ug/L		61	49 - 100
Benzoic acid	20.0	15.4		ug/L		77	31 - 122
Benzyl alcohol	20.0	14.6		ug/L		73	33 - 107
Bis(2-chloroethoxy)methane	20.0	11.9		ug/L		59	49 - 100
Bis(2-chloroethyl)ether	20.0	12.6		ug/L		63	46 - 100
Bis(2-ethylhexyl) phthalate	20.0	14.1		ug/L		71	52 - 101
bis(chloroisopropyl) ether	20.0	12.0		ug/L		60	29 - 102
Butyl benzyl phthalate	20.0	16.2		ug/L		81	52 - 100
Chrysene	20.0	13.0		ug/L		65	51 - 100
Dibenz(a,h)anthracene	20.0	16.7		ug/L		83	52 - 101
Dibenzofuran	20.0	13.8		ug/L		69	53 - 100
Diethyl phthalate	20.0	14.6		ug/L		73	52 - 100
Dimethyl phthalate	20.0	14.6		ug/L		73	55 - 100
Di-n-butyl phthalate	20.0	16.4		ug/L		82	57 - 100
Di-n-octyl phthalate	20.0	13.3		ug/L		66	41 - 100
Fluoranthene	20.0	16.8		ug/L		84	56 - 100

Eurofins Pittsburgh

# QC Sample Results

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

Job ID: 180-145919-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-415011/2-A**

**Matrix: Water**

**Analysis Batch: 415242**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 415011**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluorene	20.0	14.3		ug/L		71	53 - 100
Hexachlorobenzene	20.0	15.8		ug/L		79	46 - 100
Hexachlorobutadiene	20.0	15.4		ug/L		77	42 - 101
Hexachlorocyclopentadiene	20.0	13.3		ug/L		66	38 - 102
Hexachloroethane	20.0	13.8		ug/L		69	46 - 100
Indeno[1,2,3-cd]pyrene	20.0	15.6		ug/L		78	54 - 100
Isophorone	20.0	14.3		ug/L		71	50 - 100
Methylphenol, 3 & 4	20.0	14.4		ug/L		72	51 - 100
Naphthalene	20.0	14.1		ug/L		70	53 - 100
Nitrobenzene	20.0	13.4		ug/L		67	47 - 100
N-Nitrosodi-n-propylamine	20.0	13.7		ug/L		68	43 - 103
N-Nitrosodiphenylamine	20.0	14.2		ug/L		71	53 - 100
Phenanthrene	20.0	14.3		ug/L		71	53 - 100
Phenol	20.0	13.2		ug/L		66	49 - 100
Pyrene	20.0	13.5		ug/L		68	53 - 100

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	87		23 - 128
2-Fluorobiphenyl	63		20 - 105
2-Fluorophenol (Surr)	67		20 - 105
Nitrobenzene-d5 (Surr)	66		20 - 107
Phenol-d5 (Surr)	65		20 - 106
Terphenyl-d14 (Surr)	66		22 - 120

# QC Association Summary

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

Job ID: 180-145919-1

## GC/MS VOA

### Analysis Batch: 645516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-1	SUPE-W-12CR-100622	Total/NA	Water	8260C	
180-145919-2	SUPE-W-30A-100622	Total/NA	Water	8260C	
180-145919-3	SUPE-EB3-100622	Total/NA	Water	8260C	
180-145919-4	SUPE-W-10AR2-100622	Total/NA	Water	8260C	
180-145919-6	TRIP BLANK	Total/NA	Water	8260C	
MB 480-645516/7	Method Blank	Total/NA	Water	8260C	
LCS 480-645516/5	Lab Control Sample	Total/NA	Water	8260C	

## GC/MS Semi VOA

### Prep Batch: 415011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-1	SUPE-W-12CR-100622	Total/NA	Water	3520C	
180-145919-2	SUPE-W-30A-100622	Total/NA	Water	3520C	
180-145919-2 - DL	SUPE-W-30A-100622	Total/NA	Water	3520C	
180-145919-3	SUPE-EB3-100622	Total/NA	Water	3520C	
180-145919-4 - DL	SUPE-W-10AR2-100622	Total/NA	Water	3520C	
180-145919-4	SUPE-W-10AR2-100622	Total/NA	Water	3520C	
180-145919-5	SUPE-W-18D-100622	Total/NA	Water	3520C	
MB 180-415011/1-A	Method Blank	Total/NA	Water	3520C	
LCS 180-415011/2-A	Lab Control Sample	Total/NA	Water	3520C	

### Analysis Batch: 415242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-1	SUPE-W-12CR-100622	Total/NA	Water	EPA 8270E LL	415011
MB 180-415011/1-A	Method Blank	Total/NA	Water	EPA 8270E LL	415011
LCS 180-415011/2-A	Lab Control Sample	Total/NA	Water	EPA 8270E LL	415011

### Analysis Batch: 415371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-2	SUPE-W-30A-100622	Total/NA	Water	EPA 8270E LL	415011
180-145919-3	SUPE-EB3-100622	Total/NA	Water	EPA 8270E LL	415011
180-145919-4	SUPE-W-10AR2-100622	Total/NA	Water	EPA 8270E LL	415011
180-145919-5	SUPE-W-18D-100622	Total/NA	Water	EPA 8270E LL	415011

### Analysis Batch: 415542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-2 - DL	SUPE-W-30A-100622	Total/NA	Water	EPA 8270E LL	415011
180-145919-4 - DL	SUPE-W-10AR2-100622	Total/NA	Water	EPA 8270E LL	415011

### Prep Batch: 645029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-1	SUPE-W-12CR-100622	Total/NA	Water	3510C	
180-145919-2	SUPE-W-30A-100622	Total/NA	Water	3510C	
180-145919-3	SUPE-EB3-100622	Total/NA	Water	3510C	
180-145919-4	SUPE-W-10AR2-100622	Total/NA	Water	3510C	
180-145919-5	SUPE-W-18D-100622	Total/NA	Water	3510C	
MB 480-645029/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-645029/2-A	Lab Control Sample	Total/NA	Water	3510C	
180-145919-1 MS	SUPE-W-12CR-100622	Total/NA	Water	3510C	
180-145919-1 MSD	SUPE-W-12CR-100622	Total/NA	Water	3510C	



# QC Association Summary

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

Job ID: 180-145919-1

## GC/MS Semi VOA

### Analysis Batch: 645323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145919-1	SUPE-W-12CR-100622	Total/NA	Water	8270D LL	645029
180-145919-2	SUPE-W-30A-100622	Total/NA	Water	8270D LL	645029
180-145919-3	SUPE-EB3-100622	Total/NA	Water	8270D LL	645029
180-145919-4	SUPE-W-10AR2-100622	Total/NA	Water	8270D LL	645029
180-145919-5	SUPE-W-18D-100622	Total/NA	Water	8270D LL	645029
MB 480-645029/1-A	Method Blank	Total/NA	Water	8270D LL	645029
LCS 480-645029/2-A	Lab Control Sample	Total/NA	Water	8270D LL	645029
180-145919-1 MS	SUPE-W-12CR-100622	Total/NA	Water	8270D LL	645029
180-145919-1 MSD	SUPE-W-12CR-100622	Total/NA	Water	8270D LL	645029





# CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 502006

TestAmerica Duluth SC 269

Ref 210311

Project Name: Superior, WI - 2022 OM&M Program      Company: Field & Technical Services      Client: Beazer East, Inc.  
 Project Number: OM-0556-22      Address: 200 Third Avenue      Contact: mferrick.2006@f-ts.com  
 Laboratory: TACHI      Carnegie, PA 15106  
 Shipment Method: Courier      (412) 279-3363  
 Program: Superior 2022 2SA Sampling\_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					None	None		
10/06/2022	0950	GW	SUPE-W-12CR-100622	827D_SVOC (less naphtha) (Chicago)	None	None	2	
10/06/2022	1151	GW	SUPE-W-30A-100622	827D_SVOC+naphtha (Chicago) (250ml)	None	None	2	
10/06/2022	1348	GW	SUPE-EB3-100622				2	
10/06/2022	1348	GW	SUPE-W-10AR2-100622				2	
10/06/2022	1524	GW	SUPE-W-18D-100622				2	



180-145919 Chain of Custody

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Marie Ferrick</i> Printed Name: Marie Ferrick Firm: FTS Date/Time: 10/06/2022 1558	Signature: <i>Melissa Gaseon</i> Printed Name: Melissa Gaseon Firm: <i>Candino</i> Date/Time: 10-7-22 0800	Signature: <i>Melissa Gaseon</i> Printed Name: <i>Melissa Gaseon</i> Firm: <i>Candino</i> Date/Time: 10/5/22 1500	Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: <i>[Firm]</i> Date/Time: 10/8/22 900	<input checked="" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard

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Ref 210311

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS  
REQUEST FORM

REF.# 502007

TestAmerica Duluth SC  
269

Client: Beazer East, Inc.  
Contact: mferrick.2006@t-ts.com

Company: Field & Technical Services  
Address: 200 Third Avenue  
Carnegie, PA 15106  
(412) 279-3363

Project Name: Superior, WI - 2022 OM&M Program  
Project Number: OM-0556-22  
Laboratory: TABUF  
Shipment Method: Courier  
Program: Superior 2022 2SA Sampling\_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:											
					HCL	None													
10/06/2022	0950	GW	SUPE-W-12CR-100622			8260C_VOA+naphtha	3	2											
10/06/2022	1151	GW	SUPE-W-30A-100622			8270D_LL_PCP (Buffalo) (TL)	3	2											
10/06/2022	1348	GW	SUPE-EB3-100622				3	2											
10/06/2022	1348	GW	SUPE-W-10AR2-100622				3	2											
10/06/2022	1524	GW	SUPE-W-18D-100622				0	2											

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Marie Ferrick</i> Printed Name: Marie Ferrick Firm: FTS Date/Time: 10/06/2022 1558	Signature: <i>Melissa Gascon</i> Printed Name: Melissa Gascon Firm: Eurofino Date/Time: 10/17/22 0800	Signature: <i>Marie Ferrick</i> Printed Name: Marie Ferrick Firm: FTS Date/Time: 10/15/22 1500	Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	<input checked="" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard



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- 13

ORIGIN ID:DLHA (715) 394-3674

SHIP DATE: 07OCT22  
 ACTWT: 72.15 LB MAN  
 CAD: 0669741/CAFE3612

TESTAMERICA-DULUTH SVC  
 63 E 2ND ST STE 100

SUPERIOR, WI 54880  
 UNITED STATES US

BILL RECIPIENT

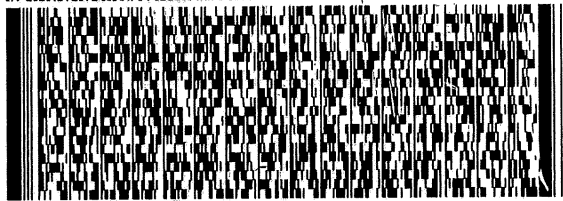
TO **CARRIE GAMBER**  
**EUROFINS TESTAMERICA - PITTSBURGH**  
**301 ALPHA DR**

57701/PCSF/432A

**PITTSBURGH PA 15238**

(318) 490-4780

REF: FTS/KOPPERS



**FedEx**  
Express



J22202032801 W

TRK# 4546 9355 9397  
 0201

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

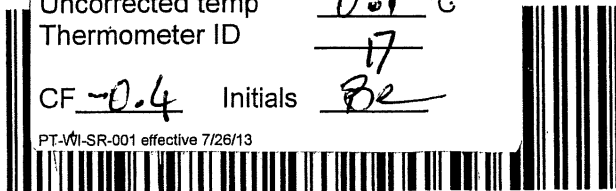
**XO AGCA**

**15238**  
 PA-US **PIT**

Uncorrected temp 0.1 °C  
 Thermometer ID 17

CF 0.4 Initials Be

PT-WI-SR-001 effective 7/26/13



180-145919 Waybill

ORIGIN ID:DLHA, (715) 394-3674  
TESTAMERICA-DULUTH SVC  
63 E 2ND ST STE 100  
SUPERIOR, WI 54880  
UNITED STATES US

SHIP DATE: 07OCT22  
ACTWGT: 72.15 LB MAN  
CAD: 0669741/CAFE3612

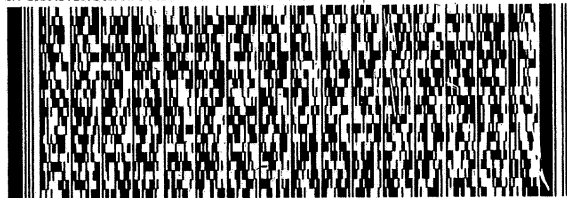
BILL RECIPIENT

TO **CARRIE GAMBER**  
**EUROFINS TESTAMERICA - PITTSBURGH**  
**301 ALPHA DR**

**PITTSBURGH PA 15238**

(318) 490-4780

REF: FTS/KOPPERS



**FedEx**  
Express



J22202203280111V

TRK# 4546 9355 9397  
0201

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

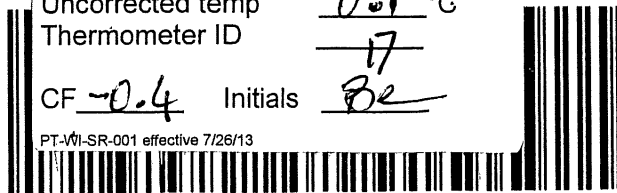
**XO AGCA**

**15238**  
PA-US **PIT**

Uncorrected temp 0.1 °C  
Thermometer ID 17

CF -0.4 Initials Be

PT-WI-SR-001 effective 7/26/13



180-145919 Waybill

**Eurofins Pittsburgh**

301 Alpha Drive RIDC Park  
 Pittsburgh, PA 15238  
 Phone: 412-963-7058 Fax: 412-963-2468

**Chain of Custody Record**



Environment Testing  
 America

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:																									
Client Contact:		Phone:	Brown, Shali		180-471267.1																									
Shipping/Receiving		E-Mail:	Shali.Brown@et.eurofinsus.com	State of Origin:	Page:																									
Company:				Wisconsin	Page 1 of 1																									
Eurofins Environment Testing Northeast,		Accreditations Required (See note):			Job #:																									
Address:		State - Wisconsin; State Program - Wisconsin			180-145919-1																									
10 Hazelwood Drive,		<b>Analysis Requested</b>			<b>Preservation Codes:</b> 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 - EDTA Y - Trizma Z - other (specify)																									
City:		<table border="1"> <tr> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>8260C/5030C (MOD) Volatiles, project list</th> <th>8270D_L/L/TL/LL (MOD) Pentachlorophenol</th> <th>Total Number of containers</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C/5030C (MOD) Volatiles, project list	8270D_L/L/TL/LL (MOD) Pentachlorophenol	Total Number of containers																				
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)					8260C/5030C (MOD) Volatiles, project list	8270D_L/L/TL/LL (MOD) Pentachlorophenol	Total Number of containers																						
Amherst																														
State, Zip:																														
NY, 14228-2298																														
Phone:																														
716-691-2600(Tel) 716-691-7991(Fax)																														
Email:																														
Project Name:																														
Superior, WI Semiannual Groundwater																														
Site:																														
SSOW#:																														
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type</b> (C=comp, G=grab)	<b>Matrix</b> (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)																									
Preservation Code:																														
SUPE-W-12CR-100622 (180-145919-1)	10/6/22	09:50 Central	Water		5																									
SUPE-W-30A-100622 (180-145919-2)	10/6/22	11:51 Central	Water	X X	5																									
SUPE-EB3-100622 (180-145919-3)	10/6/22	13:48 Central	Water	X X	5																									
SUPE-W-10AR2-100622 (180-145919-4)	10/6/22	13:48 Central	Water	X X	5																									
SUPE-W-18D-100622 (180-145919-5)	10/6/22	15:24 Central	Water	X	2																									
TRIP BLANK (180-145919-6)	10/6/22	Central	Water	X	2																									
<b>Special Instructions/Note:</b>																														
Refer to PT-PM-WI-006 for Wisconsin Protocol Refer to PT-PM-WI-006 for Wisconsin Protocol Refer to PT-PM-WI-006 for Wisconsin Protocol Refer to PT-PM-WI-006 for Wisconsin Protocol Refer to PT-PM-WI-006 for Wisconsin Protocol Refer to PT-PM-WI-006 for Wisconsin Protocol																														
Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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 Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.																														
<b>Possible Hazard Identification</b>			<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>																											
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: 10-16-22 1800	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>																										
Relinquished by:		Date/Time:	Company:	Date/Time: 10-11-22 1600	Company: <i>JAB</i>																									
Relinquished by:		Date/Time:	Company:	Date/Time:	Company:																									
Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:																												
Δ Yes Δ No		20 21 ICE																												

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10/21/2022



## Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-145919-1

**Login Number: 145919**

**List Number: 1**

**Creator: Abernathy, Eric L**

**List Source: Eurofins Pittsburgh**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
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.	N/A	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-145919-1

**Login Number: 145919**

**List Number: 2**

**Creator: Yeager, Brian A**

**List Source: Eurofins Buffalo**

**List Creation: 10/11/22 12:33 PM**

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	2.0 2.1 ICE
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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	





# FTS, LLC

**DATE:** October 26, 2022

**FROM:** Kendra Chintella

**SUBJECT:** Superior Groundwater

**SAMPLE DELIVERY GROUP (SDG):** 180-145920-1

**SAMPLES:** SUPE-M-099A-100522 (W-28C), SUPE-W-28C-100522, SUPE-W-04AR2-100522, SUPE-EB2-100522, TRIP BLANK

**ANALYSES:** Method 8260C (VOCs), 8270E LL (SVOCs), 8270D LL (Pentachlorophenol)

**LABORATORY:** Eurofins Laboratories, Buffalo, Pittsburgh

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: bis(2-Ethylhexyl)phthalate was detected above the QL in the equipment blank and the result in sample W-04AR2 was qualified "J+". Butyl benzyl phthalate was detected above the QL in the equipment blank and the result in samples W-28C was qualified as not detected at the QL. The butyl benzyl phthalate result in sample W-04AR2 was qualified "J+". Di-n-butyl phthalate was detected above the QL in the equipment blank and the results in samples M-099A and W-28C were qualified not detected. The di-n-butyl phthalate result in sample W-104AR2 was qualified "J+". Fluoranthrene was detected below the QL in the equipment blank and the result in sample M-099A was as not detected at the QL. The fluoranthrene result in sample W-04AR2 was qualified "J+". Phenanthrene was detected above the QL in the equipment blank and the result in sample M-099A was qualified not detected at the QL. The phenanthrene result in sample W-28C was qualified not detected. The phenanthrene result in sample W-04AR2 was qualified "J+". Pyrene was detected below the QL in the equipment blank and the results in samples M-099A and W-04AR2 were qualified as not detected at the QL. Naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, and fluorene were detected in the equipment blank and no data qualification was necessary as the sample results were not detected.
- Field Duplicate Precision  
Noncompliance: See attached page for details.
- Surrogate Recoveries  
Noncompliance: None
- Laboratory Control Sample  
Noncompliance: None

**Field Duplicate Precision:**

FIELD DUPLICATE PRECISION					
ANALYTE	W-28C	QUAL	M-099A	QUAL	RPD
Benzyl alcohol	0.18	U	0.39	J	NC
Butyl benzyl phthalate	0.53	J		U	NC
Di-n-butyl phthalate	1.4		1.3		7.41
Fluoranthene	0.065	U	0.098	J	NC
Phenanthrene	0.23		0.12	J	62.86*
Pyrene	0.059	U	0.062	J	NC

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 Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-145920-1

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:  
10/20/2022 3:58:15 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

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results through



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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.

PA Lab ID: 02-00416



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# Case Narrative

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

Job ID: 180-145920-1

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## Job ID: 180-145920-1

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### Laboratory: Eurofins Pittsburgh

#### Narrative

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#### Job Narrative 180-145920-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/8/2022 12:59 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method 8270E LL: The continuing calibration verification (CCV) associated with batch 180-415201 recovered above the upper control limit for 2-Nitroaniline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: CCVIS 180-415201/3.

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

#### Organic Prep

Method 3510C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: SUPE-M-099A-100522 and SUPE-W-04AR2-100522.

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



# Definitions/Glossary

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

Job ID: 180-145920-1

## 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
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

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

Job ID: 180-145920-1

## Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998027800	08-31-23

## Laboratory: Eurofins Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998310390	08-31-23

- 1
- 2
- 3
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- 9
- 10
- 11
- 12
- 13

# Sample Summary

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

Job ID: 180-145920-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-145920-1	SUPE-M-099A-100522	Water	10/05/22 13:00	10/08/22 12:59
180-145920-2	SUPE-W-28C-100522	Water	10/05/22 17:51	10/08/22 12:59
180-145920-3	SUPE-W-04AR2-100522	Water	10/05/22 19:25	10/08/22 12:59
180-145920-4	SUPE-EB2-100522	Water	10/05/22 19:45	10/08/22 12:59
180-145920-5	TRIP BLANK	Water	10/05/22 00:00	10/08/22 12:59

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# Method Summary

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

Job ID: 180-145920-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	EET BUF
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	EET PIT
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3520C	Liquid-Liquid Extraction (Continuous)	SW846	EET PIT
5030C	Purge and Trap	SW846	EET BUF

#### Protocol References:

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

#### Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058



# Lab Chronicle

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-M-099A-100522**

**Lab Sample ID: 180-145920-1**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/08/22 12:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645606	10/15/22 12:18	AXK	EET BUF
Instrument ID: HP5975D										
Total/NA	Prep	3510C			870 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/14/22 01:30	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			240 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415201	10/15/22 14:30	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-W-28C-100522**

**Lab Sample ID: 180-145920-2**

Date Collected: 10/05/22 17:51

Matrix: Water

Date Received: 10/08/22 12:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645606	10/15/22 12:41	AXK	EET BUF
Instrument ID: HP5975D										
Total/NA	Prep	3510C			1030 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/14/22 01:58	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415201	10/15/22 14:52	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-W-04AR2-100522**

**Lab Sample ID: 180-145920-3**

Date Collected: 10/05/22 19:25

Matrix: Water

Date Received: 10/08/22 12:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645606	10/15/22 13:03	AXK	EET BUF
Instrument ID: HP5975D										
Total/NA	Prep	3510C			870 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		5	1 mL	1 mL	645323	10/14/22 02:26	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			240 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415201	10/15/22 15:13	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: SUPE-EB2-100522**

**Lab Sample ID: 180-145920-4**

Date Collected: 10/05/22 19:45

Matrix: Water

Date Received: 10/08/22 12:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645606	10/15/22 13:26	AXK	EET BUF
Instrument ID: HP5975D										

# Lab Chronicle

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-EB2-100522**

**Lab Sample ID: 180-145920-4**

**Date Collected: 10/05/22 19:45**

**Matrix: Water**

**Date Received: 10/08/22 12:59**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			930 mL	1 mL	645029	10/12/22 09:00	JMP	EET BUF
Total/NA	Analysis	8270D LL		1	1 mL	1 mL	645323	10/14/22 02:54	RJS	EET BUF
Instrument ID: HP5973Y										
Total/NA	Prep	3520C			230 mL	250 uL	414851	10/12/22 13:18	BJT	EET PIT
Total/NA	Analysis	EPA 8270E LL		1	1 mL	1 mL	415201	10/15/22 15:34	VVP	EET PIT
Instrument ID: CH733										

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 180-145920-5**

**Date Collected: 10/05/22 00:00**

**Matrix: Water**

**Date Received: 10/08/22 12:59**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	645606	10/15/22 13:48	AXK	EET BUF
Instrument ID: HP5975D										

**Laboratory References:**

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

Lab: EET BUF

Batch Type: Prep

JMP = Jacob Pollock

Batch Type: Analysis

AXK = Ahmad Kiwan

RJS = Robert Schick

Lab: EET PIT

Batch Type: Prep

BJT = Bill Trout

Batch Type: Analysis

VVP = Vincent Piccolino

# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-M-099A-100522**

**Lab Sample ID: 180-145920-1**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/08/22 12:59

## Method: SW846 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			10/15/22 12:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 12:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 12:18	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 12:18	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 12:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 12:18	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 12:18	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 12:18	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 12:18	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 12:18	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 12:18	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 12:18	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 12:18	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 12:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 12:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120					10/15/22 12:18	1
4-Bromofluorobenzene (Surr)	102		73 - 120					10/15/22 12:18	1
Dibromofluoromethane (Surr)	99		75 - 123					10/15/22 12:18	1
Toluene-d8 (Surr)	99		80 - 120					10/15/22 12:18	1

## Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.1	0.39	ug/L		10/12/22 09:00	10/14/22 01:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	97		24 - 146				10/12/22 09:00	10/14/22 01:30	1
2-Fluorobiphenyl	101		37 - 120				10/12/22 09:00	10/14/22 01:30	1
2-Fluorophenol (Surr)	54		10 - 120				10/12/22 09:00	10/14/22 01:30	1
Nitrobenzene-d5 (Surr)	78		26 - 120				10/12/22 09:00	10/14/22 01:30	1
Phenol-d5 (Surr)	37		11 - 120				10/12/22 09:00	10/14/22 01:30	1
p-Terphenyl-d14	100		64 - 127				10/12/22 09:00	10/14/22 01:30	1

## Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.14	ug/L		10/12/22 13:18	10/15/22 14:30	1
1,2-Dichlorobenzene	ND		1.0	0.099	ug/L		10/12/22 13:18	10/15/22 14:30	1
1,3-Dichlorobenzene	ND		1.0	0.10	ug/L		10/12/22 13:18	10/15/22 14:30	1
1,4-Dichlorobenzene	ND		1.0	0.064	ug/L		10/12/22 13:18	10/15/22 14:30	1
1-Methylnaphthalene	ND		0.20	0.058	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.34	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.53	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,4,5-Trichlorophenol	ND		1.0	0.26	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,4,6-Trichlorophenol	ND		1.0	0.23	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,4-Dichlorophenol	ND		0.20	0.053	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,4-Dinitrophenol	ND		10	1.6	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,4-Dinitrotoluene	ND		1.0	0.37	ug/L		10/12/22 13:18	10/15/22 14:30	1
2,6-Dinitrotoluene	ND		1.0	0.18	ug/L		10/12/22 13:18	10/15/22 14:30	1

Eurofins Pittsburgh

# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-M-099A-100522**

**Lab Sample ID: 180-145920-1**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.20	0.061	ug/L		10/12/22 13:18	10/15/22 14:30	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/12/22 13:18	10/15/22 14:30	1
2-Methylnaphthalene	ND		0.20	0.065	ug/L		10/12/22 13:18	10/15/22 14:30	1
2-Methylphenol	ND		1.0	0.31	ug/L		10/12/22 13:18	10/15/22 14:30	1
2-Nitroaniline	ND		5.2	0.57	ug/L		10/12/22 13:18	10/15/22 14:30	1
2-Nitrophenol	ND		1.0	0.20	ug/L		10/12/22 13:18	10/15/22 14:30	1
3,3'-Dichlorobenzidine	ND		1.0	0.61	ug/L		10/12/22 13:18	10/15/22 14:30	1
3-Nitroaniline	ND		5.2	0.46	ug/L		10/12/22 13:18	10/15/22 14:30	1
4,6-Dinitro-2-methylphenol	ND		5.2	1.5	ug/L		10/12/22 13:18	10/15/22 14:30	1
4-Bromophenyl phenyl ether	ND		1.0	0.33	ug/L		10/12/22 13:18	10/15/22 14:30	1
4-Chloro-3-methylphenol	ND		1.0	0.29	ug/L		10/12/22 13:18	10/15/22 14:30	1
4-Chloroaniline	ND		1.0	0.39	ug/L		10/12/22 13:18	10/15/22 14:30	1
4-Chlorophenyl phenyl ether	ND		1.0	0.23	ug/L		10/12/22 13:18	10/15/22 14:30	1
4-Nitroaniline	ND		5.2	0.38	ug/L		10/12/22 13:18	10/15/22 14:30	1
4-Nitrophenol	ND		5.2	0.98	ug/L		10/12/22 13:18	10/15/22 14:30	1
Acenaphthene	ND		0.20	0.068	ug/L		10/12/22 13:18	10/15/22 14:30	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/12/22 13:18	10/15/22 14:30	1
Anthracene	ND		0.20	0.051	ug/L		10/12/22 13:18	10/15/22 14:30	1
Benzo[a]anthracene	ND		0.20	0.078	ug/L		10/12/22 13:18	10/15/22 14:30	1
Benzo[a]pyrene	ND		0.20	0.055	ug/L		10/12/22 13:18	10/15/22 14:30	1
Benzo[b]fluoranthene	ND		0.20	0.10	ug/L		10/12/22 13:18	10/15/22 14:30	1
Benzo[g,h,i]perylene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/15/22 14:30	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/12/22 13:18	10/15/22 14:30	1
Benzoic acid	ND		5.2	0.96	ug/L		10/12/22 13:18	10/15/22 14:30	1
<b>Benzyl alcohol</b>	<b>0.39</b>	<b>J</b>	1.0	0.17	ug/L		10/12/22 13:18	10/15/22 14:30	1
Bis(2-chloroethoxy)methane	ND		1.0	0.16	ug/L		10/12/22 13:18	10/15/22 14:30	1
Bis(2-chloroethyl)ether	ND		0.20	0.042	ug/L		10/12/22 13:18	10/15/22 14:30	1
Bis(2-ethylhexyl) phthalate	ND		10	6.5	ug/L		10/12/22 13:18	10/15/22 14:30	1
bis(chloroisopropyl) ether	ND		0.20	0.060	ug/L		10/12/22 13:18	10/15/22 14:30	1
Butyl benzyl phthalate	ND		1.0	0.48	ug/L		10/12/22 13:18	10/15/22 14:30	1
Chrysene	ND		0.20	0.084	ug/L		10/12/22 13:18	10/15/22 14:30	1
Dibenz(a,h)anthracene	ND		0.20	0.075	ug/L		10/12/22 13:18	10/15/22 14:30	1
Dibenzofuran	ND		1.0	0.20	ug/L		10/12/22 13:18	10/15/22 14:30	1
Diethyl phthalate	ND		1.0	0.59	ug/L		10/12/22 13:18	10/15/22 14:30	1
Dimethyl phthalate	ND		1.0	0.21	ug/L		10/12/22 13:18	10/15/22 14:30	1
<b>Di-n-butyl phthalate</b>	<b>1.3</b>		1.0	0.77	ug/L		10/12/22 13:18	10/15/22 14:30	1
Di-n-octyl phthalate	ND		1.0	0.71	ug/L		10/12/22 13:18	10/15/22 14:30	1
<b>Fluoranthene</b>	<b>0.098</b>	<b>J</b>	0.20	0.063	ug/L		10/12/22 13:18	10/15/22 14:30	1
Fluorene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/15/22 14:30	1
Hexachlorobenzene	ND		0.20	0.058	ug/L		10/12/22 13:18	10/15/22 14:30	1
Hexachlorobutadiene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/15/22 14:30	1
Hexachlorocyclopentadiene	ND		1.0	0.52	ug/L		10/12/22 13:18	10/15/22 14:30	1
Hexachloroethane	ND		1.0	0.14	ug/L		10/12/22 13:18	10/15/22 14:30	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.089	ug/L		10/12/22 13:18	10/15/22 14:30	1
Isophorone	ND		1.0	0.20	ug/L		10/12/22 13:18	10/15/22 14:30	1
Methylphenol, 3 & 4	ND		1.0	0.39	ug/L		10/12/22 13:18	10/15/22 14:30	1
Nitrobenzene	ND		2.1	0.52	ug/L		10/12/22 13:18	10/15/22 14:30	1
N-Nitrosodi-n-propylamine	ND		0.20	0.074	ug/L		10/12/22 13:18	10/15/22 14:30	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/12/22 13:18	10/15/22 14:30	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-M-099A-100522**

**Lab Sample ID: 180-145920-1**

Date Collected: 10/05/22 13:00

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	0.12	J	0.20	0.057	ug/L		10/12/22 13:18	10/15/22 14:30	1
Phenol	ND		1.0	0.51	ug/L		10/12/22 13:18	10/15/22 14:30	1
Pyrene	0.062	J	0.20	0.056	ug/L		10/12/22 13:18	10/15/22 14:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	42		23 - 128				10/12/22 13:18	10/15/22 14:30	1
2-Fluorobiphenyl	41		20 - 105				10/12/22 13:18	10/15/22 14:30	1
2-Fluorophenol (Surr)	41		20 - 105				10/12/22 13:18	10/15/22 14:30	1
Nitrobenzene-d5 (Surr)	49		20 - 107				10/12/22 13:18	10/15/22 14:30	1
Phenol-d5 (Surr)	44		20 - 106				10/12/22 13:18	10/15/22 14:30	1
Terphenyl-d14 (Surr)	44		22 - 120				10/12/22 13:18	10/15/22 14:30	1

**Client Sample ID: SUPE-W-28C-100522**

**Lab Sample ID: 180-145920-2**

Date Collected: 10/05/22 17:51

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 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			10/15/22 12:41	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 12:41	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 12:41	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 12:41	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 12:41	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 12:41	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 12:41	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 12:41	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 12:41	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 12:41	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 12:41	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 12:41	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 12:41	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 12:41	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 12:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120					10/15/22 12:41	1
4-Bromofluorobenzene (Surr)	101		73 - 120					10/15/22 12:41	1
Dibromofluoromethane (Surr)	100		75 - 123					10/15/22 12:41	1
Toluene-d8 (Surr)	99		80 - 120					10/15/22 12:41	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.97	0.33	ug/L		10/12/22 09:00	10/14/22 01:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	97		24 - 146				10/12/22 09:00	10/14/22 01:58	1
2-Fluorobiphenyl	101		37 - 120				10/12/22 09:00	10/14/22 01:58	1
2-Fluorophenol (Surr)	50		10 - 120				10/12/22 09:00	10/14/22 01:58	1
Nitrobenzene-d5 (Surr)	77		26 - 120				10/12/22 09:00	10/14/22 01:58	1
Phenol-d5 (Surr)	34		11 - 120				10/12/22 09:00	10/14/22 01:58	1
p-Terphenyl-d14	96		64 - 127				10/12/22 09:00	10/14/22 01:58	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-W-28C-100522**

**Lab Sample ID: 180-145920-2**

Date Collected: 10/05/22 17:51

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 14:52	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/12/22 13:18	10/15/22 14:52	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/12/22 13:18	10/15/22 14:52	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/12/22 13:18	10/15/22 14:52	1
1-Methylnaphthalene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,4-Dinitrophenol	ND		11	1.7	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/12/22 13:18	10/15/22 14:52	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/12/22 13:18	10/15/22 14:52	1
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/12/22 13:18	10/15/22 14:52	1
2-Chlorophenol	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 14:52	1
2-Methylnaphthalene	ND		0.21	0.067	ug/L		10/12/22 13:18	10/15/22 14:52	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/12/22 13:18	10/15/22 14:52	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/12/22 13:18	10/15/22 14:52	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/12/22 13:18	10/15/22 14:52	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/12/22 13:18	10/15/22 14:52	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/12/22 13:18	10/15/22 14:52	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/12/22 13:18	10/15/22 14:52	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/12/22 13:18	10/15/22 14:52	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/12/22 13:18	10/15/22 14:52	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/12/22 13:18	10/15/22 14:52	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/12/22 13:18	10/15/22 14:52	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/12/22 13:18	10/15/22 14:52	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/12/22 13:18	10/15/22 14:52	1
Acenaphthene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/15/22 14:52	1
Acenaphthylene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/15/22 14:52	1
Anthracene	ND		0.21	0.053	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzoic acid	ND		5.4	1.0	ug/L		10/12/22 13:18	10/15/22 14:52	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/15/22 14:52	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/12/22 13:18	10/15/22 14:52	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/12/22 13:18	10/15/22 14:52	1
Bis(2-ethylhexyl) phthalate	ND		11	6.8	ug/L		10/12/22 13:18	10/15/22 14:52	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/12/22 13:18	10/15/22 14:52	1
<b>Butyl benzyl phthalate</b>	<b>0.53</b>	<b>J</b>	1.1	0.50	ug/L		10/12/22 13:18	10/15/22 14:52	1
Chrysene	ND		0.21	0.088	ug/L		10/12/22 13:18	10/15/22 14:52	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/12/22 13:18	10/15/22 14:52	1
Dibenzofuran	ND		1.1	0.21	ug/L		10/12/22 13:18	10/15/22 14:52	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/12/22 13:18	10/15/22 14:52	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/12/22 13:18	10/15/22 14:52	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-W-28C-100522**

**Lab Sample ID: 180-145920-2**

Date Collected: 10/05/22 17:51

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Di-n-butyl phthalate</b>	<b>1.4</b>		1.1	0.81	ug/L		10/12/22 13:18	10/15/22 14:52	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/12/22 13:18	10/15/22 14:52	1
Fluoranthene	ND		0.21	0.065	ug/L		10/12/22 13:18	10/15/22 14:52	1
Fluorene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 14:52	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/15/22 14:52	1
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 14:52	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/12/22 13:18	10/15/22 14:52	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 14:52	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/12/22 13:18	10/15/22 14:52	1
Isophorone	ND		1.1	0.20	ug/L		10/12/22 13:18	10/15/22 14:52	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/12/22 13:18	10/15/22 14:52	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/12/22 13:18	10/15/22 14:52	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/12/22 13:18	10/15/22 14:52	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/12/22 13:18	10/15/22 14:52	1
<b>Phenanthrene</b>	<b>0.23</b>		0.21	0.060	ug/L		10/12/22 13:18	10/15/22 14:52	1
Phenol	ND		1.1	0.53	ug/L		10/12/22 13:18	10/15/22 14:52	1
Pyrene	ND		0.21	0.059	ug/L		10/12/22 13:18	10/15/22 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	62		23 - 128	10/12/22 13:18	10/15/22 14:52	1
2-Fluorobiphenyl	54		20 - 105	10/12/22 13:18	10/15/22 14:52	1
2-Fluorophenol (Surr)	53		20 - 105	10/12/22 13:18	10/15/22 14:52	1
Nitrobenzene-d5 (Surr)	66		20 - 107	10/12/22 13:18	10/15/22 14:52	1
Phenol-d5 (Surr)	57		20 - 106	10/12/22 13:18	10/15/22 14:52	1
Terphenyl-d14 (Surr)	64		22 - 120	10/12/22 13:18	10/15/22 14:52	1

**Client Sample ID: SUPE-W-04AR2-100522**

**Lab Sample ID: 180-145920-3**

Date Collected: 10/05/22 19:25

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 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			10/15/22 13:03	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 13:03	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 13:03	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 13:03	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 13:03	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 13:03	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 13:03	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 13:03	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 13:03	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 13:03	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 13:03	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 13:03	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 13:03	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 13:03	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		10/15/22 13:03	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-W-04AR2-100522**

**Lab Sample ID: 180-145920-3**

Date Collected: 10/05/22 19:25

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		73 - 120		10/15/22 13:03	1
Dibromofluoromethane (Surr)	102		75 - 123		10/15/22 13:03	1
Toluene-d8 (Surr)	100		80 - 120		10/15/22 13:03	1

**Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.7	2.0	ug/L		10/12/22 09:00	10/14/22 02:26	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	64		24 - 146	10/12/22 09:00	10/14/22 02:26	5
2-Fluorobiphenyl	73		37 - 120	10/12/22 09:00	10/14/22 02:26	5
2-Fluorophenol (Surr)	32		10 - 120	10/12/22 09:00	10/14/22 02:26	5
Nitrobenzene-d5 (Surr)	53		26 - 120	10/12/22 09:00	10/14/22 02:26	5
Phenol-d5 (Surr)	19		11 - 120	10/12/22 09:00	10/14/22 02:26	5
p-Terphenyl-d14	71		64 - 127	10/12/22 09:00	10/14/22 02:26	5

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.14	ug/L		10/12/22 13:18	10/15/22 15:13	1
1,2-Dichlorobenzene	ND		1.0	0.099	ug/L		10/12/22 13:18	10/15/22 15:13	1
1,3-Dichlorobenzene	ND		1.0	0.10	ug/L		10/12/22 13:18	10/15/22 15:13	1
1,4-Dichlorobenzene	ND		1.0	0.064	ug/L		10/12/22 13:18	10/15/22 15:13	1
1-Methylnaphthalene	ND		0.20	0.058	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.34	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.53	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,4,5-Trichlorophenol	ND		1.0	0.26	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,4,6-Trichlorophenol	ND		1.0	0.23	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,4-Dichlorophenol	ND		0.20	0.053	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,4-Dinitrophenol	ND		10	1.6	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,4-Dinitrotoluene	ND		1.0	0.37	ug/L		10/12/22 13:18	10/15/22 15:13	1
2,6-Dinitrotoluene	ND		1.0	0.18	ug/L		10/12/22 13:18	10/15/22 15:13	1
2-Chloronaphthalene	ND		0.20	0.061	ug/L		10/12/22 13:18	10/15/22 15:13	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/12/22 13:18	10/15/22 15:13	1
2-Methylnaphthalene	ND		0.20	0.065	ug/L		10/12/22 13:18	10/15/22 15:13	1
2-Methylphenol	ND		1.0	0.31	ug/L		10/12/22 13:18	10/15/22 15:13	1
2-Nitroaniline	ND		5.2	0.57	ug/L		10/12/22 13:18	10/15/22 15:13	1
2-Nitrophenol	ND		1.0	0.20	ug/L		10/12/22 13:18	10/15/22 15:13	1
3,3'-Dichlorobenzidine	ND		1.0	0.61	ug/L		10/12/22 13:18	10/15/22 15:13	1
3-Nitroaniline	ND		5.2	0.46	ug/L		10/12/22 13:18	10/15/22 15:13	1
4,6-Dinitro-2-methylphenol	ND		5.2	1.5	ug/L		10/12/22 13:18	10/15/22 15:13	1
4-Bromophenyl phenyl ether	ND		1.0	0.33	ug/L		10/12/22 13:18	10/15/22 15:13	1
4-Chloro-3-methylphenol	ND		1.0	0.29	ug/L		10/12/22 13:18	10/15/22 15:13	1
4-Chloroaniline	ND		1.0	0.39	ug/L		10/12/22 13:18	10/15/22 15:13	1
4-Chlorophenyl phenyl ether	ND		1.0	0.23	ug/L		10/12/22 13:18	10/15/22 15:13	1
4-Nitroaniline	ND		5.2	0.38	ug/L		10/12/22 13:18	10/15/22 15:13	1
4-Nitrophenol	ND		5.2	0.98	ug/L		10/12/22 13:18	10/15/22 15:13	1
Acenaphthene	ND		0.20	0.068	ug/L		10/12/22 13:18	10/15/22 15:13	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/12/22 13:18	10/15/22 15:13	1
<b>Anthracene</b>	<b>1.3</b>		0.20	0.051	ug/L		10/12/22 13:18	10/15/22 15:13	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-W-04AR2-100522**

**Lab Sample ID: 180-145920-3**

Date Collected: 10/05/22 19:25

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.091	J	0.20	0.078	ug/L		10/12/22 13:18	10/15/22 15:13	1
Benzo[a]pyrene	0.061	J	0.20	0.055	ug/L		10/12/22 13:18	10/15/22 15:13	1
Benzo[b]fluoranthene	0.20		0.20	0.10	ug/L		10/12/22 13:18	10/15/22 15:13	1
Benzo[g,h,i]perylene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/15/22 15:13	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/12/22 13:18	10/15/22 15:13	1
Benzoic acid	1.4	J	5.2	0.96	ug/L		10/12/22 13:18	10/15/22 15:13	1
Benzyl alcohol	0.57	J	1.0	0.17	ug/L		10/12/22 13:18	10/15/22 15:13	1
Bis(2-chloroethoxy)methane	ND		1.0	0.16	ug/L		10/12/22 13:18	10/15/22 15:13	1
Bis(2-chloroethyl)ether	ND		0.20	0.042	ug/L		10/12/22 13:18	10/15/22 15:13	1
Bis(2-ethylhexyl) phthalate	15		10	6.5	ug/L		10/12/22 13:18	10/15/22 15:13	1
bis(chloroisopropyl) ether	ND		0.20	0.060	ug/L		10/12/22 13:18	10/15/22 15:13	1
Butyl benzyl phthalate	1.3		1.0	0.48	ug/L		10/12/22 13:18	10/15/22 15:13	1
Chrysene	0.16	J	0.20	0.084	ug/L		10/12/22 13:18	10/15/22 15:13	1
Dibenz(a,h)anthracene	ND		0.20	0.075	ug/L		10/12/22 13:18	10/15/22 15:13	1
Dibenzofuran	ND		1.0	0.20	ug/L		10/12/22 13:18	10/15/22 15:13	1
Diethyl phthalate	0.61	J	1.0	0.59	ug/L		10/12/22 13:18	10/15/22 15:13	1
Dimethyl phthalate	ND		1.0	0.21	ug/L		10/12/22 13:18	10/15/22 15:13	1
Di-n-butyl phthalate	2.0		1.0	0.77	ug/L		10/12/22 13:18	10/15/22 15:13	1
Di-n-octyl phthalate	ND		1.0	0.71	ug/L		10/12/22 13:18	10/15/22 15:13	1
Fluoranthene	0.24		0.20	0.063	ug/L		10/12/22 13:18	10/15/22 15:13	1
Fluorene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/15/22 15:13	1
Hexachlorobenzene	ND		0.20	0.058	ug/L		10/12/22 13:18	10/15/22 15:13	1
Hexachlorobutadiene	ND		0.20	0.072	ug/L		10/12/22 13:18	10/15/22 15:13	1
Hexachlorocyclopentadiene	ND		1.0	0.52	ug/L		10/12/22 13:18	10/15/22 15:13	1
Hexachloroethane	ND		1.0	0.14	ug/L		10/12/22 13:18	10/15/22 15:13	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.089	ug/L		10/12/22 13:18	10/15/22 15:13	1
Isophorone	ND		1.0	0.20	ug/L		10/12/22 13:18	10/15/22 15:13	1
Methylphenol, 3 & 4	ND		1.0	0.39	ug/L		10/12/22 13:18	10/15/22 15:13	1
Nitrobenzene	ND		2.1	0.52	ug/L		10/12/22 13:18	10/15/22 15:13	1
N-Nitrosodi-n-propylamine	ND		0.20	0.074	ug/L		10/12/22 13:18	10/15/22 15:13	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/12/22 13:18	10/15/22 15:13	1
Phenanthrene	0.36		0.20	0.057	ug/L		10/12/22 13:18	10/15/22 15:13	1
Phenol	ND		1.0	0.51	ug/L		10/12/22 13:18	10/15/22 15:13	1
Pyrene	0.14	J	0.20	0.056	ug/L		10/12/22 13:18	10/15/22 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		23 - 128	10/12/22 13:18	10/15/22 15:13	1
2-Fluorobiphenyl	60		20 - 105	10/12/22 13:18	10/15/22 15:13	1
2-Fluorophenol (Surr)	54		20 - 105	10/12/22 13:18	10/15/22 15:13	1
Nitrobenzene-d5 (Surr)	73		20 - 107	10/12/22 13:18	10/15/22 15:13	1
Phenol-d5 (Surr)	59		20 - 106	10/12/22 13:18	10/15/22 15:13	1
Terphenyl-d14 (Surr)	77		22 - 120	10/12/22 13:18	10/15/22 15:13	1

**Client Sample ID: SUPE-EB2-100522**

**Lab Sample ID: 180-145920-4**

Date Collected: 10/05/22 19:45

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 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			10/15/22 13:26	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-EB2-100522**

**Lab Sample ID: 180-145920-4**

Date Collected: 10/05/22 19:45

Matrix: Water

Date Received: 10/08/22 12:59

## Method: SW846 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			10/15/22 13:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 13:26	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 13:26	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 13:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 13:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 13:26	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 13:26	1
<b>Naphthalene</b>	<b>0.86</b>	<b>J</b>	1.0	0.43	ug/L			10/15/22 13:26	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 13:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 13:26	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 13:26	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 13:26	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 13:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 13:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		10/15/22 13:26	1
4-Bromofluorobenzene (Surr)	99		73 - 120		10/15/22 13:26	1
Dibromofluoromethane (Surr)	101		75 - 123		10/15/22 13:26	1
Toluene-d8 (Surr)	98		80 - 120		10/15/22 13:26	1

## Method: SW846 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.1	0.37	ug/L		10/12/22 09:00	10/14/22 02:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		24 - 146	10/12/22 09:00	10/14/22 02:54	1
2-Fluorobiphenyl	98		37 - 120	10/12/22 09:00	10/14/22 02:54	1
2-Fluorophenol (Surr)	49		10 - 120	10/12/22 09:00	10/14/22 02:54	1
Nitrobenzene-d5 (Surr)	77		26 - 120	10/12/22 09:00	10/14/22 02:54	1
Phenol-d5 (Surr)	34		11 - 120	10/12/22 09:00	10/14/22 02:54	1
p-Terphenyl-d14	103		64 - 127	10/12/22 09:00	10/14/22 02:54	1

## Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 15:34	1
1,2-Dichlorobenzene	ND		1.1	0.10	ug/L		10/12/22 13:18	10/15/22 15:34	1
1,3-Dichlorobenzene	ND		1.1	0.11	ug/L		10/12/22 13:18	10/15/22 15:34	1
1,4-Dichlorobenzene	ND		1.1	0.066	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>1-Methylnaphthalene</b>	<b>0.081</b>	<b>J</b>	0.21	0.061	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,3,4,6-Tetrachlorophenol	ND		1.1	0.35	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,3,5,6-Tetrachlorophenol	ND		1.1	0.55	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,4,5-Trichlorophenol	ND		1.1	0.27	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,4,6-Trichlorophenol	ND		1.1	0.24	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,4-Dichlorophenol	ND		0.21	0.055	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,4-Dimethylphenol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,4-Dinitrophenol	ND		1.1	1.7	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,4-Dinitrotoluene	ND		1.1	0.38	ug/L		10/12/22 13:18	10/15/22 15:34	1
2,6-Dinitrotoluene	ND		1.1	0.19	ug/L		10/12/22 13:18	10/15/22 15:34	1
2-Chloronaphthalene	ND		0.21	0.064	ug/L		10/12/22 13:18	10/15/22 15:34	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-EB2-100522**

**Lab Sample ID: 180-145920-4**

Date Collected: 10/05/22 19:45

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>2-Methylnaphthalene</b>	<b>0.17</b>	<b>J</b>	0.21	0.067	ug/L		10/12/22 13:18	10/15/22 15:34	1
2-Methylphenol	ND		1.1	0.33	ug/L		10/12/22 13:18	10/15/22 15:34	1
2-Nitroaniline	ND		5.4	0.60	ug/L		10/12/22 13:18	10/15/22 15:34	1
2-Nitrophenol	ND		1.1	0.21	ug/L		10/12/22 13:18	10/15/22 15:34	1
3,3'-Dichlorobenzidine	ND		1.1	0.63	ug/L		10/12/22 13:18	10/15/22 15:34	1
3-Nitroaniline	ND		5.4	0.48	ug/L		10/12/22 13:18	10/15/22 15:34	1
4,6-Dinitro-2-methylphenol	ND		5.4	1.6	ug/L		10/12/22 13:18	10/15/22 15:34	1
4-Bromophenyl phenyl ether	ND		1.1	0.35	ug/L		10/12/22 13:18	10/15/22 15:34	1
4-Chloro-3-methylphenol	ND		1.1	0.30	ug/L		10/12/22 13:18	10/15/22 15:34	1
4-Chloroaniline	ND		1.1	0.41	ug/L		10/12/22 13:18	10/15/22 15:34	1
4-Chlorophenyl phenyl ether	ND		1.1	0.24	ug/L		10/12/22 13:18	10/15/22 15:34	1
4-Nitroaniline	ND		5.4	0.39	ug/L		10/12/22 13:18	10/15/22 15:34	1
4-Nitrophenol	ND		5.4	1.0	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Acenaphthene</b>	<b>0.21</b>		0.21	0.071	ug/L		10/12/22 13:18	10/15/22 15:34	1
Acenaphthylene	ND		0.21	0.071	ug/L		10/12/22 13:18	10/15/22 15:34	1
Anthracene	ND		0.21	0.053	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzo[a]anthracene	ND		0.21	0.082	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzo[a]pyrene	ND		0.21	0.058	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzo[b]fluoranthene	ND		0.21	0.11	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzo[g,h,i]perylene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzo[k]fluoranthene	ND		0.21	0.096	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzoic acid	ND		5.4	1.0	ug/L		10/12/22 13:18	10/15/22 15:34	1
Benzyl alcohol	ND		1.1	0.18	ug/L		10/12/22 13:18	10/15/22 15:34	1
Bis(2-chloroethoxy)methane	ND		1.1	0.17	ug/L		10/12/22 13:18	10/15/22 15:34	1
Bis(2-chloroethyl)ether	ND		0.21	0.043	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>11</b>		11	6.8	ug/L		10/12/22 13:18	10/15/22 15:34	1
bis(chloroisopropyl) ether	ND		0.21	0.063	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Butyl benzyl phthalate</b>	<b>1.2</b>		1.1	0.50	ug/L		10/12/22 13:18	10/15/22 15:34	1
Chrysene	ND		0.21	0.088	ug/L		10/12/22 13:18	10/15/22 15:34	1
Dibenz(a,h)anthracene	ND		0.21	0.078	ug/L		10/12/22 13:18	10/15/22 15:34	1
Dibenzofuran	ND		1.1	0.21	ug/L		10/12/22 13:18	10/15/22 15:34	1
Diethyl phthalate	ND		1.1	0.62	ug/L		10/12/22 13:18	10/15/22 15:34	1
Dimethyl phthalate	ND		1.1	0.22	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Di-n-butyl phthalate</b>	<b>1.7</b>		1.1	0.81	ug/L		10/12/22 13:18	10/15/22 15:34	1
Di-n-octyl phthalate	ND		1.1	0.74	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Fluoranthene</b>	<b>0.12</b>	<b>J</b>	0.21	0.065	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Fluorene</b>	<b>0.12</b>	<b>J</b>	0.21	0.075	ug/L		10/12/22 13:18	10/15/22 15:34	1
Hexachlorobenzene	ND		0.21	0.061	ug/L		10/12/22 13:18	10/15/22 15:34	1
Hexachlorobutadiene	ND		0.21	0.075	ug/L		10/12/22 13:18	10/15/22 15:34	1
Hexachlorocyclopentadiene	ND		1.1	0.54	ug/L		10/12/22 13:18	10/15/22 15:34	1
Hexachloroethane	ND		1.1	0.14	ug/L		10/12/22 13:18	10/15/22 15:34	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.092	ug/L		10/12/22 13:18	10/15/22 15:34	1
Isophorone	ND		1.1	0.20	ug/L		10/12/22 13:18	10/15/22 15:34	1
Methylphenol, 3 & 4	ND		1.1	0.40	ug/L		10/12/22 13:18	10/15/22 15:34	1
Nitrobenzene	ND		2.2	0.54	ug/L		10/12/22 13:18	10/15/22 15:34	1
N-Nitrosodi-n-propylamine	ND		0.21	0.077	ug/L		10/12/22 13:18	10/15/22 15:34	1
N-Nitrosodiphenylamine	ND		1.1	0.13	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Phenanthrene</b>	<b>0.30</b>		0.21	0.060	ug/L		10/12/22 13:18	10/15/22 15:34	1

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# Client Sample Results

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

Job ID: 180-145920-1

**Client Sample ID: SUPE-EB2-100522**

**Lab Sample ID: 180-145920-4**

Date Collected: 10/05/22 19:45

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		1.1	0.53	ug/L		10/12/22 13:18	10/15/22 15:34	1
<b>Pyrene</b>	<b>0.073</b>	<b>J</b>	0.21	0.059	ug/L		10/12/22 13:18	10/15/22 15:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		23 - 128				10/12/22 13:18	10/15/22 15:34	1
2-Fluorobiphenyl	55		20 - 105				10/12/22 13:18	10/15/22 15:34	1
2-Fluorophenol (Surr)	53		20 - 105				10/12/22 13:18	10/15/22 15:34	1
Nitrobenzene-d5 (Surr)	66		20 - 107				10/12/22 13:18	10/15/22 15:34	1
Phenol-d5 (Surr)	56		20 - 106				10/12/22 13:18	10/15/22 15:34	1
Terphenyl-d14 (Surr)	72		22 - 120				10/12/22 13:18	10/15/22 15:34	1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 180-145920-5**

Date Collected: 10/05/22 00:00

Matrix: Water

Date Received: 10/08/22 12:59

**Method: SW846 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			10/15/22 13:48	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 13:48	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 13:48	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 13:48	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 13:48	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 13:48	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 13:48	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 13:48	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 13:48	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 13:48	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 13:48	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 13:48	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 13:48	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 13:48	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120					10/15/22 13:48	1
4-Bromofluorobenzene (Surr)	102		73 - 120					10/15/22 13:48	1
Dibromofluoromethane (Surr)	100		75 - 123					10/15/22 13:48	1
Toluene-d8 (Surr)	100		80 - 120					10/15/22 13:48	1

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# QC Sample Results

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

Job ID: 180-145920-1

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

**Lab Sample ID: MB 480-645606/7**  
**Matrix: Water**  
**Analysis Batch: 645606**

**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			10/15/22 11:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/15/22 11:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/15/22 11:49	1
Benzene	ND		1.0	0.41	ug/L			10/15/22 11:49	1
Chloromethane	ND		1.0	0.35	ug/L			10/15/22 11:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/15/22 11:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/15/22 11:49	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/15/22 11:49	1
Naphthalene	ND		1.0	0.43	ug/L			10/15/22 11:49	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/15/22 11:49	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/15/22 11:49	1
o-Xylene	ND		1.0	0.76	ug/L			10/15/22 11:49	1
Styrene	ND		1.0	0.73	ug/L			10/15/22 11:49	1
Toluene	ND		1.0	0.51	ug/L			10/15/22 11:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/15/22 11:49	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		10/15/22 11:49	1
4-Bromofluorobenzene (Surr)	101		73 - 120		10/15/22 11:49	1
Dibromofluoromethane (Surr)	101		75 - 123		10/15/22 11:49	1
Toluene-d8 (Surr)	99		80 - 120		10/15/22 11:49	1

**Lab Sample ID: LCS 480-645606/5**  
**Matrix: Water**  
**Analysis Batch: 645606**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trimethylbenzene	25.0	25.1		ug/L		100	76 - 121
1,3,5-Trimethylbenzene	25.0	25.7		ug/L		103	77 - 121
Benzene	25.0	26.0		ug/L		104	71 - 124
Chloromethane	25.0	26.1		ug/L		104	68 - 124
Ethylbenzene	25.0	25.8		ug/L		103	77 - 123
Methyl tert-butyl ether	25.0	23.3		ug/L		93	77 - 120
m-Xylene & p-Xylene	25.0	25.7		ug/L		103	76 - 122
Naphthalene	25.0	24.6		ug/L		98	66 - 125
n-Butylbenzene	25.0	27.6		ug/L		111	71 - 128
N-Propylbenzene	25.0	26.7		ug/L		107	75 - 127
o-Xylene	25.0	25.1		ug/L		100	76 - 122
Styrene	25.0	25.0		ug/L		100	80 - 120
Toluene	25.0	25.8		ug/L		103	80 - 122
Xylenes, Total	50.0	50.8		ug/L		102	76 - 122

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	101		80 - 120

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# QC Sample Results

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

Job ID: 180-145920-1

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

**Lab Sample ID: MB 480-645029/1-A**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 645029**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/12/22 09:00	10/13/22 21:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		24 - 146				10/12/22 09:00	10/13/22 21:19	1
2-Fluorobiphenyl	99		37 - 120				10/12/22 09:00	10/13/22 21:19	1
2-Fluorophenol (Surr)	49		10 - 120				10/12/22 09:00	10/13/22 21:19	1
Nitrobenzene-d5 (Surr)	73		26 - 120				10/12/22 09:00	10/13/22 21:19	1
Phenol-d5 (Surr)	33		11 - 120				10/12/22 09:00	10/13/22 21:19	1
p-Terphenyl-d14	101		64 - 127				10/12/22 09:00	10/13/22 21:19	1

**Lab Sample ID: LCS 480-645029/2-A**  
**Matrix: Water**  
**Analysis Batch: 645323**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 645029**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	16.0	13.5		ug/L		84	10 - 131
Surrogate	%Recovery	Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	106		24 - 146				
2-Fluorobiphenyl	95		37 - 120				
2-Fluorophenol (Surr)	51		10 - 120				
Nitrobenzene-d5 (Surr)	79		26 - 120				
Phenol-d5 (Surr)	36		11 - 120				
p-Terphenyl-d14	94		64 - 127				

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 180-414851/1-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	0.13	ug/L		10/12/22 13:18	10/14/22 13:18	1
1,2-Dichlorobenzene	ND		1.0	0.095	ug/L		10/12/22 13:18	10/14/22 13:18	1
1,3-Dichlorobenzene	ND		1.0	0.099	ug/L		10/12/22 13:18	10/14/22 13:18	1
1,4-Dichlorobenzene	ND		1.0	0.061	ug/L		10/12/22 13:18	10/14/22 13:18	1
1-Methylnaphthalene	ND		0.19	0.056	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,3,4,6-Tetrachlorophenol	ND		1.0	0.33	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,3,5,6-Tetrachlorophenol	ND		1.0	0.51	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4,5-Trichlorophenol	ND		1.0	0.25	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4,6-Trichlorophenol	ND		1.0	0.22	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dichlorophenol	ND		0.19	0.051	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dimethylphenol	ND		1.0	0.17	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dinitrophenol	ND		10	1.5	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,4-Dinitrotoluene	ND		1.0	0.35	ug/L		10/12/22 13:18	10/14/22 13:18	1
2,6-Dinitrotoluene	ND		1.0	0.17	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Chloronaphthalene	ND		0.19	0.059	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Chlorophenol	ND		1.0	0.13	ug/L		10/12/22 13:18	10/14/22 13:18	1

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# QC Sample Results

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

Job ID: 180-145920-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-414851/1-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
2-Methylnaphthalene	ND		0.19	0.062	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Methylphenol	ND		1.0	0.30	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Nitroaniline	ND		5.0	0.55	ug/L		10/12/22 13:18	10/14/22 13:18	1
2-Nitrophenol	ND		1.0	0.19	ug/L		10/12/22 13:18	10/14/22 13:18	1
3,3'-Dichlorobenzidine	ND		1.0	0.58	ug/L		10/12/22 13:18	10/14/22 13:18	1
3-Nitroaniline	ND		5.0	0.44	ug/L		10/12/22 13:18	10/14/22 13:18	1
4,6-Dinitro-2-methylphenol	ND		5.0	1.5	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Bromophenyl phenyl ether	ND		1.0	0.32	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Chloro-3-methylphenol	ND		1.0	0.28	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Chloroaniline	ND		1.0	0.38	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Chlorophenyl phenyl ether	ND		1.0	0.22	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Nitroaniline	ND		5.0	0.36	ug/L		10/12/22 13:18	10/14/22 13:18	1
4-Nitrophenol	ND		5.0	0.94	ug/L		10/12/22 13:18	10/14/22 13:18	1
Acenaphthene	ND		0.19	0.065	ug/L		10/12/22 13:18	10/14/22 13:18	1
Acenaphthylene	ND		0.19	0.065	ug/L		10/12/22 13:18	10/14/22 13:18	1
Anthracene	ND		0.19	0.049	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[a]anthracene	ND		0.19	0.075	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[a]pyrene	ND		0.19	0.053	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[b]fluoranthene	ND		0.19	0.097	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[g,h,i]perylene	ND		0.19	0.069	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzo[k]fluoranthene	ND		0.19	0.088	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzoic acid	ND		5.0	0.92	ug/L		10/12/22 13:18	10/14/22 13:18	1
Benzyl alcohol	ND		1.0	0.16	ug/L		10/12/22 13:18	10/14/22 13:18	1
Bis(2-chloroethoxy)methane	ND		1.0	0.15	ug/L		10/12/22 13:18	10/14/22 13:18	1
Bis(2-chloroethyl)ether	ND		0.19	0.040	ug/L		10/12/22 13:18	10/14/22 13:18	1
Bis(2-ethylhexyl) phthalate	ND		10	6.2	ug/L		10/12/22 13:18	10/14/22 13:18	1
bis(chloroisopropyl) ether	ND		0.19	0.058	ug/L		10/12/22 13:18	10/14/22 13:18	1
Butyl benzyl phthalate	ND		1.0	0.46	ug/L		10/12/22 13:18	10/14/22 13:18	1
Chrysene	ND		0.19	0.081	ug/L		10/12/22 13:18	10/14/22 13:18	1
Dibenz(a,h)anthracene	ND		0.19	0.072	ug/L		10/12/22 13:18	10/14/22 13:18	1
Dibenzofuran	ND		1.0	0.19	ug/L		10/12/22 13:18	10/14/22 13:18	1
Diethyl phthalate	ND		1.0	0.57	ug/L		10/12/22 13:18	10/14/22 13:18	1
Dimethyl phthalate	ND		1.0	0.20	ug/L		10/12/22 13:18	10/14/22 13:18	1
Di-n-butyl phthalate	ND		1.0	0.74	ug/L		10/12/22 13:18	10/14/22 13:18	1
Di-n-octyl phthalate	ND		1.0	0.69	ug/L		10/12/22 13:18	10/14/22 13:18	1
Fluoranthene	ND		0.19	0.060	ug/L		10/12/22 13:18	10/14/22 13:18	1
Fluorene	ND		0.19	0.069	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachlorobenzene	ND		0.19	0.056	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachlorobutadiene	ND		0.19	0.069	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachlorocyclopentadiene	ND		1.0	0.50	ug/L		10/12/22 13:18	10/14/22 13:18	1
Hexachloroethane	ND		1.0	0.13	ug/L		10/12/22 13:18	10/14/22 13:18	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.085	ug/L		10/12/22 13:18	10/14/22 13:18	1
Isophorone	ND		1.0	0.19	ug/L		10/12/22 13:18	10/14/22 13:18	1
Methylphenol, 3 & 4	ND		1.0	0.37	ug/L		10/12/22 13:18	10/14/22 13:18	1
Nitrobenzene	ND		2.0	0.50	ug/L		10/12/22 13:18	10/14/22 13:18	1
N-Nitrosodi-n-propylamine	ND		0.19	0.071	ug/L		10/12/22 13:18	10/14/22 13:18	1
N-Nitrosodiphenylamine	ND		1.0	0.12	ug/L		10/12/22 13:18	10/14/22 13:18	1
Phenanthrene	ND		0.19	0.055	ug/L		10/12/22 13:18	10/14/22 13:18	1
Phenol	ND		1.0	0.49	ug/L		10/12/22 13:18	10/14/22 13:18	1

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# QC Sample Results

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

Job ID: 180-145920-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-414851/1-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	ND		0.19	0.054	ug/L		10/12/22 13:18	10/14/22 13:18	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		23 - 128				10/12/22 13:18	10/14/22 13:18	1
2-Fluorobiphenyl	90		20 - 105				10/12/22 13:18	10/14/22 13:18	1
2-Fluorophenol (Surr)	93		20 - 105				10/12/22 13:18	10/14/22 13:18	1
Nitrobenzene-d5 (Surr)	104		20 - 107				10/12/22 13:18	10/14/22 13:18	1
Phenol-d5 (Surr)	88		20 - 106				10/12/22 13:18	10/14/22 13:18	1
Terphenyl-d14 (Surr)	69		22 - 120				10/12/22 13:18	10/14/22 13:18	1

**Lab Sample ID: LCS 180-414851/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	20.0	15.3		ug/L		77	51 - 100
1,2-Dichlorobenzene	20.0	15.5		ug/L		77	51 - 100
1,3-Dichlorobenzene	20.0	15.7		ug/L		78	51 - 100
1,4-Dichlorobenzene	20.0	15.6		ug/L		78	52 - 100
1-Methylnaphthalene	20.0	15.2		ug/L		76	53 - 100
2,3,4,6-Tetrachlorophenol	20.0	15.5		ug/L		78	50 - 100
2,4,5-Trichlorophenol	20.0	16.9		ug/L		85	55 - 100
2,4,6-Trichlorophenol	20.0	17.3		ug/L		87	54 - 100
2,4-Dichlorophenol	20.0	16.0		ug/L		80	55 - 100
2,4-Dimethylphenol	20.0	16.3		ug/L		81	51 - 100
2,4-Dinitrophenol	40.0	28.3		ug/L		71	32 - 100
2,4-Dinitrotoluene	20.0	17.3		ug/L		86	56 - 100
2,6-Dinitrotoluene	20.0	17.2		ug/L		86	56 - 101
2-Chloronaphthalene	20.0	16.4		ug/L		82	52 - 100
2-Chlorophenol	20.0	16.0		ug/L		80	53 - 100
2-Methylnaphthalene	20.0	17.3		ug/L		86	53 - 100
2-Methylphenol	20.0	15.7		ug/L		79	51 - 100
2-Nitroaniline	20.0	18.7		ug/L		93	47 - 104
2-Nitrophenol	20.0	18.9		ug/L		94	56 - 100
3,3'-Dichlorobenzidine	20.0	14.5		ug/L		72	42 - 100
3-Nitroaniline	20.0	17.3		ug/L		87	54 - 100
4,6-Dinitro-2-methylphenol	40.0	32.7		ug/L		82	48 - 100
4-Bromophenyl phenyl ether	20.0	16.7		ug/L		83	50 - 100
4-Chloro-3-methylphenol	20.0	15.9		ug/L		79	47 - 105
4-Chloroaniline	20.0	15.0		ug/L		75	48 - 100
4-Chlorophenyl phenyl ether	20.0	15.7		ug/L		79	52 - 100
4-Nitroaniline	20.0	17.0		ug/L		85	54 - 100
4-Nitrophenol	40.0	33.2		ug/L		83	37 - 120
Acenaphthene	20.0	15.6		ug/L		78	51 - 100
Acenaphthylene	20.0	16.2		ug/L		81	54 - 100
Anthracene	20.0	16.3		ug/L		82	54 - 100
Benzo[a]anthracene	20.0	16.8		ug/L		84	52 - 100
Benzo[a]pyrene	20.0	16.4		ug/L		82	52 - 100

Eurofins Pittsburgh

# QC Sample Results

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

Job ID: 180-145920-1

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-414851/2-A**  
**Matrix: Water**  
**Analysis Batch: 415129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 414851**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[b]fluoranthene	20.0	17.6		ug/L		88	50 - 100
Benzo[g,h,i]perylene	20.0	16.1		ug/L		81	53 - 100
Benzo[k]fluoranthene	20.0	16.3		ug/L		82	49 - 100
Benzoic acid	20.0	17.4		ug/L		87	31 - 122
Benzyl alcohol	20.0	15.6		ug/L		78	33 - 107
Bis(2-chloroethoxy)methane	20.0	14.8		ug/L		74	49 - 100
Bis(2-chloroethyl)ether	20.0	15.2		ug/L		76	46 - 100
Bis(2-ethylhexyl) phthalate	20.0	20.2		ug/L		101	52 - 101
bis(chloroisopropyl) ether	20.0	15.2		ug/L		76	29 - 102
Butyl benzyl phthalate	20.0	19.7		ug/L		99	52 - 100
Chrysene	20.0	15.5		ug/L		78	51 - 100
Dibenz(a,h)anthracene	20.0	16.6		ug/L		83	52 - 101
Dibenzofuran	20.0	15.3		ug/L		76	53 - 100
Diethyl phthalate	20.0	15.3		ug/L		77	52 - 100
Dimethyl phthalate	20.0	15.4		ug/L		77	55 - 100
Di-n-butyl phthalate	20.0	16.9		ug/L		85	57 - 100
Di-n-octyl phthalate	20.0	19.7		ug/L		98	41 - 100
Fluoranthene	20.0	15.8		ug/L		79	56 - 100
Fluorene	20.0	15.7		ug/L		78	53 - 100
Hexachlorobenzene	20.0	15.8		ug/L		79	46 - 100
Hexachlorobutadiene	20.0	15.7		ug/L		79	42 - 101
Hexachlorocyclopentadiene	20.0	19.6		ug/L		98	38 - 102
Hexachloroethane	20.0	16.1		ug/L		80	46 - 100
Indeno[1,2,3-cd]pyrene	20.0	16.7		ug/L		83	54 - 100
Isophorone	20.0	16.0		ug/L		80	50 - 100
Methylphenol, 3 & 4	20.0	15.2		ug/L		76	51 - 100
Nitrobenzene	20.0	18.3		ug/L		91	47 - 100
N-Nitrosodi-n-propylamine	20.0	16.5		ug/L		83	43 - 103
N-Nitrosodiphenylamine	20.0	17.8		ug/L		89	53 - 100
Phenanthrene	20.0	16.1		ug/L		81	53 - 100
Phenol	20.0	15.7		ug/L		78	49 - 100
Pyrene	20.0	18.0		ug/L		90	53 - 100

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	84		23 - 128
2-Fluorobiphenyl	79		20 - 105
2-Fluorophenol (Surr)	81		20 - 105
Nitrobenzene-d5 (Surr)	91		20 - 107
Phenol-d5 (Surr)	79		20 - 106
Terphenyl-d14 (Surr)	84		22 - 120

# QC Association Summary

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

Job ID: 180-145920-1

## GC/MS VOA

### Analysis Batch: 645606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145920-1	SUPE-M-099A-100522	Total/NA	Water	8260C	
180-145920-2	SUPE-W-28C-100522	Total/NA	Water	8260C	
180-145920-3	SUPE-W-04AR2-100522	Total/NA	Water	8260C	
180-145920-4	SUPE-EB2-100522	Total/NA	Water	8260C	
180-145920-5	TRIP BLANK	Total/NA	Water	8260C	
MB 480-645606/7	Method Blank	Total/NA	Water	8260C	
LCS 480-645606/5	Lab Control Sample	Total/NA	Water	8260C	

## GC/MS Semi VOA

### Prep Batch: 414851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145920-1	SUPE-M-099A-100522	Total/NA	Water	3520C	
180-145920-2	SUPE-W-28C-100522	Total/NA	Water	3520C	
180-145920-3	SUPE-W-04AR2-100522	Total/NA	Water	3520C	
180-145920-4	SUPE-EB2-100522	Total/NA	Water	3520C	
MB 180-414851/1-A	Method Blank	Total/NA	Water	3520C	
LCS 180-414851/2-A	Lab Control Sample	Total/NA	Water	3520C	

### Analysis Batch: 415129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-414851/1-A	Method Blank	Total/NA	Water	EPA 8270E LL	414851
LCS 180-414851/2-A	Lab Control Sample	Total/NA	Water	EPA 8270E LL	414851

### Analysis Batch: 415201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145920-1	SUPE-M-099A-100522	Total/NA	Water	EPA 8270E LL	414851
180-145920-2	SUPE-W-28C-100522	Total/NA	Water	EPA 8270E LL	414851
180-145920-3	SUPE-W-04AR2-100522	Total/NA	Water	EPA 8270E LL	414851
180-145920-4	SUPE-EB2-100522	Total/NA	Water	EPA 8270E LL	414851

### Prep Batch: 645029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145920-1	SUPE-M-099A-100522	Total/NA	Water	3510C	
180-145920-2	SUPE-W-28C-100522	Total/NA	Water	3510C	
180-145920-3	SUPE-W-04AR2-100522	Total/NA	Water	3510C	
180-145920-4	SUPE-EB2-100522	Total/NA	Water	3510C	
MB 480-645029/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-645029/2-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 645323

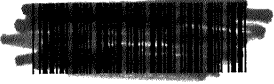
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145920-1	SUPE-M-099A-100522	Total/NA	Water	8270D LL	645029
180-145920-2	SUPE-W-28C-100522	Total/NA	Water	8270D LL	645029
180-145920-3	SUPE-W-04AR2-100522	Total/NA	Water	8270D LL	645029
180-145920-4	SUPE-EB2-100522	Total/NA	Water	8270D LL	645029
MB 480-645029/1-A	Method Blank	Total/NA	Water	8270D LL	645029
LCS 480-645029/2-A	Lab Control Sample	Total/NA	Water	8270D LL	645029



Ref 210311

# CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 502015



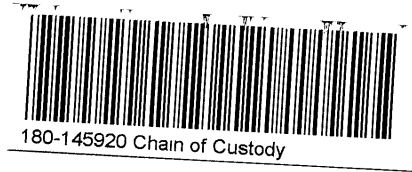
TestAmerica Duluth SC  
269

Project Name: Superior, WI - 2022 OM&M Program  
 Project Number: OM-0556-22  
 Laboratory: TACHI  
 Shipment Method: Courier  
 Program: Superior 2022 2SA Sampling\_001

Company: Field & Technical Services  
 Address: 200 Third Avenue  
 Carnegie, PA 15106  
 (412) 279-3363

Client: Beazer East, Inc.  
 Contact: mferrick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8270D_SVOC (less naphtha) (Chicago)																	Notes:	
						Preservative	Total Bottle Count																
					None																		
10/05/2022	1300	GW	SUPE-M-099A-100522		2	2																	
10/05/2022	1751	GW	SUPE-W-28C-100522		2	2																	
10/05/2022	1925	GW	SUPE-W-04AR2-100522		2	2																	
10/05/2022	1945	GW	SUPE-EB2-100522		2	2																	



Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
<i>Marie Ferrick</i>	Signature: <i>Melissa Gascon</i>	Signature: <i>Marie Ferrick</i>	Signature: <i>Marie Ferrick</i>	<input checked="" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard
Printed Name: Marie Ferrick	Printed Name: Melissa Gascon	Printed Name: Marie Ferrick	Printed Name: Marie Ferrick	
Firm: FTS	Firm: Euroferio	Firm:	Firm: FTS	
Date/Time: 10/05/2022 1957	Date/Time: 10/7/22 0800	Date/Time: 10/5/22 1520	Date/Time: 10/8/22 900	

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10/20/2022



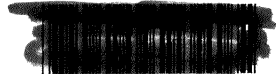


Ref 210311

## CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 502016

TestAmerica Duluth SC  
269

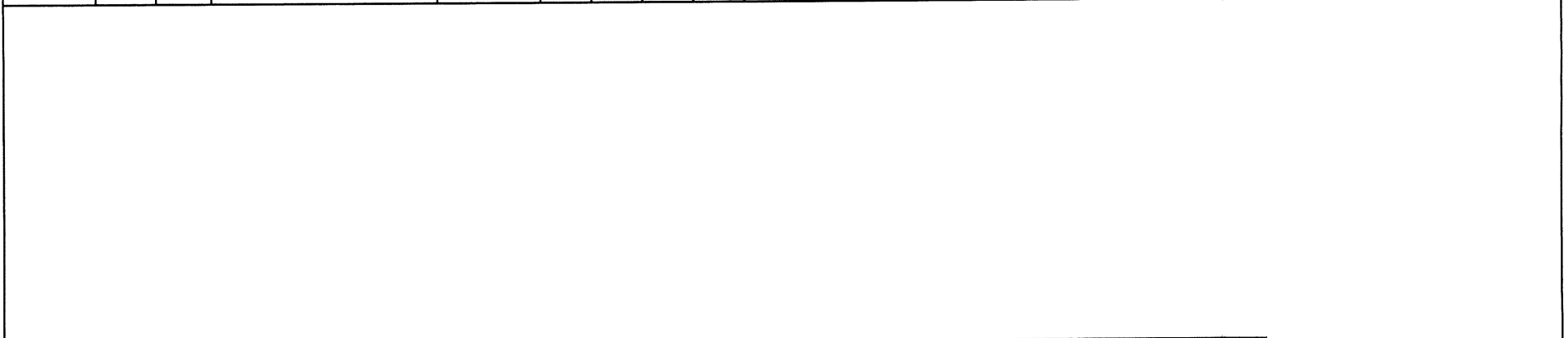


Project Name: Superior, WI - 2022 OM&M Program  
 Project Number: OM-0556-22  
 Laboratory: TABUF  
 Shipment Method: Courier  
 Program: Superior 2022 2SA Sampling\_001

Company: Field & Technical Services  
 Address: 200 Third Avenue  
 Carnegie, PA 15106  
 (412) 279-3363

Client: Beazer East, Inc.  
 Contact: mferrick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8270D_LL_PCP (Buffalo) (1L)	8260C_VOA+naphtha (Buffalo)																	
					Preservative	None	HCL																
				Total Bottle Count																	Notes:		
10/05/2022	1300	GW	SUPE-M-099A-100522	5	2	3																	
10/05/2022	1751	GW	SUPE-W-28C-100522	5	2	3																	
10/05/2022	1925	GW	SUPE-W-04AR2-100522	5	2	3																	
10/05/2022	1945	GW	SUPE-EB2-100522	5	2	3																	



Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
<i>Marie Ferrick</i>	<i>Melissa Gascon</i>	<i>Melissa Gascon</i>		<input checked="" type="checkbox"/> Rush <input type="checkbox"/> Next Day <input type="checkbox"/> Standard
Printed Name: Marie Ferrick	Signature: Melissa Gascon	Signature: Melissa Gascon	Printed Name:	
Firm: FTS	Date/Time: 10/5/22 0800	Firm: Eurofins	Date/Time: 10/5/22 1500	
Date/Time: 10/05/2022 1958				

Page 27 of 32

10/20/2022



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- 13

10.08

ORIGIN ID:DLHA (7.5) 394-3674

TESTAMERICA DULUTH SVC  
63 E 2ND ST STE 100

SUPERIOR, WI 54880  
UNITED STATES US

SHIP DATE: 07OCT22  
ACTWGT: 70.15 LB MAN  
CAD: 0669741/CAFE3612

BILL RECEIPT

TO **CARRIE GAMBER**  
**EUROFINS TESTAMERICA - PITTSBURGH**  
**301 ALPHA DR**

577CL/ACSF/482A

**PITTSBURGH PA 15238**

(318) 490-4780

REF: FTS/KOPPERS



**FedEx**  
Express



J222022032801UY

TRK# 4546 9355 9386  
0201

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

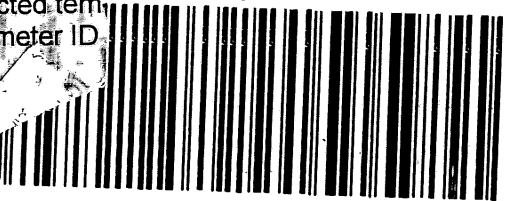
**XO AGCA**

**15238**  
**PA-US PIT**

3173 13 - 3770 EXP 07/20 6

Uncorrected tem  
Thermometer ID

CF - 2  
PT-WI-F



180-145920 Waybill

10.08

ORIGIN ID:DLHA (7.5) 394-3674

TESTAMERICA DULUTH SVC  
63 E 2ND ST STE 100

SUPERIOR, WI 54880  
UNITED STATES US

SHIP DATE: 07OCT22  
ACTWGT: 70.15 LB MAN  
CAD: 0669741/CAFE3612

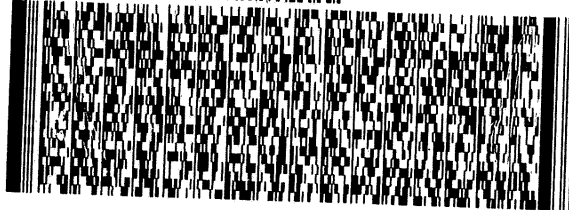
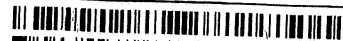
BILL RECEIPT

TO: **CARRIE GAMBER**  
**EUROFINS TESTAMERICA - PITTSBURGH**  
**301 ALPHA DR**

**PITTSBURGH PA 15238**

(318) 490-4780

REF: FTS/KOPPERS



**FedEx**  
Express



J22202032801 0V

TRK# 4546 9355 9386  
0201

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

**XO AGCA**

**15238**  
PA-US **PIT**

Uncorrected tem  
Thermometer ID

CF - 1

PT-W-F



180-145920 Waybill

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# Eurofins Pittsburgh

301 Alpha Drive RIDC Park  
Pittsburgh, PA 15238  
Phone: 412-963-7058 Fax: 412-963-2468

## Chain of Custody Record



Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>				Sampler: Brown, Shali		Lab PM: Brown, Shali		Carrier Tracking No(s):			COC No: 180-471267.1					
Client Contact: Shipping/Receiving				Phone:		E-Mail: Shali.Brown@et.eurofinsus.com		State of Origin: Wisconsin			Page: Page 1 of 1					
Company: Eurofins Environment Testing Northeast,				Accreditations Required (See note): State - Wisconsin; State Program - Wisconsin		Job #: 180-145920-1										
Address: 10 Hazelwood Drive,				Due Date Requested: 10/31/2022		<b>Analysis Requested</b>						<b>Preservation Codes:</b> A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)  <b>Other:</b>				
City: Amherst				TAT Requested (days):												
State, Zip: NY, 14228-2298				PO #:		<b>Total Number of containers</b>						<b>Special Instructions/Note:</b>				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)				WO #:												
Email:				Project #: 18015916		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8260C/5030C (MOD) Volatiles, project list 8270D_LL5510C_LL (MOD) Pentachlorophenol										
Project Name: Superior, WI Semiannual Groundwater				SSOW#:												
Site:				Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Total Number of containers				
<b>Sample Identification - Client ID (Lab ID)</b>				Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8260C/5030C (MOD) Volatiles, project list		8270D_LL5510C_LL (MOD) Pentachlorophenol		Special Instructions/Note:		
SUPE-M-099A-100522 (180-145920-1)				10/5/22		13:00 Central		Water						5 Refer to PT-PM-WI-006 for Wisconsin Protocol		
SUPE-W-28C-100522 (180-145920-2)				10/5/22		17:51 Central		Water		X		X		5 Refer to PT-PM-WI-006 for Wisconsin Protocol		
SUPE-W-04AR2-100522 (180-145920-3)				10/5/22		19:25 Central		Water		X		X		5 Refer to PT-PM-WI-006 for Wisconsin Protocol		
SUPE-EB2-100522 (180-145920-4)				10/5/22		19:45 Central		Water		X		X		5 Refer to PT-PM-WI-006 for Wisconsin Protocol		
TRIP BLANK (180-145920-5)				10/5/22		Central		Water		X				2 Refer to PT-PM-WI-006 for Wisconsin Protocol		

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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 Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

<b>Possible Hazard Identification</b>				<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>							
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>AW</i>		Date/Time: 10-10-22 1200		Company: <i>ETRA</i>		Received by: <i>Gym</i>		Date/Time: 10-11-22 1000		Company: <i>JAB</i>	
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 2.0 2.1 ICE					





## Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-145920-1

**Login Number: 145920**

**List Number: 1**

**Creator: Abernathy, Eric L**

**List Source: Eurofins Pittsburgh**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
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.	N/A	
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.	N/A	



# Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 180-145920-1

**Login Number: 145920**

**List Number: 2**

**Creator: Yeager, Brian A**

**List Source: Eurofins Buffalo**

**List Creation: 10/11/22 12:34 PM**

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	2.0 2.1 ICE
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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	



**APPENDIX D**  
**Data Summary Tables**

**Table D1**  
**Summary of Detected Constituents**  
**First Semi-Annual 2022 Sampling Event**  
**Superior Facility**  
**Superior, Wisconsin**

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L
<b>8270D LL</b>				
W-10AR2	1-Methylnaphthalene	7.1	NA	NA
W-04AR2	2-Methylnaphthalene	0.14 J	NA	NA
W-10AR2	4-Methylphenol	0.37 J	NA	NA
W-04AR2	Acenaphthene	0.77	NA	NA
W-10AR2	Acenaphthene	58	NA	NA
W-10AR2	Acenaphthylene	2.7	NA	NA
W-04AR2	Anthracene	7.3	600	3000
W-10AR2	Anthracene	0.63 J	600	3000
W-30A	Anthracene	0.53 J	600	3000
W-04AR2	Benzo(a)anthracene	1.4	NA	NA
W-10AR2	Benzo(a)anthracene	0.12 J	NA	NA
W-12CR	Benzo(a)anthracene	0.056 J	NA	NA
W-04AR2	Benzo(a)pyrene	0.51	0.02	0.2
W-04AR2	Benzo(b)fluoranthene	1.5	0.02	0.2
W-10AR2	Benzo(b)fluoranthene	0.13	0.02	0.2
W-12CR	Benzo(b)fluoranthene	0.072 J	0.02	0.2
W-04AR2	Benzo(k)fluoranthene	0.65	NA	NA
W-10AR2	Benzo(k)fluoranthene	0.05 J	NA	NA
W-04AR2	Chrysene	2.9	0.02	0.2
W-10AR2	Chrysene	0.22	0.02	0.2
W-12CR	Chrysene	0.093 J	0.02	0.2
W-04AR2	Dibenzo(a,h)anthracene	0.079 J	NA	NA
W-04AR2	Dibenzofuran	1.1 J	NA	NA
W-10AR2	Dibenzofuran	14	NA	NA
W-04AR2	Fluoranthene	15	80	400
W-10AR2	Fluoranthene	2.7	80	400
W-04AR2	Fluorene	2.2	80	400
W-10AR2	Fluorene	12	80	400
W-04AR2	Indeno(1,2,3-cd)pyrene	0.26	NA	NA
W-04AR2	Phenanthrene	7.2	NA	NA
W-10AR2	Phenanthrene	0.48 J	NA	NA
W-10AR2	Phenol	0.49 J	400	2000
W-04AR2	Pyrene	7.2	50	250
W-10AR2	Pyrene	1.5	50	250

**Table D1**  
**Summary of Detected Constituents**  
**First Semi-Annual 2022 Sampling Event**  
**Superior Facility**  
**Superior, Wisconsin**

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L
<b>8260C</b>				
W-10AR2	1,2,4-Trimethylbenzene	5.3	96*	480*
W-10AR2	Benzene	9.4	0.5	5
W-10AR2	Ethylbenzene	16	140	700
W-10AR2	Naphthalene	1.5	10	100
W-30A	Naphthalene	1 J	10	100
W-10AR2	Toluene	1.2	160	800
W-10AR2	Xylene, Meta & Para	2	400**	2000**
W-10AR2	Xylene, Ortho	11	400**	2000**
<b>8290A</b>				
W-04AR2	1,2,3,4,6,7,8-HPCDD	0.000052	NA	NA
W-06A	1,2,3,4,6,7,8-HPCDD	0.000078	NA	NA
W-06C	1,2,3,4,6,7,8-HPCDD	0.000013 JI	NA	NA
W-10AR2	1,2,3,4,6,7,8-HPCDD	0.000023 J	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDD	0.000073 I	NA	NA
W-12CR	1,2,3,4,6,7,8-HPCDD	0.000042 J	NA	NA
W-28C	1,2,3,4,6,7,8-HPCDD	0.000092 J	NA	NA
W-28C DUP	1,2,3,4,6,7,8-HPCDD	0.000014 JI	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDD	0.00067	NA	NA
W-30C	1,2,3,4,6,7,8-HPCDD	0.0000078 J	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDF	0.00022	NA	NA
W-04AR2	1,2,3,4,7,8-HXCDF	0.0000022 J	NA	NA
W-12A	1,2,3,4,7,8-HXCDF	0.000008 J	NA	NA
W-30A	1,2,3,4,7,8-HXCDF	0.000028 J	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDF	0.0000025 JI	NA	NA
W-06A	1,2,3,6,7,8-HXCDF	0.0000024 JI	NA	NA
W-12A	1,2,3,6,7,8-HXCDF	0.0000061 JI	NA	NA
W-12CR	1,2,3,6,7,8-HXCDF	0.0000024 JI	NA	NA
W-30A	1,2,3,6,7,8-HXCDF	0.000044 JI	NA	NA
W-04AR2	1,2,3,7,8,9-HXCDF	0.0000019 J	NA	NA
W-04AR2	1,2,3,7,8-PECDD	0.0000011 JI	NA	NA
W-06A	1,2,3,7,8-PECDD	0.00000074 JI	NA	NA
W-12A	1,2,3,7,8-PECDD	0.00000098 JI	NA	NA
W-28C DUP	1,2,3,7,8-PECDD	0.00000049 J	NA	NA
W-30A	1,2,3,7,8-PECDD	0.00000068 JI	NA	NA
W-04AR2	1,2,3,7,8-PECDF	0.0000009 J	NA	NA
W-12A	1,2,3,7,8-PECDF	0.00000092 J	NA	NA
W-30A	1,2,3,7,8-PECDF	0.000002 JI	NA	NA
W-04AR2	2,3,4,6,7,8-HXCDF	0.0000019 J	NA	NA
W-04AR2	2,3,4,7,8-PECDF	0.00000065 J	NA	NA
W-12A	2,3,4,7,8-PECDF	0.0000016 JI	NA	NA
W-30A	2,3,4,7,8-PECDF	0.0000037 J	NA	NA
W-12A	2,3,7,8-TCDF	0.00000084 J	NA	NA

**Table D1**  
**Summary of Detected Constituents**  
**First Semi-Annual 2022 Sampling Event**  
**Superior Facility**  
**Superior, Wisconsin**

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L
W-04AR2	OCDD	0.00048	NA	NA
W-06A	OCDD	0.00062	NA	NA
W-10AR2	OCDD	0.00021	NA	NA
W-12A	OCDD	0.00038	NA	NA
W-12CR	OCDD	0.00042	NA	NA
W-30A	OCDD	0.0092	NA	NA
W-30A	OCDF	0.00066	NA	NA
W-04AR2	Total HPCDD	0.00027	NA	NA
W-06A	Total HPCDD	0.00029	NA	NA
W-06C	Total HPCDD	0.000036 JI	NA	NA
W-10AR2	Total HPCDD	0.000088	NA	NA
W-12A	Total HPCDD	0.00015 I	NA	NA
W-12CR	Total HPCDD	0.00014	NA	NA
W-28C	Total HPCDD	0.00004 J	NA	NA
W-28C DUP	Total HPCDD	0.000058 JI	NA	NA
W-30A	Total HPCDD	0.0015	NA	NA
W-30C	Total HPCDD	0.000033 J	NA	NA
W-12A	Total HPCDF	0.00006	NA	NA
W-30A	Total HPCDF	0.00095	NA	NA
W-30A	Total HXCDD	0.0001 IS	NA	NA
W-04AR2	Total HXCDF	0.000029 JI	NA	NA
W-06A	Total HXCDF	0.000037 JI	NA	NA
W-06C	Total HXCDF	0.0000039 JI	NA	NA
W-10AR2	Total HXCDF	0.000014 JI	NA	NA
W-12A	Total HXCDF	0.00011 IS	NA	NA
W-12CR	Total HXCDF	0.000028 JI	NA	NA
W-28C	Total HXCDF	0.0000057 JIS	NA	NA
W-28C DUP	Total HXCDF	0.000002 JI	NA	NA
W-30A	Total HXCDF	0.00087 IS	NA	NA
W-30C	Total HXCDF	0.0000013 JI	NA	NA
W-04AR2	Total PECDF	0.0000067 JI	NA	NA
W-06A	Total PECDF	0.000012 JI	NA	NA
W-06C	Total PECDF	0.0000016 JI	NA	NA
W-10AR2	Total PECDF	0.0000077 JI	NA	NA
W-12A	Total PECDF	0.000063 I	NA	NA
W-12CR	Total PECDF	0.0000055 JI	NA	NA
W-28C	Total PECDF	0.00000061 JI	NA	NA
W-28C DUP	Total PECDF	0.00000061 JI	NA	NA
W-30A	Total PECDF	0.00031 I	NA	NA
W-30C	Total PECDF	0.0000005 JI	NA	NA
W-10AR2	Total TCDD	0.00000051 JI	NA	NA
W-12A	Total TCDD	0.0000014 JI	NA	NA
W-04AR2	Total TCDF	0.0000023 JI	NA	NA
W-10AR2	Total TCDF	0.0000083 JI	NA	NA
W-12A	Total TCDF	0.000069 I	NA	NA
W-12CR	Total TCDF	0.0000029 JI	NA	NA
W-30A	Total TCDF	0.000076 I	NA	NA
W-30C	Total TCDF	0.0000015 J	NA	NA

**Table D1**  
**Summary of Detected Constituents**  
**First Semi-Annual 2022 Sampling Event**  
**Superior Facility**  
**Superior, Wisconsin**

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L
W-04AR2	2,3,7,8-TCDD TEQ	2.84E-06	0.000003	0.00003
W-06A	2,3,7,8-TCDD TEQ	1.95E-06	0.000003	0.00003
W-06C	2,3,7,8-TCDD TEQ	1.30E-07	0.000003	0.00003
W-10AR2	2,3,7,8-TCDD TEQ	2.93E-07	0.000003	0.00003
W-12A	2,3,7,8-TCDD TEQ	3.83E-06	0.000003	0.00003
W-12CR	2,3,7,8-TCDD TEQ	7.86E-07	0.000003	0.00003
W-28C	2,3,7,8-TCDD TEQ	9.20E-08	0.000003	0.00003
W-28C DUP	2,3,7,8-TCDD TEQ	6.30E-07	0.000003	0.00003
W-30A	2,3,7,8-TCDD TEQ	2.09E-05	0.000003	0.00003
W-30C	2,3,7,8-TCDD TEQ	7.80E-08	0.000003	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

I - Value is estimated maximum possible concentration.

S - Ion suppression.

\* - 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.

**Table D2**  
**Summary of Detected Constituents**  
**Second Semi-Annual 2022 Sampling Event**  
**Superior Facility**  
**Superior, Wisconsin**

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L
<b>8270D LL / 8270E LL</b>				
W-10AR2	1-Methylnaphthalene	20	NA	NA
W-30A	1-Methylnaphthalene	15	NA	NA
W-06C	2-Chloronaphthalene	0.077 J	NA	NA
W-06C	2-Methylnaphthalene	0.067 J	NA	NA
W-06C	Acenaphthene	0.073 J	NA	NA
W-10AR2	Acenaphthene	62	NA	NA
W-18D	Acenaphthene	0.073 J	NA	NA
W-30A	Acenaphthene	39	NA	NA
W-10AR2	Acenaphthylene	1	NA	NA
W-30A	Acenaphthylene	0.56	NA	NA
W-04AR2	Anthracene	1.3	600	3000
W-10AR2	Anthracene	0.67	600	3000
W-12A	Anthracene	0.1 J	600	3000
W-12CR	Anthracene	0.064 J	600	3000
W-30A	Anthracene	0.71	600	3000
W-30C	Anthracene	0.2	600	3000
W-04AR2	Benzo(a)anthracene	0.091 J	NA	NA
W-10AR2	Benzo(a)anthracene	0.16 J	NA	NA
W-04AR2	Benzo(a)pyrene	0.061 J	0.02	0.2
W-10AR2	Benzo(a)pyrene	0.062 J	0.02	0.2
W-04AR2	Benzo(b)fluoranthene	0.2	0.02	0.2
W-10AR2	Benzo(b)fluoranthene	0.25	0.02	0.2
W-04AR2	Benzoic acid	1.4 J	NA	NA
W-06C	Benzoic acid	1.8 J	NA	NA
W-18D	Benzoic acid	1.7 J	NA	NA
W-30A	Benzoic acid	1.7 J	NA	NA
W-04AR2	Benzyl alcohol	0.57 J	NA	NA
W-06C	Benzyl alcohol	1.5	NA	NA
W-28C DUP	Benzyl alcohol	0.39 J	NA	NA
W-04AR2	bis(2-Ethylhexyl)phthalate	15 J+	0.6	6
W-04AR2	Butyl benzyl phthalate	1.3 J+	NA	NA
W-06C	Butyl benzyl phthalate	1.3	NA	NA
W-04AR2	Chrysene	0.16 J	0.02	0.2
W-10AR2	Chrysene	0.22	0.02	0.2
W-10AR2	Dibenzofuran	17	NA	NA
W-30A	Dibenzofuran	17	NA	NA
W-04AR2	Diethyl phthalate	0.61 J	NA	NA
W-04AR2	Di-n-butyl phthalate	2 J+	100	1000
W-06C	Di-n-butyl phthalate	2.1 J+	100	1000
W-10AR2	Di-n-butyl phthalate	1.2 J+	100	1000
W-12A	Di-n-butyl phthalate	1.7 J+	100	1000



**Table D2**  
**Summary of Detected Constituents**  
**Second Semi-Annual 2022 Sampling Event**  
**Superior Facility**  
**Superior, Wisconsin**

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L
W-12CR	Di-n-butyl phthalate	1.4 J+	100	1000
W-18D	Di-n-butyl phthalate	1.1 J+	100	1000
W-30A	Di-n-butyl phthalate	.1.2 J+	100	1000
W-30C	Di-n-butyl phthalate	1.7 J+	100	1000
W-04AR2	Fluoranthene	0.24 J+	80	400
W-06C	Fluoranthene	0.066 J	80	400
W-10AR2	Fluoranthene	2.1	80	400
W-30A	Fluoranthene	1.3	80	400
W-10AR2	Fluorene	17	80	400
W-30A	Fluorene	14	80	400
W-30C	Pentachlorophenol	0.46 J	0.1	1
W-04AR2	Phenanthrene	0.36 J+	NA	NA
W-06A	Phenanthrene	0.26 J+	NA	NA
W-06C	Phenanthrene	0.34 J+	NA	NA
W-10AR2	Phenanthrene	0.58 J+	NA	NA
W-18D	Phenanthrene	0.27 J+	NA	NA
W-30A	Phenanthrene	5.4 J+	NA	NA
W-10AR2	Phenol	2	400	2000
W-30A	Phenol	1 J	400	2000
W-06C	Pyrene	0.056 J	50	250
W-10AR2	Pyrene	1.4	50	250
W-30A	Pyrene	0.9	50	250
<b>8260C</b>				
W-10AR2	1,2,4-Trimethylbenzene	10	96*	480*
W-30A	1,2,4-Trimethylbenzene	6.4	96*	480*
W-10AR2	Benzene	19	0.5	5
W-30A	Benzene	13	0.5	5
W-10AR2	Ethylbenzene	41	140	700
W-30A	Ethylbenzene	27	140	700
W-10AR2	Naphthalene	3.6	10	100
W-30A	Naphthalene	19	10	100
W-10AR2	Toluene	2.4	160	800
W-30A	Toluene	2.6	160	800
W-10AR2	Xylene, Meta & Para	3.3	400**	2000**
W-30A	Xylene, Meta & Para	6.1	400**	2000**
W-10AR2	Xylene, Ortho	18	400**	2000**
W-30A	Xylene, Ortho	6.8	400**	2000**

**Notes:**

- Indicates the detected value exceeds one or more specified standards.

PAL - Preventative Action Limit

ES - Enforcement Standard

NA - Not available

J - Estimated

J+ - Estimated biased high

\* - Total trimethylbenzene standard

\*\* - Total xylene standard

## **APPENDIX E**

### **Linear Regression Analysis**

BENZENE STATISTICAL ANALYSIS

	W-10AR2 Benzene	W-30A Benzene	PAL	ES	
Feb-99	0	0	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	0	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	
Apr-20	18	5.6	0.5	5	
Oct-20	18	9.6	0.5	5	
Apr-21	15	1.8	0.5	5	
Oct-21	26	18	0.5	5	
Apr-22	9.4	0	0.5	5	
Oct-22	19	13	0.5	5	

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2022)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.611588441
R Square	0.374040422
Adjusted R Square	0.36152123
Standard Error	31.31477196
Observations	52

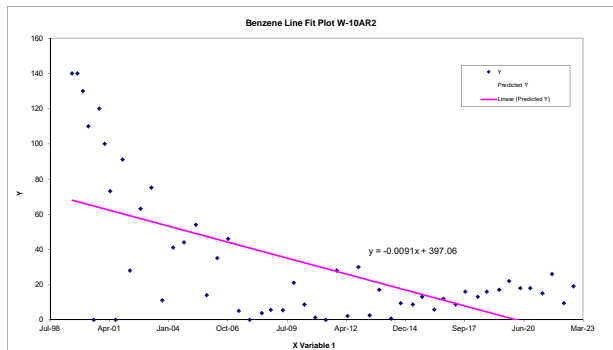
ANOVA

	df	SS	MS	F	Significance F
Regression	1	29298.18791	29298.18791	29.87739225	1.46032E-06
Residual	50	49030.7472	980.614544		
Total	51	78328.93511			

	Coefficients	Standard Error	t-Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	397.063819	66.82862691	5.941884165	2.69831E-07	262.8336956	531.2939423	262.8336956	531.2939423
X Variable 1	-0.00950288	0.00165737	-5.466018866	1.46032E-06	-0.012375933	-0.005724643	-0.012375933	-0.005724643

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	67.87788225	72.12231775
2	67.04505573	72.95494427
3	68.2124252	63.7875748
4	65.39790325	44.60209675
5	64.56527673	-64.56527673
6	63.73265021	56.26734979
7	62.90002368	37.09997632
8	62.06739716	10.90545188
9	61.23477064	-61.23477064
10	60.40214412	30.84221388
11	59.5695176	-31.06270144
12	58.73689108	5.99301325
13	57.90426456	19.2406538
14	57.07163804	43.10314344
15	56.23901152	-11.41978981
16	55.40638501	-6.78387054
17	54.57375849	5.019319744
18	53.74113197	-33.3244775
19	52.90850545	-10.67732502
20	52.07587893	1.87887739
21	51.24325241	-37.39207036
22	50.41062589	-40.74491789
23	49.57800037	-35.20770936
24	48.74537385	-32.00491468
25	47.91274733	-30.27675644
26	47.08012081	-13.02055368
27	46.24749429	-23.79150178
28	45.41486777	-29.52624873
29	44.58224125	-29.08814655
30	43.74961473	0.586056216
31	42.91698821	-23.80289189
32	42.08436169	5.862361161
33	41.25173517	-20.02711945
34	40.41910865	-3.960887641
35	39.58648213	-18.4828284
36	38.75385561	-8.37532984
37	37.92122909	-7.12947188
38	37.08860257	-1.37237775
39	36.25597605	-6.75269799
40	35.42334953	0.812876908
41	34.59072301	-0.640864276
42	33.75809649	8.216232142
43	32.92546997	7.116702688
44	32.09284345	11.5014888
45	31.26021693	14.39299706
46	30.42759041	20.93154607
47	29.59496389	18.63300272
48	28.76233737	20.15344671
49	27.92971085	18.99065724
50	27.09708433	31.44775365
51	26.26445781	16.89401247
52	25.43183129	27.75110889



BENZENE STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2022)

SUMMARY OUTPUT

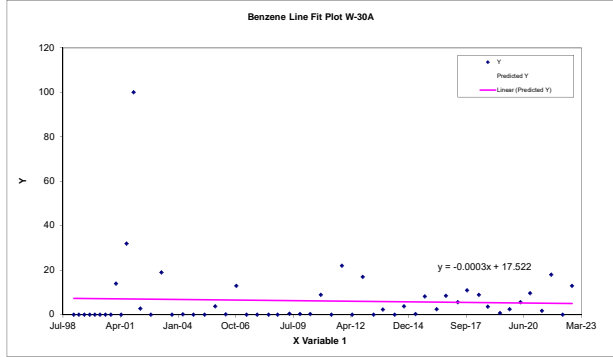
Regression Statistics	
Multiple R	0.051442915
R Square	0.002646373
Adjusted R Square	-0.016533504
Standard Error	14.86738755
Observations	54

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	30.49822973	30.49822973	0.137876558	0.71181018
Residual	52	11494.03905	221.0392124		
Total	53	11524.53728			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	17.5216585	30.31025965	0.57807682	0.565707401	-43.30032719	78.34364419	-43.30032719	78.34364419
X Variable 1	-0.000279952	0.00075387	-0.371451959	0.71181018	-0.001782302	0.001232398	-0.001782302	0.001232398

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	7.398620880	-7.398620880
2	7.384711137	-7.384711137
3	7.33895553	-7.33895553
4	7.313199924	-7.313199924
5	7.287444317	-7.287444317
6	7.26249815	-7.26249815
7	7.236493009	-7.236493009
8	7.210737402	-7.210737402
9	7.184981796	6.815018204
10	7.160096046	-7.160096046
11	7.134311644	26.868696556
12	7.100156296	92.89684373
13	7.066282045	-4.266282045
14	7.015050784	-7.015050784
15	6.984099475	12.03590052
16	6.912868215	-6.912868215
17	6.880797097	-6.880797097
18	6.809565837	-6.809565837
19	6.754415245	-6.754415245
20	6.703183984	-3.003183984
21	6.652232676	-6.512232676
22	6.601001415	6.38998585
23	6.550610011	-6.550610011
24	6.496687703	-6.496687703
25	6.442828397	-6.442828397
26	6.394337399	-6.394337399
27	6.34285446	-5.94285446
28	6.291654185	-6.001654185
29	6.241262781	-5.881262781
30	6.189751568	2.710248432
31	6.138080212	-6.138080212
32	6.087848951	15.81215105
33	6.037457548	-6.037457548
34	5.98948335	11.01405367
35	5.93303536	-5.93303536
36	5.878683097	-3.587683097
37	5.831132744	-5.831132744
38	5.786060432	-2.086060432
39	5.728950175	-5.988950175
40	5.683877863	2.516122137
41	5.627607462	-3.127607462
42	5.582551199	2.317744801
43	5.525144941	0.074855059
44	5.48007263	5.51892737
45	5.421282658	3.478717342
46	5.378449865	-1.778449865
47	5.319939946	-4.599939946
48	5.272348064	-2.872348064
49	5.219171043	0.380262957
50	5.172890968	4.427314604
51	5.11585476	-3.31585476
52	5.070782449	12.92921755
53	5.013872191	-5.013872191
54	4.96859988	8.03140012



CHRYSENE STATISTICAL ANALYSIS

	W-10AR2 Chrysene	W-30A Chrysene	PAL	ES
Feb-99		28	0.02	0.2
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
Apr-20	0.3	0.23	0.02	0.2
Oct-20	0	0	0.02	0.2
Apr-21	0.16	0.29	0.02	0.2
Oct-21	0.26	0.17	0.02	0.2
Apr-22	0.22	0	0.02	0.2
Oct-22	0.22	0	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.

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2022)

SUMMARY OUTPUT

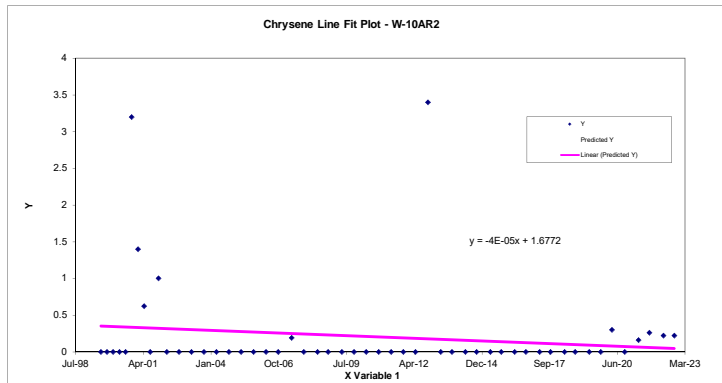
Regression Statistics	
Multiple R	0.143121196
R Square	0.020483677
Adjusted R Square	0.00089335
Standard Error	0.67338149
Observations	52

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.47412034	0.47412034	1.045601597	0.311444348
Residual	50	22.67213158	0.453442632		
Total	51	23.14625192			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.677178932	1.436925544	1.167199608	0.248666158	-1.208970962	4.563328826	-1.208970962	4.563328826
X Variable 1	-3.64049E-05	3.56022E-05	-1.022546623	0.311444348	-0.000107914	3.51042E-05	-0.000107914	3.51042E-05

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	0.353022651	-0.353022651
2	0.349673398	-0.349673398
3	0.346324145	-0.346324145
4	0.343047702	-0.343047702
5	0.339698449	-0.339698449
6	0.336349196	2.863650804
7	0.332999943	1.067000057
8	0.329759905	0.290240095
9	0.326410652	-0.326410652
10	0.321969251	0.678030749
11	0.317564256	-0.317564256
12	0.310902155	-0.310902155
13	0.304276459	-0.304276459
14	0.297614358	-0.297614358
15	0.290843042	-0.290843042
16	0.284180941	-0.284180941
17	0.277552545	-0.277552545
18	0.270893144	-0.270893144
19	0.264267448	-0.264267448
20	0.257605347	-0.257605347
21	0.250506387	-0.060506387
22	0.2439535	-0.2439535
23	0.236490491	-0.236490491
24	0.230847728	-0.230847728
25	0.223493933	-0.223493933
26	0.216831832	-0.216831832
27	0.210278946	-0.210278946
28	0.203580044	-0.203580044
29	0.196991149	-0.196991149
30	0.190329048	-0.190329048
31	0.183776162	-0.183776162
32	0.177077656	3.222922344
33	0.170197125	-0.170197125
34	0.164299528	-0.164299528
35	0.156945733	-0.156945733
36	0.151084541	-0.151084541
37	0.143657936	-0.143657936
38	0.137796744	-0.137796744
39	0.130479354	-0.130479354
40	0.124581756	-0.124581756
41	0.11715152	-0.11715152
42	0.111293959	-0.111293959
43	0.103648925	-0.103648925
44	0.098078972	-0.098078972
45	0.090470343	-0.090470343
46	0.084281506	-0.084281506
47	0.078165479	0.221834521
48	0.071321353	-0.071321353
49	0.063931154	0.096068846
50	0.058069961	0.201930039
51	0.050643357	0.169356643
52	0.044782164	0.175217836



CHRYSENE STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2022)

SUMMARY OUTPUT

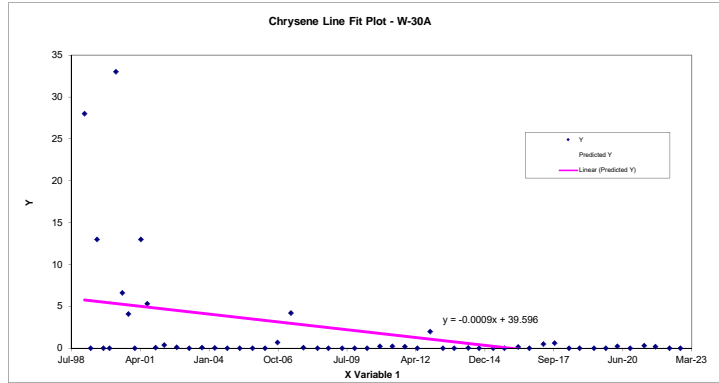
Regression Statistics	
Multiple R	0.403720919
R Square	0.16299058
Adjusted R Square	0.146894245
Standard Error	5.793516986
Observations	54

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	339.8756667	339.8756667	10.12594358	0.002467378
Residual	52	1745.371631	33.56483907		
Total	53	2085.247298			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	39.59677117	1.170109623	33.82723972	0.00000000	37.25987481	41.93366753	37.25987481	41.93366753
X Variable 1	-0.000492637	0.000049263	-3.186126161	0.000492637	-0.000626298	-0.000359076	-0.000626298	-0.000359076

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	5.773025514	22.22697449
2	5.689851764	-5.689851764
3	5.603874405	7.398125595
4	5.517897045	-5.517897045
5	5.431919686	-5.431919686
6	5.347811399	27.6521886
7	5.26183404	1.33816596
8	5.17585668	-1.07585668
9	5.089879321	-5.089879321
10	5.003902571	7.993294429
11	4.920728211	0.379271789
12	4.806714756	-4.747714756
13	4.693635838	-4.333635838
14	4.522615655	-4.402615655
15	4.352530009	-4.352530009
16	4.181509827	-4.181509827
17	4.007686035	-3.966686035
18	3.83665852	-3.83665852
19	3.666580206	-3.666580206
20	3.495560024	-3.495560024
21	3.325474378	-3.325474378
22	3.154454195	-2.474454195
23	2.972219574	1.227780426
24	2.804003001	-2.730003001
25	2.612423015	-2.612423015
26	2.467569855	-2.467569855
27	2.278793479	-2.278793479
28	2.107773296	-2.107773296
29	1.939556723	-1.939556723
30	1.767602004	-1.547602004
31	1.598450895	-1.378450895
32	1.427430712	-1.227430712
33	1.259214139	-1.259214139
34	1.08725942	0.91274058
35	0.910632019	-0.910632019
36	0.759237103	-0.759237103
37	0.570460727	-0.520460727
38	0.420000347	-0.420000347
39	0.229354898	-0.229354898
40	0.078894519	-0.078894519
41	-0.108947321	0.238947321
42	-0.260342237	0.260342237
43	-0.450987686	0.950987686
44	-0.601448065	1.221448065
45	-0.797700734	0.797700734
46	-0.940684821	0.940684821
47	-1.136002953	1.136002953
48	-1.29487416	1.29487416
49	-1.451876295	1.681876295
50	-1.62756916	1.62756916
51	-1.817280073	2.107280073
52	-1.967740452	2.137740452
53	-2.158385902	2.158385902
54	-2.308846281	2.308846281



NAPHTHALENE STATISTICAL ANALYSIS

	W-10AR2 Naphthalene	W-30A Naphthalene	PAL	ES
Feb-99		8500	10	100
May-99		5300	10	100
Aug-99	4100	2600	10	100
Nov-99	5300	4800	10	100
Feb-00	1000	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
Apr-20	1.9	150	10	100
Oct-20	2.3	43	10	100
Apr-21	6.3	10	10	100
Oct-21	3.1	130	10	100
Apr-22	1.5	1	10	100
Oct-22	3.6	19	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.

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2022)

SUMMARY OUTPUT

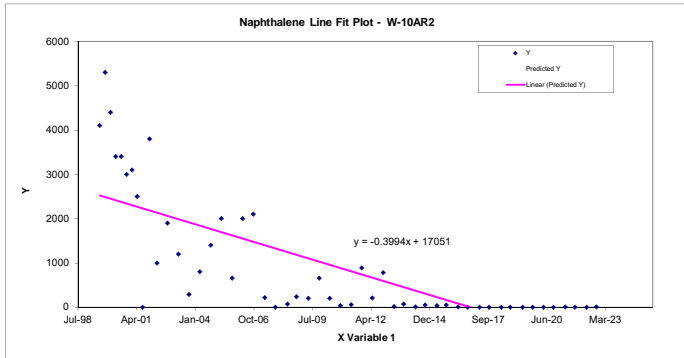
Regression Statistics	
Multiple R	0.748302577
R Square	0.560043555
Adjusted R Square	0.551244424
Standard Error	947.1233194
Observations	52

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	57094619.03	57094619.03	63.64761291	1.79919E-10
Residual	50	44852129.11	897042.5822		
Total	51	101946748.1			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	17051.46381	2020.869742	8.438520878	3.515685E-11	12992.82918	21110.09843	12992.82918	21110.09843
X Variable 1	-0.39941524	0.050094925	-7.977945406	1.79919E-10	-0.499973602	-0.298856878	-0.499973602	-0.298856878

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2523.53328	-1576.46672
2	2486.787078	2813.212922
3	2450.040876	1949.959124
4	2414.093504	985.9064957
5	2377.347302	1022.652698
6	2340.6011	659.3988969
7	2303.854898	795.1451919
8	2268.306942	231.6930583
9	2231.56074	-2231.56074
10	2182.83208	1617.16792
11	2134.502836	-1134.502836
12	2081.408847	-161.4088474
13	1988.716274	-788.7162737
14	1915.623285	-1625.623285
15	1841.33205	-1041.33205
16	1768.239061	-368.2390612
17	1695.545488	304.4545125
18	1622.452499	-962.4524986
19	1549.75925	450.2410751
20	1476.65636	623.334064
21	1398.779964	-1178.779964
22	1326.885221	-1326.885221
23	1245.005097	-1175.005097
24	1183.095735	-943.0957346
25	1102.413856	-902.4138561
26	1029.320867	-369.3208672
27	957.426124	-757.426124
28	883.9337198	-850.9337198
29	811.6395614	-751.6395614
30	738.5465724	151.4534276
31	666.6518292	-456.6518292
32	593.1594251	186.8405749
33	517.6699447	-506.6699447
34	452.9646758	-383.9646758
35	372.2827973	-367.2827973
36	307.9769437	-260.9769437
37	226.4962347	-189.4962347
38	162.1903811	-113.1903811
39	81.90791784	-74.70791784
40	17.20264896	-15.70264896
41	-64.27806001	66.27806001
42	-128.5839137	130.2839137
43	-212.4611141	213.9611141
44	-273.5716458	273.5716458
45	-357.0494309	359.2494309
46	-424.9500217	424.9500217
47	-500.0400869	501.9400869
48	-567.1418472	569.4418472
49	-648.2231409	654.5231409
50	-712.6289946	712.6289946
51	-794.0097035	795.5097035
52	-858.3155572	861.9155572



NAPHTHALENE STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2022)

SUMMARY OUTPUT

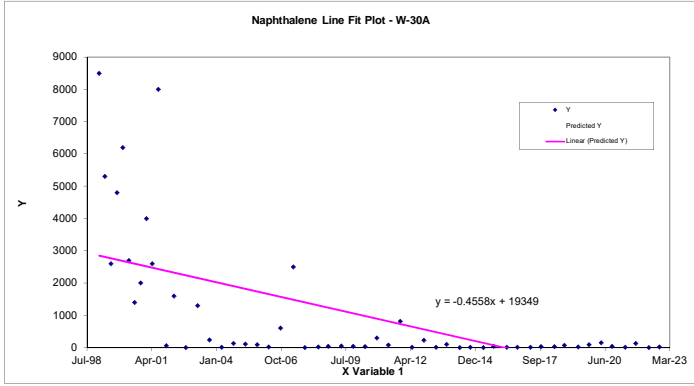
Regression Statistics	
Multiple R	0.606518121
R Square	0.367964231
Adjusted R Square	0.355707774
Standard Error	1634.969117
Observations	54

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	80890896.14	80890896.14	30.26080935	1.1673E-06
Residual	52	139002448.7	2673124.013		
Total	53	219893344.8			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	19349.48311	3332.400928	5.806469127	3.88522E-07	12662.53143	26036.43478	12662.53143	26036.43478
X Variable 1	-0.455828112	0.082863035	-5.5008258	1.1673E-06	-0.622104956	-0.289551268	-0.622104956	-0.289551268

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2652.152062	5647.847918
2	2811.55338	2488.41662
3	2769.647194	-169.6471939
4	2727.711008	2072.288992
5	2685.774821	3514.225179
6	2644.750291	55.24970875
7	2602.814105	-1202.814105
8	2560.877919	-560.8779187
9	2518.941732	1481.058268
10	2478.37303	121.6269696
11	2436.436844	5563.563156
12	2380.825814	-2324.825814
13	2325.670613	-725.6706129
14	2242.254068	-2242.254068
15	2159.293352	-859.2933521
16	2075.876808	-1835.876808
17	1991.092779	-1983.992779
18	1907.676234	-1777.676234
19	1824.715518	-1714.715518
20	1741.298973	-1649.298973
21	1658.338257	-1658.338257
22	1574.921713	-964.9217126
23	1486.035231	1013.964769
24	1403.986171	-1403.986171
25	1310.541408	-1290.541408
26	1239.88905	-1202.88905
27	1147.810772	-1093.810772
28	1064.394227	-1020.394227
29	982.3451671	-947.3451671
30	898.4727945	-598.4727945
31	815.9679063	-731.9679063
32	732.5513618	77.44863819
33	650.5023017	-640.5023017
34	566.6299291	-336.6299291
35	480.4784159	-465.4784159
36	406.6342618	-310.6342618
37	314.5569832	-310.5569832
38	241.1686572	-230.1686572
39	148.1797223	-146.3797223
40	74.79139633	-37.79139633
41	-16.83005417	27.83005417
42	-90.67420829	102.6742083
43	-183.6631431	197.6631431
44	-257.0514691	283.0514691
45	-352.7753726	381.7753726
46	-422.5170738	489.5170738
47	-517.7851491	539.7851491
48	-595.2759282	686.2759282
49	-680.9716132	830.9716132
50	-757.550736	800.550736
51	-850.0838427	860.0838427
52	-923.4721687	1053.472169
53	-1016.461104	1017.461104
54	-1089.84943	1108.84943





PENTACHLOROPHENOL STATISTICAL ANALYSIS

W-10AR2		W-30A		PAL	ES	
Penta		Penta				
Feb-99		Feb-99	0	0.1	1	
May-99		May-99	6	0.1	1	
Aug-99	260	Aug-99	6	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.
Nov-99	320	Nov-99	10	0.1	1	Pentachlorophenol data for Aug-01 W-10AR2 not available
Feb-00	450	Feb-00	3.1	0.1	1	
May-00	150	May-00	0	0.1	1	
Aug-00	280	Aug-00	0	0.1	1	
Nov-00	440	Nov-00	1.1	0.1	1	
Feb-01	290	Feb-01	3.7	0.1	1	
May-01	140	May-01	0	0.1	1	
Dec-01	400	Aug-01	3.8	0.1	1	
Apr-02	58	Dec-01	0	0.1	1	
Oct-02	0.0255	Apr-02	1.7	0.1	1	
Apr-03	3.8	Oct-02	0.18	0.1	1	
Oct-03	60	Apr-03	0.95	0.1	1	
Apr-04	42	Oct-03	0.4	0.1	1	
Oct-04	38	Apr-04	0	0.1	1	
Apr-05	0.4695	Oct-04	0	0.1	1	
Oct-05	8.3	Apr-05	0	0.1	1	
Apr-06	0	Oct-05	0.11	0.1	1	
Oct-06	0.305	Apr-06	0	0.1	1	
Apr-07	16	Oct-06	0.24	0.1	1	
Oct-07	0	Apr-07	0	0.1	1	
May-08	0	Oct-07	0	0.1	1	
Oct-08	0	May-08	0	0.1	1	
Apr-09	0	Oct-08	0	0.1	1	
Oct-09	0	Apr-09	0	0.1	1	
Apr-10	0	Oct-09	0	0.1	1	
Oct-10	0	Apr-10	0	0.1	1	
Apr-11	0	Oct-10	0	0.1	1	
Oct-11	0	Apr-11	0	0.1	1	
Apr-12	0	Oct-11	0	0.1	1	
Oct-12	0	Apr-12	0	0.1	1	
May-13	0.81	Oct-12	0	0.1	1	
Oct-13	0	May-13	0	0.1	1	
Apr-14	0.76	Oct-13	0	0.1	1	
Oct-14	0.35	Apr-14	0	0.1	1	
Apr-15	0	Oct-14	0	0.1	1	
Oct-15	0	Apr-15	0.39	0.1	1	
Apr-16	0	Oct-15	0	0.1	1	
Oct-16	0	Apr-16	0	0.1	1	
Apr-17	0	Oct-16	0	0.1	1	
Oct-17	0	Apr-17	0	0.1	1	
May-18	0	Oct-17	0	0.1	1	
Oct-18	0	May-18	0	0.1	1	
Apr-19	0	Oct-18	0	0.1	1	
Oct-19	0	Apr-19	0	0.1	1	
Apr-20	0	Oct-19	0	0.1	1	
Oct-20	0	Apr-20	0	0.1	1	
Apr-21	0	Oct-20	0	0.1	1	
Oct-21	0	Apr-21	0	0.1	1	
Apr-22	0	Oct-21	0	0.1	1	
Oct-22	0	Apr-22	0	0.1	1	
		Oct-22	0	0.1	1	

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2022)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.630442629
R Square	0.397457908
Adjusted R Square	0.385161131
Standard Error	97.2781198
Observations	51

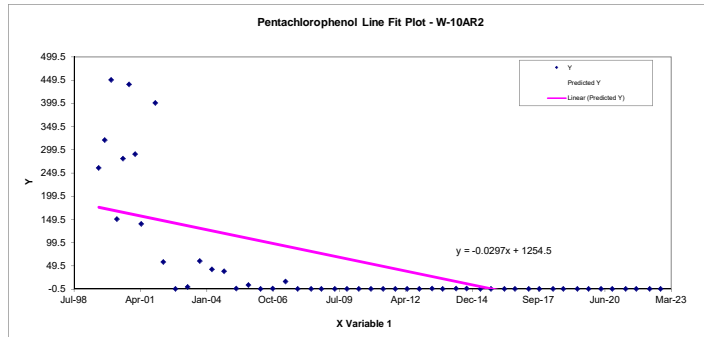
ANOVA

	df	SS	MS	F	Significance F
Regression	1	305865.2702	305865.2702	32.32211949	7.12154E-07
Residual	49	463688.597	9463.032591		
Total	50	769553.8671			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	125.542245	210.9016734	5.948469848	2.80955E-07	830.7194648	1678.365025	830.7194648	1678.365025
X Variable 1	-0.0206265	0.005217471	-5.685254567	7.12154E-07	-0.04014755	-0.01917775	-0.04014755	-0.01917775

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	175.6226702	84.37732962
2	172.8927064	147.1062936
3	170.1647425	279.8352575
4	167.495104	-17.49510403
5	164.7681402	115.2338598
6	162.0371764	277.9628236
7	159.3082128	130.6917874
8	156.602367	-16.66823671
9	153.9204296	249.6795704
10	146.7312489	-88.7312489
11	141.3029839	-141.2774839
12	135.9043816	-132.1043816
13	130.4761166	-70.47611661
14	124.9586367	-82.95863667
15	119.5305987	-81.53059869
16	114.1319964	-113.6624964
17	108.7037314	-100.4037314
18	103.305129	-103.305129
19	97.87686406	-97.87686406
20	92.09264728	-76.09264728
21	86.7537025	-86.7537025
22	80.67252696	-80.67252696
23	76.07481618	-76.07481618
24	70.08296085	-70.08296085
25	64.65495987	-64.65495987
26	59.31541883	-59.31541883
27	53.8574912	-53.8574912
28	48.4885152	-48.4885152
29	43.06028654	-43.06028654
30	37.7210095	-37.7210095
31	32.26308187	-32.26308187
32	26.69684099	-26.69684099
33	21.85149166	-21.85149166
34	15.85963632	-15.09963632
35	11.08394965	-10.73394965
36	5.03276901	-5.03276901
37	0.257082331	-0.257082331
38	-5.705110354	5.705110354
39	-10.51045988	10.51045988
40	-16.86164032	16.86164032
41	-21.337327	21.337327
42	-27.56648353	27.56648353
43	-32.07520636	32.07520636
44	-38.3043629	38.3043629
45	-43.34701343	43.34701343
46	-48.92359166	48.92359166
47	-53.90691689	53.90691689
48	-59.92843488	59.92843488
49	-64.70412156	64.70412156
50	-70.75530219	70.75530219
51	-75.53098887	75.53098887



PENTACHLOROPHENOL STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2022)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.472973105
R Square	0.223703558
Adjusted R Square	0.20877478
Standard Error	1.679203221
Observations	54

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	42.25276723	42.25276723	14.98472026	0.000304232
Residual	52	146.6256198	2.819723458		
Total	53	188.878387			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	13.91665554	3.422524075	4.066196536	0.000162438	7.048858537	20.78445254	7.048858537	20.78445254
X Variable 1	-0.000329439	8.5104E-05	-3.871010238	0.000304232	-0.000500212	-0.000158665	-0.000500212	-0.000158665

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	1.993615999	-1.993615999
2	1.964295989	4.035704031
3	1.933997634	4.066012276
4	1.903699279	8.096520721
5	1.873370933	1.226629067
6	1.843721465	-1.843721465
7	1.813413119	-1.813413119
8	1.783104774	-0.683104774
9	1.752796429	1.947203571
10	1.723476399	-1.723476399
11	1.693168053	2.106831947
12	1.662976552	-1.662976552
13	1.613114489	0.086885511
14	1.552827236	-1.372827236
15	1.492694923	-0.542694923
16	1.43258217	-1.03258217
17	1.371306603	-1.371306603
18	1.31101935	-1.31101935
19	1.251061536	-1.251061536
20	1.190774284	-1.080774284
21	1.13081647	-1.13081647
22	1.070529218	-0.830529218
23	1.006288703	-1.006288703
24	0.946989767	-0.946989767
25	0.879454867	-0.879454867
26	0.828391893	-0.828391893
27	0.761845309	-0.761845309
28	0.701887495	-0.701887495
29	0.64225912	-0.64225912
30	0.581642429	-0.581642429
31	0.522014054	-0.522014054
32	0.461728801	-0.461728801
33	0.402427865	-0.402427865
34	0.341811174	-0.341811174
35	0.27954729	-0.27954729
36	0.226178247	-0.226178247
37	0.159631663	-0.159631663
38	0.106592058	-0.106592058
39	0.039386597	0.350613403
40	-0.013653008	0.013653008
41	-0.079870154	0.079870154
42	-0.133291917	0.133291917
43	-0.20044658	0.20044658
44	-0.253484263	0.253484263
45	-0.32266356	0.32266356
46	-0.373070452	0.373070452
47	-0.441923106	0.441923106
48	-0.497927657	0.497927657
49	-0.559862102	0.559862102
50	-0.615537215	0.615537215
51	-0.6820838	0.6820838
52	-0.735123404	0.735123404
53	-0.802228866	0.802228866
54	-0.85536847	0.85536847

