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January 24, 2019

Mr. Christopher Saari
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
2501 Golf Course Road
Ashland, WI 54806-3505
(715) 685-2209

**RE: 2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility
Superior, Wisconsin
WID 006 179 493**

Dear Mr. Saari:

On behalf of Beazer East, Inc. (Beazer), Field & Technical Services, LLC (FTS) is submitting to the Wisconsin Department of Natural Resources (WDNR) the 2018 RCRA Annual Groundwater Monitoring Report for the above-referenced facility.

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

Sincerely,

Field & Technical Services LLC

Angie Gatchie
Project Scientist

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

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

2018 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




January 24, 2019

CERTIFICATION

"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: **2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility
Superior, Wisconsin
EPA ID No. WID 006 176 493**

Jane Patavaly
(Name)


(Signature)

Sr. Env. Manager
(Title)

Beazer East, Inc.
(Company Name)

1/17/19
(Date)

PROFESSIONAL GEOLOGIST CERTIFICATION

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

Document: **2018 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.
Professional Geologist Registration Number 369

01/07/2019
Date

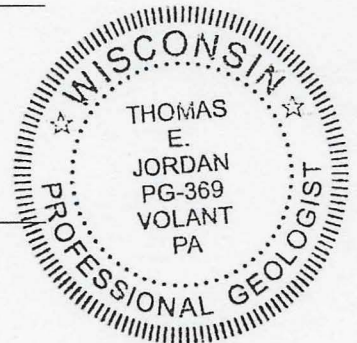


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ABBREVIATIONS/ACRONYMS

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

1.0 INTRODUCTION

Field and Technical Services, LLC (FTS), on behalf of Beazer East, Inc. (Beazer), prepared this 2018 Resource Conservation and Recovery Act (RCRA) Annual Groundwater Monitoring Report to summarize the compliance groundwater monitoring data collected in 2018 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 2018, 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 aerial 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 2018 groundwater sampling activities were completed on the following dates:

- First semi-annual event - May 2, 2018 and May 3, 2018; and
- Second semi-annual event - October 1, 2018 through October 3, 2018.

A total of 37 wells comprised the monitoring well network during 2018 (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 2018 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 2018 semi-annual sampling events. During the May 2018 well inspection, well W-39A had an obstruction at 5.00 below top of casing (ft-btoc), this well was able to be gauged; and well W-31C had an obstruction at 4.60 ft-btoc, which prevented it from being gauged. All of the other monitoring wells were reported to be in good condition with no major repairs required during the May 2018 well inspection. During the October 2018 well inspection, well W-31C had an obstruction at 4.62 ft-btoc which prevented it from being gauged; this well will be further evaluated in 2019. All of the other monitoring wells were reported to be in good condition with no major repairs required during the October 2018 well inspection.

1.5 DOCUMENT ORGANIZATION

The remainder of the 2018 RCRA Annual Groundwater Monitoring Report is organized in the following manner:

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

2.0 SITE GEOLOGIC AND HYDROLOGIC CONDITIONS

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

2.1 SITE GEOLOGY

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

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

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

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

2.2 GROUNDWATER

Perched groundwater may be temporarily retained in the thin fill layer (where present). However, across most of the Site, the uppermost groundwater occurs in an unconfined state within the thick red-brown clay (an aquitard). The A-zone monitoring wells monitor the water table in this shallow clay with the bottom of the screened interval typically located approximately 13.0 to 15.5 ft-bgs. Depth to groundwater in the A-zone wells ranged from 1.42 to 8.95 ft-btoc during the May 2018 event (Table 2A), and from 1.31 to 7.95 ft-btoc during the October 2018 event (Table 2B). Previous geologic studies in the Superior area and aquifer testing at the Site show these clay deposits to have very low intergranular hydraulic conductivities. There are also three B-zone monitoring wells at the Site, which monitor slightly deeper zones within the shallow clay (bottom of the screened interval located approximately 32 to 35 ft-bgs). Depth to groundwater in the B-zone wells ranged from 5.73 to 7.24 ft-btoc during the May 2018 event (Table 2A), and from 5.16 to 7.73 ft-btoc during the October 2018 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 9.80 to 14.80 ft-btoc in May 2018 (Table 2A), and from 10.91 to 15.26 ft-btoc in October 2018 (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 36.55 to 45.25 ft-btoc during the May 2018 event (Table 2A) and from 38.31 to 46.30 ft-btoc during the October 2018 event (Table 2B).

Dense Non-Aqueous Phase Liquid (DNAPL)

All wells were gauged for the presence of dense non-aqueous phase liquid (DNAPL) on May 2, 2018 and October 1, 2018; with the exception of monitoring well W-31C which was unable to be gauged as previously discussed in Section 1.4. DNAPL was not observed in any monitoring wells at the Site during either the May or the October 2018 monitoring events.

Groundwater Flow Directions

On May 2, 2018 and October 1, 2018, 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 (May 2, 2018) and Figure 4 (October 1, 2018). It should be noted that the development of meaningful A-zone groundwater elevation contours is complicated by the low hydraulic conductivity of the soil and the presence of drainage ditches. Due to these factors, variable groundwater

flow patterns have been observed historically for the A-zone clay unit. Despite the varying patterns associated with contouring shallow groundwater in this setting, the predominant groundwater flow direction in the A-zone is generally toward the north/northwest.

C-zone groundwater elevation contours are presented on Figure 3 (May 2, 2018) and Figure 5 (October 1, 2018). 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 May and October 2018 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 2018 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 May and October 2018 monitoring events are presented in Table 3. Based on the 2018 water level data, the average vertical gradient between the A- and C-zones was -0.288 ft/ft for the May 2018 monitoring event and -0.281 ft/ft for the October 2018 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 0.009 ft/ft for the May 2018 monitoring event, and 0.008 ft/ft for the October 2018 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 May 2018 and October 2018 monitoring events, respectively. These gradients are generally consistent with gradients calculated during previous years.

Groundwater Flow Velocity

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

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

where:

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

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

Horizontal Groundwater Flow Velocity

Tables 4 and 5 present the procedures and results of the groundwater flow velocity calculations for the A- and C-zones, respectively. The estimated horizontal groundwater

velocities for each of the zones, associated with the respective semi-annual sampling events, are summarized below.

A-zone:

2.8×10^{-3} ft/day (May) and 2.7×10^{-3} ft/day (October) ($n_e = 0.01$)
 9.4×10^{-5} ft/day (May) and 9.0×10^{-5} ft/day (October) ($n_e = 0.3$)

C-zone:

3.6×10^{-1} ft/day (May) and 4.8×10^{-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 2018 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:

-2.0×10^{-3} ft/day (May) and -2.0×10^{-3} ft/day (October) ($n_e = 0.01$)
 -6.8×10^{-5} ft/day (May) and -6.7×10^{-5} ft/day (October) ($n_e = 0.3$)

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

The vertical groundwater flow velocities calculated using 2018 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 2018 semi-annual sampling events. Table 7 lists the general constituent groups and corresponding United States Environmental Protection Agency (USEPA) analytical methods utilized for the groundwater monitoring program as well as the individual compounds per constituent group. Table 8 summarizes data that exceeded the WDNR Preventative Action Limits (PALs), WDNR Enforcement Standards (ESs), or USEPA Maximum Contaminant Levels (MCLs) for the May 2018 and October 2018 groundwater sampling events. A map depicting the data for key historical constituents of interest from the first and second semi-annual 2018 sampling events is provided as Figure 6.

Upon receipt, FTS evaluated each laboratory data report. FTS's data evaluation team determined that the 2018 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 2018 semi-annual sampling event were analyzed for an extended list of semi-volatile organic compounds (SVOCs) by TestAmerica Laboratories, Inc., using USEPA Method 8270D LL.

As shown in Table 8, during the first semi-annual 2018 sampling event, none of the monitoring wells sampled had SVOC concentrations exceeding WDNR PALs, WDNR ESs, or MCLs (Table 8).

During the second semi-annual 2018 event, the sample from monitoring well W-30A contained benzo(a)pyrene (0.15 J micrograms per liter [ug/l] above its WDNR PAL of 0.02 ug/l) and benzo(b)fluoranthene (0.17 J ug/l above its WDNR PAL of 0.02 ug/l). None of the monitoring wells sampled during the second semi-annual 2018 event had SVOC concentrations exceeding WDNR ESs or MCLs (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 (May 2018). 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, 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 2018 sampling event.

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

3.3 VOLATILE ORGANIC COMPOUNDS

Volatile organic compounds (VOCs) were analyzed by TestAmerica Laboratories, Inc., using USEPA Method 8260C during each 2018 semi-annual sampling event. As shown on Table 8, benzene was detected in monitoring well W-10AR2 (13 ug/l and 16 ug/l) above the MCL of 5 ug/l, WDNR ES of 5 ug/l, and WDNR PAL of 0.5 ug/l during the first and second semi-annual 2018 events, respectively. Benzene was also detected in monitoring well W-30A (8.9 ug/l and 3.6 ug/l) above the MCL, WDNR ES, and WDNR PAL during the first semi-annual 2018 event and above the WDNR PAL only during the second semi-annual 2018 event.

As shown on Table 8, naphthalene was detected in monitoring well W-30A (29 ug/l and 67 ug/l) above the WDNR PAL of 10 ug/l during the first and second semi-annual 2018 events.

3.4 DATA TRENDS

This section of the report presents a discussion of data trends for representative constituents exceeding applicable regulatory standards during the last four sampling events: April and October 2017, and May and October 2018.

3.4.1 A-Zone Wells

Figure 7 presents graphs of recent and historical groundwater monitoring results at two A-zone monitoring wells: W-10AR2 and W-30A. These wells were selected for discussion because samples collected at these wells typically exhibit the highest concentrations and frequency of detection of Site-related constituents among the monitored wells. The constituents selected for trend analysis are benzene, chrysene, naphthalene, and pentachlorophenol. These constituents are considered representative of

Site-related constituents that have been detected above WDNR PALs or ESs during the last four monitoring events, and are consistent with the constituents selected for trend evaluation in previous annual groundwater monitoring reports.

As shown on Figure 7, samples collected at monitoring well W-10AR2 exhibited concentrations of benzene exceeding its WDNR PAL and WDNR ES in all of the past four sampling rounds, naphthalene was detected below its WDNR PAL and WDNR ES in all of the past four sampling rounds, and pentachlorophenol and chrysene were not detected in any of the last four sampling rounds. At monitoring well W-30A, naphthalene exceeded its WDNR PAL in all of the past four sampling rounds, benzene exceeded its WDNR PAL in all of the past four sampling rounds (three of those four samples also exceeded the WDNR ES for benzene), chrysene exceeded its WDNR PAL in two of the past four sampling rounds (both of those samples also exceeded the WDNR ES for chrysene), 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, pentachlorophenol, and naphthalene, a linear regression analysis was completed using a 95% confidence level to evaluate whether a data trend exists at wells W-10AR2 and W-30A. The statistical analyses indicate that the long-term trends in the benzene, chrysene, pentachlorophenol, and naphthalene concentrations in wells W-10AR2 and W-30A are stable or decreasing. Details related to the linear regression analysis are provided in Appendix E.

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

3.4.2 C-Zone Wells

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

3.4.3 D-Zone Wells

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

4.0 CURRENT SITE STATUS

As indicated by the data presented in Section 3, the extent of impacted groundwater at this Site is not expanding and appears stable. Additional information regarding project milestones and the current Site status is provided in Appendix A. Semi-annual groundwater monitoring will continue in 2019.

5.0 REFERENCES

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

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TABLES

Table 1
Current Monitoring Well Network
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

W-02C	W-10AR2	W-18D	W-26A	W-31C	W-39A
W-04AR2*	W-11A	W-19A	W-26B	W-32C	W-40A
W-05CR	W-12A	W-19C	W-34D	W-33D	
W-06A	W-12CR	W-20AR	W-28C	W-35A	
W-06C	W-14A	W-21A	W-29A	W-36A	
W-08A	W-14B	W-21B	W-30A	W-37A	
W-09C	W-16AR	W-25A	W-30C	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 2018 at Beazer's discretion.

Table 2A
First Semi-Annual 2018 Groundwater Elevations
2018 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)	May 2, 2018		
				Depth to Water (feet)	Groundwater Elevation (feet msl)	Apparent DNAPL Thickness (feet msl)
W-02C	672.37	632.65	627.65	9.80	662.57	NP
W-04AR2	676.15	672.53	662.53	3.65	672.50	NP
W-05CR	674.69	643.53	633.53	11.94	662.75	NP
W-06A	673.65	670.04	660.04	3.05	670.60	NP
W-06C	674.33	633.93	628.93	11.67	662.66	NP
W-08A	676.35	670.62	660.62	3.40	672.95	NP
W-09C	673.16	630.41	625.41	10.61	662.55	NP
W-10AR2	677.09	672.77	659.77	4.07	673.02	NP
W-11A	676.40	669.81	659.81	4.95	671.45	NP
W-12A	677.11	673.33	663.33	3.21	673.90	NP
W-12CR	677.39	635.34	630.34	14.80	662.59	NP
W-14A	678.61	673.05	663.05	4.45	674.16	NP
W-14B	677.60	644.97	639.97	5.73	671.87	NP
W-16AR	675.37	668.20	658.20	3.82	671.55	NP
W-18D	674.79	491.23	471.23	45.25	629.54	NP
W-19A	675.39	669.63	659.63	3.65	671.74	NP
W-19C	674.96	635.79	630.79	12.50	662.46	NP
W-20AR	674.72	669.33	659.33	5.25	669.47	NP
W-21A	674.20	667.88	657.88	4.22	669.98	NP
W-21B	674.61	641.71	636.71	7.24	667.37	NP
W-25A	678.77	672.68	662.68	5.57	673.20	NP
W-26A	673.67	668.05	658.05	3.45	670.22	NP
W-26B	674.02	644.42	639.42	7.00	667.02	NP
W-28C	676.33	635.74	630.74	13.46	662.87	NP
W-29A	673.21	668.38	658.38	1.42	671.79	NP
W-30A	676.74	672.79	662.79	2.94	673.80	NP
W-30C	676.91	633.50	628.50	14.28	662.63	NP
W-31C	671.76	626.64	621.64	NM ⁽¹⁾	NM ⁽¹⁾	NM ⁽¹⁾
W-32C	672.88	618.93	613.93	13.21	659.67	NP
W-33D	673.43	495.58	475.58	43.84	629.59	NP
W-34D	674.28	496.07	476.07	36.55	637.73	NP
W-35A	675.05	669.28	659.28	3.23	671.82	NP
W-36A	678.44	673.00	663.00	4.20	674.24	NP
W-37A	676.47	671.05	661.05	8.95	667.52	NP
W-38A	676.78	671.35	661.35	2.68	674.10	NP
W-39A	678.40	672.64	662.64	4.96	673.44	NP
W-40A	676.79	671.18	661.18	3.24	673.55	NP

Notes:

feet-msl - Feet above mean sea level

DNAPL - Dense Non-Aqueous Phase Liquid

NP - DNAPL Not Present

NM - not measured

NM⁽¹⁾ - not measured; obstruction located at 4.60' feet below top of casing.

Table 2B
Second Semi-Annual 2018 Groundwater Elevations
2018 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 1, 2018		
				Depth to Water (feet)	Groundwater Elevation (feet msl)	Apparent DNAPL Thickness (feet msl)
W-02C	672.37	632.65	627.65	10.91	661.46	NP
W-04AR2	676.15	672.53	662.53	3.94	672.21	NP
W-05CR	674.69	643.53	633.53	12.48	662.21	NP
W-06A	673.65	670.04	660.04	4.02	669.63	NP
W-06C	674.33	633.93	628.93	12.00	662.33	NP
W-08A	676.35	670.62	660.62	3.66	672.69	NP
W-09C	673.16	630.41	625.41	11.05	662.11	NP
W-10AR2	677.09	672.77	659.77	7.95	669.14	NP
W-11A	676.40	669.81	659.81	5.02	671.38	NP
W-12A	677.11	673.33	663.33	3.91	673.20	NP
W-12CR	677.39	635.34	630.34	15.26	662.13	NP
W-14A	678.61	673.05	663.05	5.05	673.56	NP
W-14B	677.60	644.97	639.97	5.16	672.44	NP
W-16AR	675.37	668.20	658.20	4.16	671.21	NP
W-18D	674.79	491.23	471.23	46.30	628.49	NP
W-19A	675.39	669.63	659.63	4.36	671.03	NP
W-19C	674.96	635.79	630.79	12.87	662.09	NP
W-20AR	674.72	669.33	659.33	5.71	669.01	NP
W-21A	674.20	667.88	657.88	4.74	669.46	NP
W-21B	674.61	641.71	636.71	7.73	666.88	NP
W-25A	678.77	672.68	662.68	5.21	673.56	NP
W-26A	673.67	668.05	658.05	3.65	670.02	NP
W-26B	674.02	644.42	639.42	7.29	666.73	NP
W-28C	676.33	635.74	630.74	13.85	662.48	NP
W-29A	673.21	668.38	658.38	1.31	671.90	NP
W-30A	676.74	672.79	662.79	3.25	673.49	NP
W-30C	676.91	633.50	628.50	14.82	662.09	NP
W-31C	671.76	626.64	621.64	NM ⁽¹⁾	NM ⁽¹⁾	NM ⁽¹⁾
W-32C	672.88	618.93	613.93	13.75	659.13	NP
W-33D	673.43	495.58	475.58	44.82	628.61	NP
W-34D	674.28	496.07	476.07	38.31	635.97	NP
W-35A	675.05	669.28	659.28	4.32	670.73	NP
W-36A	678.44	673.00	663.00	4.83	673.61	NP
W-37A	676.47	671.05	661.05	2.50	673.97	NP
W-38A	676.78	671.35	661.35	3.10	673.68	NP
W-39A	678.40	672.64	662.64	5.40	673.00	NP
W-40A	676.79	671.18	661.18	3.90	672.89	NP

Notes:

feet-msl - Feet above mean sea level

DNAPL - Dense Non-Aqueous Phase Liquid

NP - DNAPL Not Present

NM - not measured

NM⁽¹⁾ - not measured; obstruction located at 4.62' feet below top of casing.

Table 3
Summary of 2018 Vertical Gradients
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

May 2018

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			(If yes)	(If no)
		Top (feet msl)	Bottom (feet msl)	Top (feet msl)	Bottom (feet msl)	----	----		----	----				
		t1	b1	t2	b2	$\frac{(t1+b1)}{2}$	$\frac{(t1+b1)}{2}$	$\frac{(t1+b1)}{2}-\frac{(t2+b2)}{2}$	h1	h2	h2-h1		$\frac{h2-h1}{(h1+b1)/2-(t2+b2)/2}$	$\frac{h2-h1}{(t1+b1)/2-(t2+b2)/2}$
W-06A	W-06C	670.04	660.04	633.98	628.98	665.04	631.48	33.56	670.60	662.66	-7.94	no		-0.237
W-12A	W-12CR	673.33	663.33	635.34	630.34	668.33	632.84	35.49	673.90	662.59	-11.31	no		-0.319
W-19A	W-19C	669.74	659.74	635.79	630.79	664.74	633.29	31.45	671.74	662.46	-9.28	no		-0.295
W-30A	W-30C	672.90	662.90	633.50	628.50	667.90	631.00	36.90	673.80	662.63	-11.17	no		-0.303
AVERAGE VERTICAL GRADIENT⁽¹⁾ - Between Zones A and C												-0.288		

October 2018

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			(If yes)	(If no)
		Top (feet msl)	Bottom (feet msl)	Top (feet msl)	Bottom (feet msl)	----	----		----	----				
		t1	b1	t2	b2	$\frac{(t1+b1)}{2}$	$\frac{(t1+b1)}{2}$	$\frac{(t1+b1)}{2}-\frac{(t2+b2)}{2}$	h1	h2	h2-h1		$\frac{h2-h1}{(h1+b1)/2-(t2+b2)/2}$	$\frac{h2-h1}{(t1+b1)/2-(t2+b2)/2}$
W-06A	W-06C	670.04	660.04	633.98	628.98	665.04	631.48	33.56	669.63	662.33	-7.3	yes	-0.219	
W-12A	W-12CR	673.33	663.33	635.34	630.34	668.33	632.84	35.49	673.20	662.13	-11.07	yes	-0.312	
W-19A	W-19C	669.74	659.74	635.79	630.79	664.74	633.29	31.45	671.03	662.09	-8.94	no		-0.284
W-30A	W-30C	672.90	662.90	633.50	628.50	667.90	631.00	36.90	673.49	662.09	-11.4	no		-0.309
AVERAGE VERTICAL GRADIENT⁽¹⁾ - Between Zones A and C												-0.281		

Notes:

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

Table 4
2018 Horizontal Groundwater Flow Velocities for the A-Zone
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameters	First Semi-Annual 5/2/2018	Second Semi-Annual 10/1/2018
Hydraulic Gradient (i1) Vicinity of W-38A to W-29A		
Upgradient Elevation (ft, msl), (h1)	674.10	673.68
Downgradient Elevation (ft, msl), (h2)	671.79	671.90
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	1225.18	1225.18
Horizontal Hydraulic Gradient (i1=(h1-h2)/l)	0.0019	0.0015
Hydraulic Gradient (i2) Vicinity of W-19A to W-20AR		
Upgradient Elevation (ft, msl), (h1)	671.74	671.03
Downgradient Elevation (ft, msl), (h2)	669.47	669.01
Horizontal Distance Between Up and Downgradient Elevation (ft), (l)	166.81	166.81
Horizontal Hydraulic Gradient (i2 = (h1-h2)/l)	0.0136	0.0121
Hydraulic Gradient (i3) Vicinity of W-08A to W-21A		
Upgradient Well - Elevation (ft, msl), (h1)	672.95	672.69
Downgradient Well - Elevation (ft, msl), (h2)	669.98	669.46
Horizontal Distance Between Up and Downgradient Well (ft), (l)	288.00	288.00
Horizontal Hydraulic Gradient (i3 = (h1-h2)/l)	0.0103	0.0112
Average Hydraulic Gradient $i = (i1 + i2 + i3)/3$	0.009	0.008
Average Hydraulic Conductivity (K) (foot per day)	0.00328	0.00328
Effective Porosity (n)	0.01	0.01
Effective Porosity (n)	0.30	0.30
Average Groundwater Velocity		
(V = Ki/n) (feet per day), Where n = 0.01	2.8E-03	2.7E-03
(V = Ki/n) (feet per day), Where n = 0.30	9.4E-05	9.0E-05

Notes:

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

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

ft = feet

msl = mean sea level

Table 5
2018 Horizontal Groundwater Flow Velocities for the C-Zone
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameters	First Semi-Annual 5/2/2018	Second Semi-Annual 10/1/2018
Hydraulic Gradient (i1) Vicinity of W-28C to W-32C		
Upgradient Elevation (ft, msl), (h1)	662.87	662.48
Downgradient Elevation (ft, msl), (h2)	659.67	659.13
Horizontal Distance Between Up and Downgradient Elevations (ft), (l)	1377.00	1377.00
Horizontal Hydraulic Gradient ($i1=(h1-h2)/l$)	0.0023	0.0024
Hydraulic Gradient (i2) Vicinity of W-30C to W-32C		
Upgradient Elevation (ft, msl), (h1)	662.63	662.09
Downgradient Elevation (ft, msl), (h2)	659.67	659.13
Horizontal Distance Between Up and Downgradient Elevations (ft), (l)	723.89	487.95
Horizontal Hydraulic Gradient ($i2 = (h1-h2)/l$)	0.0041	0.0061
Average Hydraulic Gradient $i = (i1 + i2)/2$	0.0032	0.0042
Average Hydraulic Conductivity (K) (foot per day)	22.6	22.6
Effective Porosity (n)	0.20	0.20
Average Groundwater Velocity		
(V = Ki/n) (feet per day), Where n = 0.20	3.6E-01	4.8E-01

Notes:

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

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

ft = feet

msl = mean sea level

Table 6
Summary of 2018 Vertical Groundwater Flow Velocities
for the A to C Zones
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameters	First Semi-Annual 4/26/2017	Second Semi-Annual 10/1/2018
Average Vertical Hydraulic Gradient (i from Table 3)	-0.288	-0.281
Vertical Hydraulic Conductivity (K) (feet/day) ⁽¹⁾	7.1E-05	7.1E-05
Effective Porosity (n)	0.01	0.01
Effective Porosity (n)	0.30	0.30
Average Groundwater Flow Velocity⁽²⁾		
V=Ki/n (ft/day) Where n=0.01	-2.0E-03	-2.0E-03
V=K/in (ft/day) Where n=0.3	-6.8E-05	-6.7E-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
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin**

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

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

Table 8
Summary of Regulatory Exceedances
First and Second Semi-Annual 2018 Sampling Events
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well	Parameter	Sample Result (ug/L)	Regulatory Standard (ug/L)
First Semi-Annual Sampling Event			
MCL Exceedance			
W-10AR2	Benzene	13	5
W-30A	Benzene	8.9	5
ES Exceedance			
W-10AR2	Benzene	13	5
W-30A	Benzene	8.9	5
PAL Exceedance			
W-04AR2	2,3,7,8-TCDD TEQ	4.74E-06	3.00E-06
W-10AR2	Benzene	13	0.5
W-30A	Benzene	8.9	0.5
	Naphthalene	29	10
	2,3,7,8-TCDD TEQ	7.23E-06	3.00E-06
Second Semi-Annual Sampling Event			
MCL Exceedance			
W-10AR2	Benzene	16	5
ES Exceedance			
W-10AR2	Benzene	16	5
PAL Exceedance			
W-10AR2	Benzene	16	0.5
W-30A	Benzene	3.6	0.5
	Benzo(a)pyrene	0.15 J	0.02
	Benzo(b)fluoranthene	0.17 J	0.02
	Naphthalene	67	10
W-30A DUP	Benzene	3.5	0.5
	Naphthalene	70	10

Notes:

µg/L - micrograms per liter

J - estimated result

ES - WDNR Enforcement Standards

PAL - WDNR Preventative Action Limits

MCL - Federal Maximum Contaminant Levels

TEQ - Toxicity Equivalent Quotient

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

**Table 9
Toxicity Equivalent Quotient of Detected Dioxin and Furans
2018 RCRA Annual Groundwater Monitoring Report
Former Koppers Inc. Facility - Superior, Wisconsin**

ANALYTE NAME	UNITS	TEFs	W-04AR2 5/3/2018	W-06A 5/2/2018	W-06C 5/3/2018	W-10AR2 5/3/2018	W-12A 5/3/2018	W-12CR 5/3/2018	W-28C 5/3/2018	W-28C-DUP 5/3/2018	W-30A 5/3/2018	W-30C 5/2/2018	Equipment Blank 5/2/2018	Equipment Blank 5/3/2018
8290A														
1,2,3,4,6,7,8-HPCDD	UG/L	0.01	0.00016	0.0000066 J	0.00000046 U	0.000011 J	0.00003 J	0.00000069 U	0.0000079 J	0.0000027 J	0.00022	0.0000092 J	0.00000036 U	0.00000027 U
1,2,3,4,6,7,8-HPCDF	UG/L	0.01	0.000037 J	0.0000003 U	0.000000041 U	0.000000033 U	0.0000082 J	0.00000019 U	0.0000058 J	0.00000068 U	0.000082	0.0000012 U	0.00000012 U	0.000000024 U
1,2,3,4,7,8,9-HPCDF	UG/L	0.01	0.0000023 J	0.0000004 U	0.000000051 U	0.000000045 U	0.0000003 U	0.000000026 U	0.00000031 U	0.000000078 U	0.0000095 J	0.00000015 U	0.00000015 U	0.000000028 U
1,2,3,4,7,8-HXCDD	UG/L	0.1	0.000002 J	0.00000027 U	0.00000012 U	0.00000021 U	0.00000055 U	0.000000064 U	0.00000018 U	0.00000023 U	0.00000025 U	0.00000012 U	0.000000095 U	0.000000061 U
1,2,3,4,7,8-HXCDF	UG/L	0.1	0.0000032 J	0.000000074 U	0.00000023 U	0.000000077 U	0.00000061 U	0.00000022 U	0.00000013 U	0.00000002 U	0.00001 J	0.0000002 U	0.00000015 U	0.00000011 U
1,2,3,6,7,8-HXCDD	UG/L	0.1	0.0000049 J	0.00000031 U	0.00000014 U	0.00000025 U	0.00000054 U	0.000000071 U	0.00000019 U	0.00000025 U	0.000011 J	0.00000014 U	0.000000096 U	0.00000007 U
1,2,3,6,7,8-HXCDF	UG/L	0.1	0.0000027 J	0.000000074 U	0.00000024 U	0.000000075 U	0.0000026 J	0.00000022 U	0.00000014 U	0.000000022 U	0.000011 J	0.0000002 U	0.00000015 U	0.00000011 U
1,2,3,7,8,9-HXCDD	UG/L	0.1	0.0000032 J	0.00000027 U	0.00000012 U	0.00000021 U	0.00000051 U	0.000000063 U	0.00000017 U	0.00000022 U	0.00000024 U	0.00000012 U	0.000000089 U	0.000000061 U
1,2,3,7,8,9-HXCDF	UG/L	0.1	0.00000036 U	0.000000085 U	0.00000026 U	0.000000084 U	0.00000075 U	0.00000003 U	0.00000015 U	0.000000025 U	0.0000017 U	0.00000025 U	0.00000018 U	0.00000013 U
1,2,3,7,8-PECDD	UG/L	1	0.00000063 J	0.00000072 U	0.00000063 U	0.00000055 U	0.0000011 U	0.00000048 U	0.00000087 U	0.00000089 U	0.00000061 U	0.0000013 U	0.00000063 U	0.0000011 U
1,2,3,7,8-PECDF	UG/L	0.03	0.00000017 U	0.00000023 U	0.000000045 U	0.0000002 U	0.00000059 U	0.00000061 U	0.00000039 U	0.00000043 U	0.00000078 U	0.00000053 U	0.00000036 U	0.00000009 U
2,3,4,6,7,8-HXCDF	UG/L	0.1	0.000001 J	0.000000077 U	0.00000022 U	0.000000068 U	0.00000058 U	0.00000021 U	0.00000013 U	0.000000021 U	0.0000014 U	0.0000002 U	0.00000014 U	0.00000001 U
2,3,4,7,8-PECDF	UG/L	0.3	0.00000017 U	0.00000002 U	0.000000039 U	0.00000021 U	0.00000056 U	0.00000053 U	0.00000041 U	0.00000038 U	0.00000088 U	0.00000048 U	0.00000033 U	0.00000082 U
2,3,7,8-TCDD	UG/L	1	0.00000051 U	0.00000031 U	0.00000032 U	0.00000021 U	0.00000029 U	0.00000031 U	0.00000025 U	0.0000003 U	0.00000023 U	0.00000035 U	0.00000034 U	0.00000041 U
2,3,7,8-TCDF	UG/L	0.1	0.00000014 U	0.00000013 U	0.00000082 U	0.00000079 U	0.0000011 U	0.0000014 U	0.00000093 U	0.00000076 U	0.000001 U	0.0000011 U	0.0000013 U	0.0000014 U
OCDD	UG/L	0.0003	0.0013	0.000055 J	0.0000085 J	0.00011	0.00027	0.000031 J	0.00008 J	0.000041 J	0.0028	0.00019	0.0000038 J	0.000000032 U
OCDF	UG/L	0.0003	0.0001	0.000001 U	0.0000017 U	0.0000089 J	0.000026 J	0.000002 U	0.000013 J	0.0000022 U	0.00024	0.000018 J	0.0000016 U	0.0000014 U
TOTAL HPCDD	UG/L	NA	0.00039	0.000029 J	0.00000046 U	0.000044 J	0.00006	0.00000069 U	0.000028 J	0.000011 J	0.00052	0.000025 J	0.00000036 U	0.00000027 U
TOTAL HPCDF	UG/L	NA	0.00014	0.0000004 U	0.000000051 U	0.0000073 J	0.000028 J	0.000000026 U	0.000011 J	0.000000078 U	0.00031	0.0000055 J	0.00000015 U	0.000000028 U
TOTAL HXCDD	UG/L	NA	0.000034 J	0.00000031 U	0.00000014 U	0.00000025 U	0.00000055 U	0.000000071 U	0.0000019 J	0.00000025 U	0.000038 J	0.00000014 U	0.000000096 U	0.00000007 U
TOTAL HXCDF	UG/L	NA	0.000061	0.000000085 U	0.00000026 U	0.0000017 J	0.000022 J	0.0000003 U	0.00000091 J	0.000000025 U	0.0002	0.00000025 U	0.00000018 U	0.00000013 U
TOTAL PECDD	UG/L	NA	0.0000063 J	0.00000072 U	0.0000019 J	0.00000055 U	0.0000011 U	0.00000048 U	0.00000087 U	0.00000089 U	0.00000061 U	0.0000013 U	0.00000063 U	0.0000011 U
TOTAL PECDF	UG/L	NA	0.0000069 J	0.00000023 U	0.000000045 U	0.00000021 U	0.0000092 J	0.00000061 U	0.00000041 U	0.00000043 U	0.000047 J	0.00000053 U	0.00000036 U	0.00000009 U
TOTAL TCDD	UG/L	NA	0.00000051 U	0.00000031 U	0.00000032 U	0.00000021 U	0.00000029 U	0.00000031 U	0.00000025 U	0.0000003 U	0.00000023 U	0.00000035 U	0.00000034 U	0.00000041 U
TOTAL TCDF	UG/L	NA	0.0000019 J	0.00000013 U	0.00000082 U	0.00000079 U	0.0000011 U	0.0000014 U	0.00000093 U	0.00000076 U	0.000011	0.0000011 U	0.0000013 U	0.0000014 U
2,3,7,8-TCDD TEQ - ND = 0	UG/L	NA	4.74E-06	8.25E-08	2.55E-09	1.46E-07	7.31E-07	9.30E-09	1.65E-07	3.93E-08	7.23E-06	1.54E-07	1.14E-09	0.00E+00

Notes:

U Indicates compound was not detected

J Indicates an estimated value

Q Indicates estimated maximum possible concentration

TEQ = Toxicity Equivalent Quotient

TEQs were calculated using zero for nondetected values











TEF = Toxicity Equivalent Factor

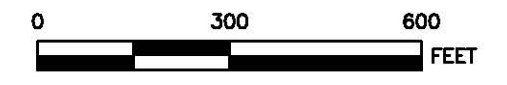
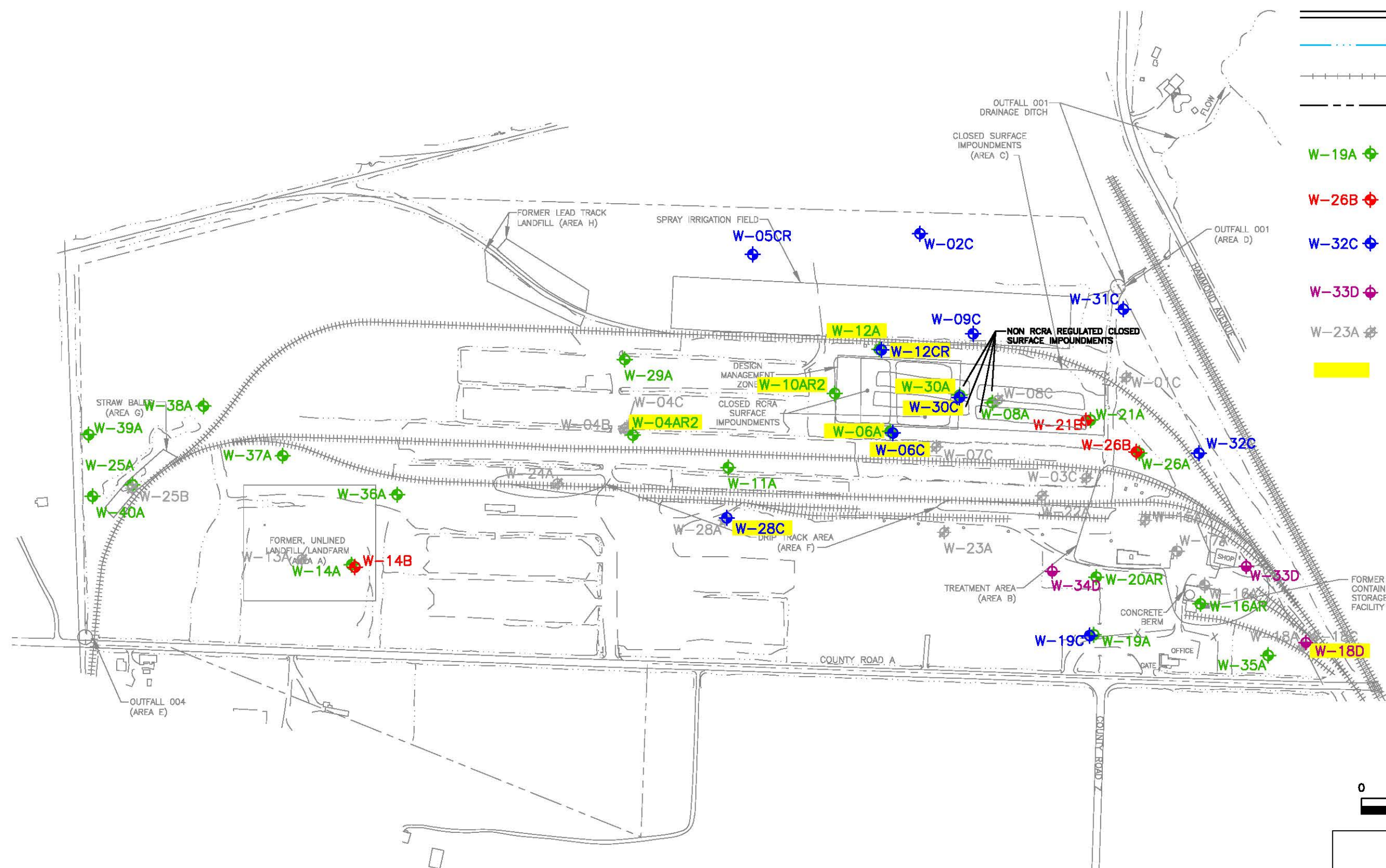
TEFs values taken from the 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds


FIGURES



LEGEND

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



BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KC	DATE: 08/04/18		FIELD & TECHNICAL SERVICES, LLC
CHKD: AMO	DATE: 08/04/18		200 THIRD AVENUE
APPD: JOK	DATE: 08/28/18		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
SITE MAP			PROJECT NO: 06055618 DRAWING NUMBER FIGURE 1

REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.

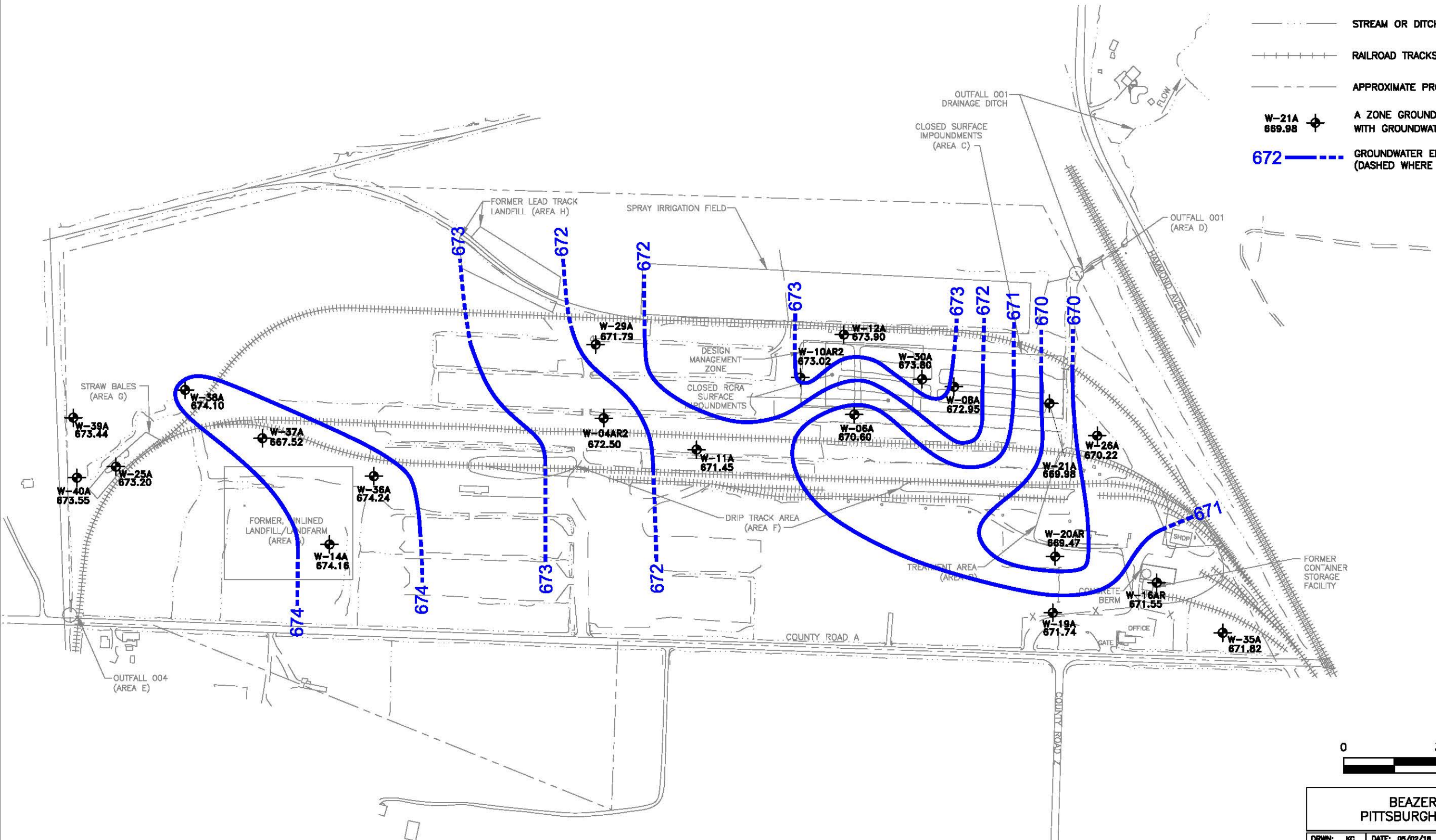
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LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-21A 669.98 A ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 672 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)



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REV #	DATE	DESCRIPTION	APPD

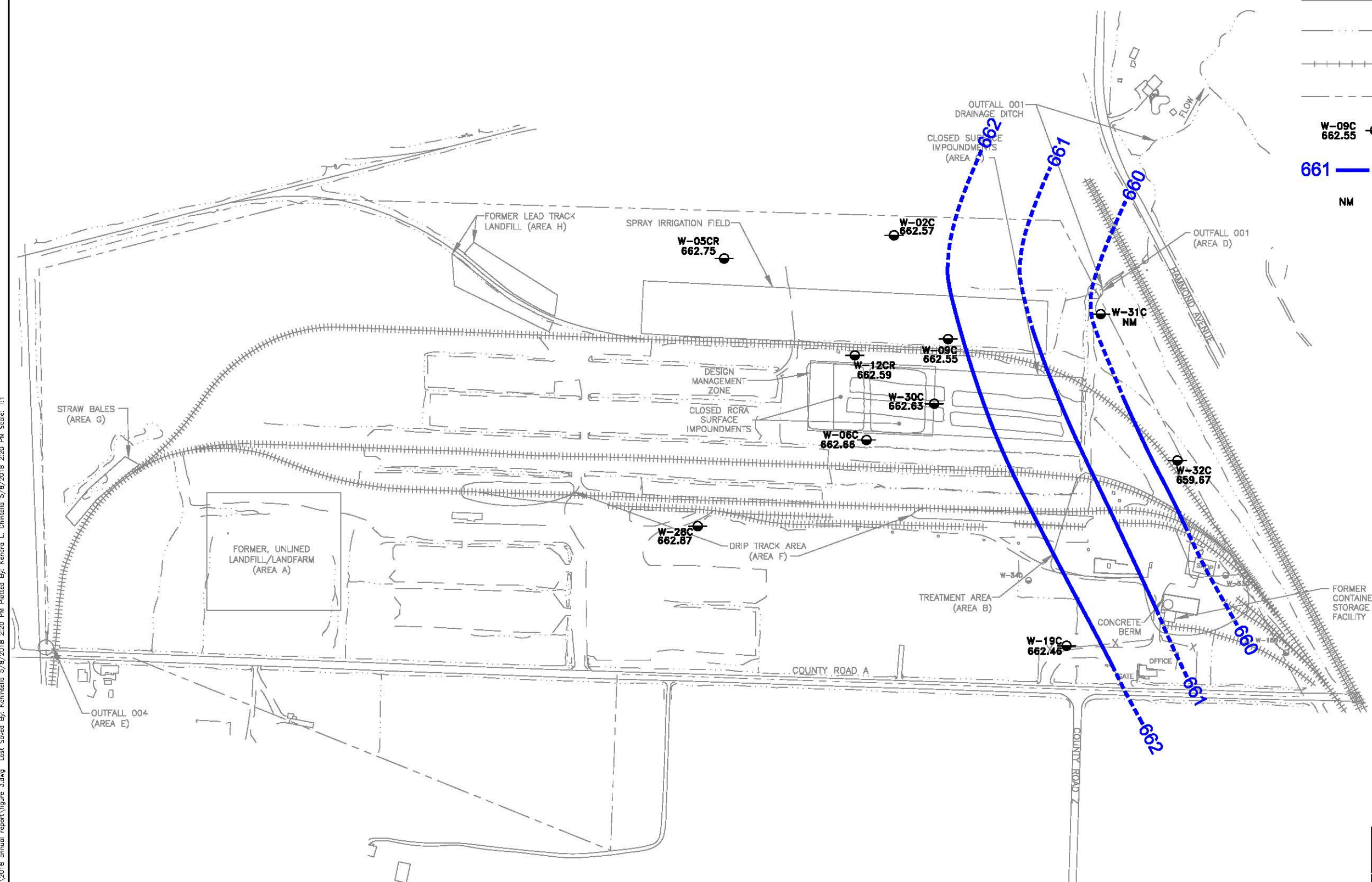
REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.
 BASE MAP AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01).
 ALL LOCATIONS ARE APPROXIMATE.
 W-37A NOT USED IN CONTOURING.

BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KC	DATE: 05/02/18	 FTS	FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 05/02/18		200 THIRD AVENUE
APPD: JJK	DATE: 05/23/18		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS A-ZONE WELLS (MAY 2, 2018)			PROJECT NO: DM055618 DRAWING NUMBER FIGURE 2

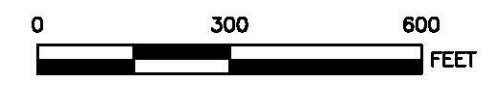


LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-09C 662.55 C ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 661 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)
- NM NOT MEASURED



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BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KC	DATE: 05/02/18	 FTS	FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 05/02/18		200 THIRD AVENUE
APPD: JJK	DATE: 05/23/18		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS C-ZONE WELLS (MAY 2, 2018)			PROJECT NO: 06055618 DRAWING NUMBER FIGURE 3

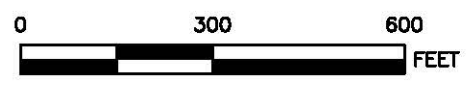
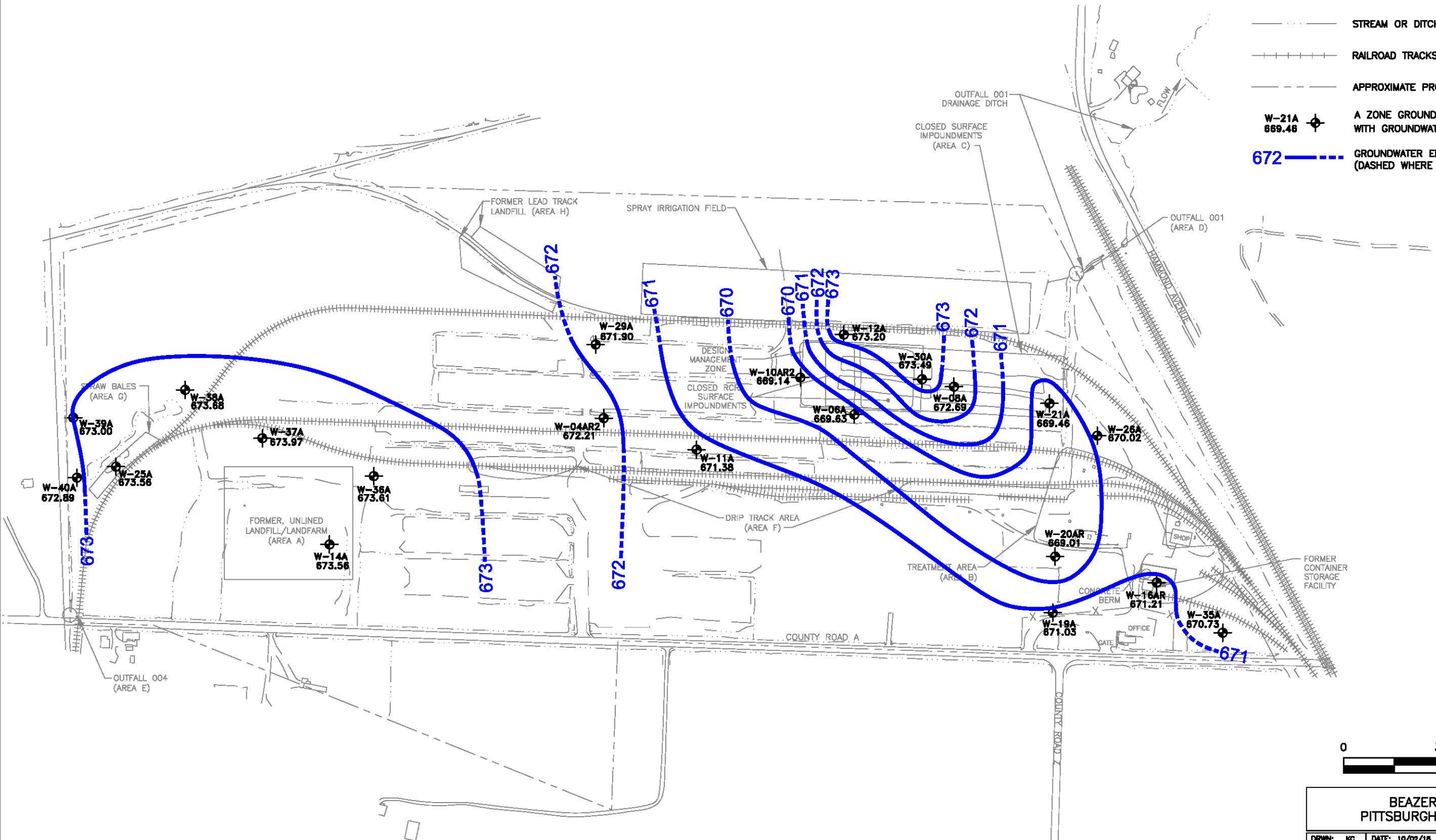
REV #	DATE	DESCRIPTION	APPD

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



LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-21A 669.46 A ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 672 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)



BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: KC	DATE: 10/02/18
CHKD: RMW	DATE: 10/02/18
APPD: JJK	DATE: 10/23/18
SCALE: AS SHOWN	
ISSUE DATE:	

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

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GROUNDWATER ELEVATION
CONTOURS A-ZONE WELLS
(OCTOBER 1, 2018)

PROJECT NO: DM055618
DRAWING NUMBER
FIGURE 4

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

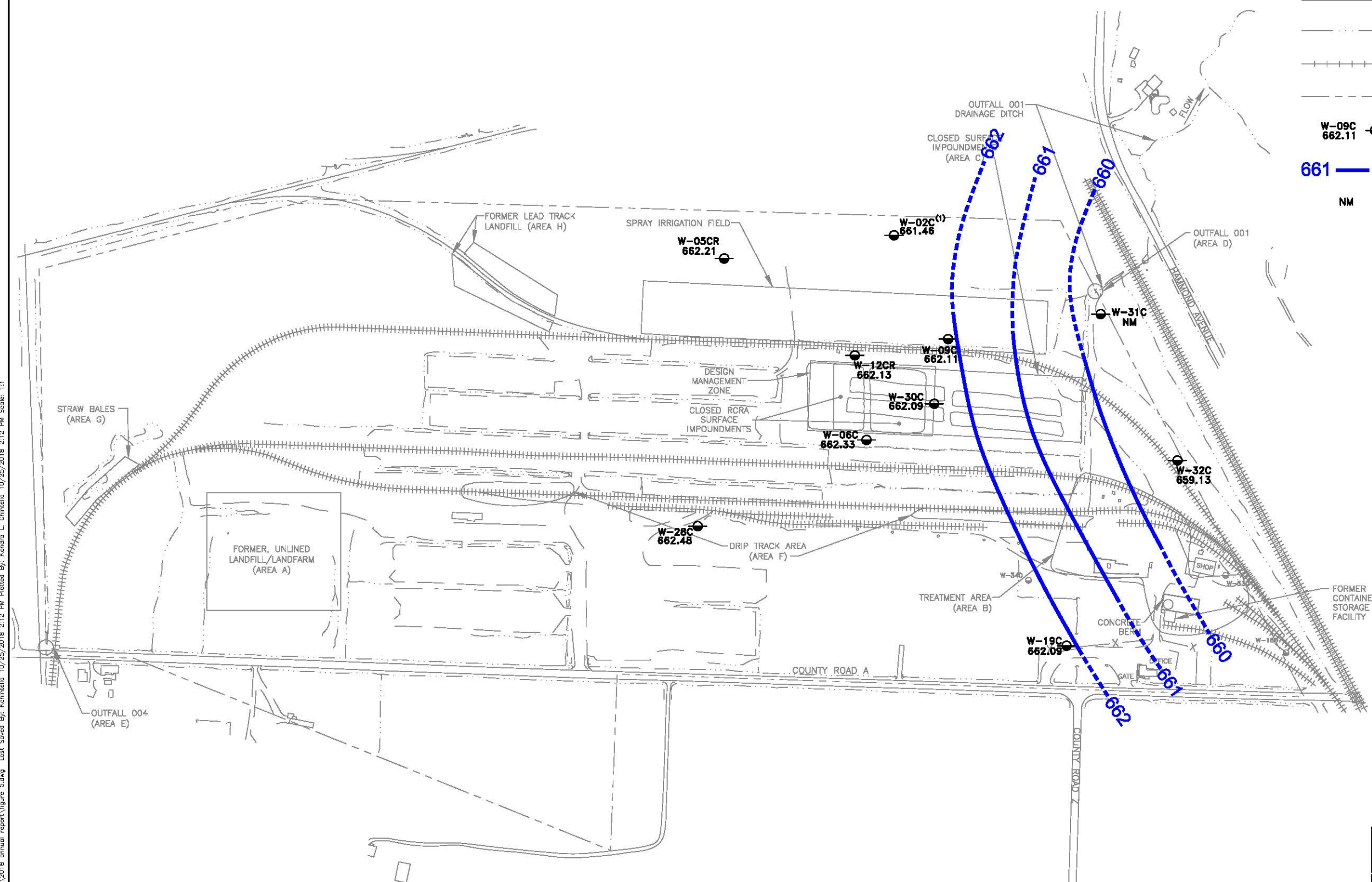
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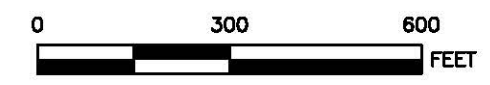


LEGEND

- ROAD
- STREAM OR DITCH
- RAILROAD TRACKS
- APPROXIMATE PROPERTY BOUNDARY
- W-09C 662.11 C ZONE GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION (FT-MSL)
- 661 GROUNDWATER ELEVATION CONTOUR (FT-MSL) (DASHED WHERE INFERRED)
- NM NOT MEASURED



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BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA			
DRWN: KC	DATE: 10/02/18	 FTS	FIELD & TECHNICAL SERVICES, LLC
CHKD: RMW	DATE: 10/02/18		200 THIRD AVENUE
APPD: JJK	DATE: 10/23/18		CARNEGIE, PA 15106
SCALE: AS SHOWN	ISSUE DATE:		
FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN			
GROUNDWATER ELEVATION CONTOURS C-ZONE WELLS (OCTOBER 1, 2018)			PROJECT NO: DM055618 DRAWING NUMBER FIGURE 5

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

REV #	DATE	DESCRIPTION	APPD



W-12A		
Constituent	May-18	Oct-18
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.054 U	0.056 U
BENZO(B)FLUORANTHENE	0.055 U	0.058 U
CHRYSENE	0.13 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	7.31E-07	NA

W-12CR		
Constituent	May-18	Oct-18
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.053 U	0.056 U
BENZO(B)FLUORANTHENE	0.055 U	0.058 U
CHRYSENE	0.13 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	9.30E-09	NA

W-30A			
Constituent	May-18	Oct-18	Dup
BENZENE	8.8	3.6	3.5
BENZO(A)PYRENE	0.059 U	0.15 J	0.057 U
BENZO(B)FLUORANTHENE	0.061 U	0.17 J	0.059 U
CHRYSENE	0.15 U	0.14 U	0.14 U
NAPHTHALENE	29	67	70
2,3,7,8-TCDD TEQ (ND=0)	7.23E-06	NA	NA

W-10AR2		
Constituent	May-18	Oct-18
BENZENE	13	16
BENZO(A)PYRENE	0.056 U	0.056 U
BENZO(B)FLUORANTHENE	0.058 U	0.058 U
CHRYSENE	0.14 U	0.14 U
NAPHTHALENE	1.5	1.9
2,3,7,8-TCDD TEQ (ND=0)	1.46E-07	NA

W-04AR2		
Constituent	May-18	Oct-18
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.056 U	0.059 U
BENZO(B)FLUORANTHENE	0.058 U	0.061 U
CHRYSENE	0.14 U	0.15 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	4.74E-06	NA

W-30C		
Constituent	May-18	Oct-18
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.055 U	0.057 U
BENZO(B)FLUORANTHENE	0.057 U	0.059 U
CHRYSENE	0.14 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	1.54E-07	NA

W-28C			
Constituent	May-18	May-18 Dup	Oct-18
BENZENE	0.41 U	0.41 U	0.41 U
BENZO(A)PYRENE	0.054 U	0.056 U	0.057 U
BENZO(B)FLUORANTHENE	0.056 U	0.058 U	0.059 U
CHRYSENE	0.13 U	0.14 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	1.65E-07	3.93E-08	NA

W-06A		
Constituent	May-18	Oct-18
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.054 U	0.056 U
BENZO(B)FLUORANTHENE	0.056 U	0.058 U
CHRYSENE	0.13 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	8.25E-08	NA

W-06C		
Constituent	May-18	Oct-18
BENZENE	0.41 U	0.41 U
BENZO(A)PYRENE	0.056 U	0.057 U
BENZO(B)FLUORANTHENE	0.058 U	0.059 U
CHRYSENE	0.14 U	0.14 U
NAPHTHALENE	0.43 U	0.43 U
2,3,7,8-TCDD TEQ (ND=0)	2.55E-09	NA

W-18D		
Constituent	May-18	Oct-18
BENZENE	NA	NA
BENZO(A)PYRENE	0.054 U	0.056 U
BENZO(B)FLUORANTHENE	0.056 U	0.058 U
CHRYSENE	0.13 U	0.14 U
NAPHTHALENE	0.29 U	0.3 U
2,3,7,8-TCDD TEQ (ND=0)	NA	NA

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

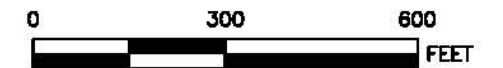
STANDARDS

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

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

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

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



BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA

DRWN: KC	DATE: 10/30/18
CHRD: KC	DATE: 10/30/18
APPD: AMO	DATE: 11/20/18
SCALE: AS SHOWN	
ISSUE DATE:	

FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

MAY AND OCTOBER 2018
CONSTITUENTS OF INTEREST

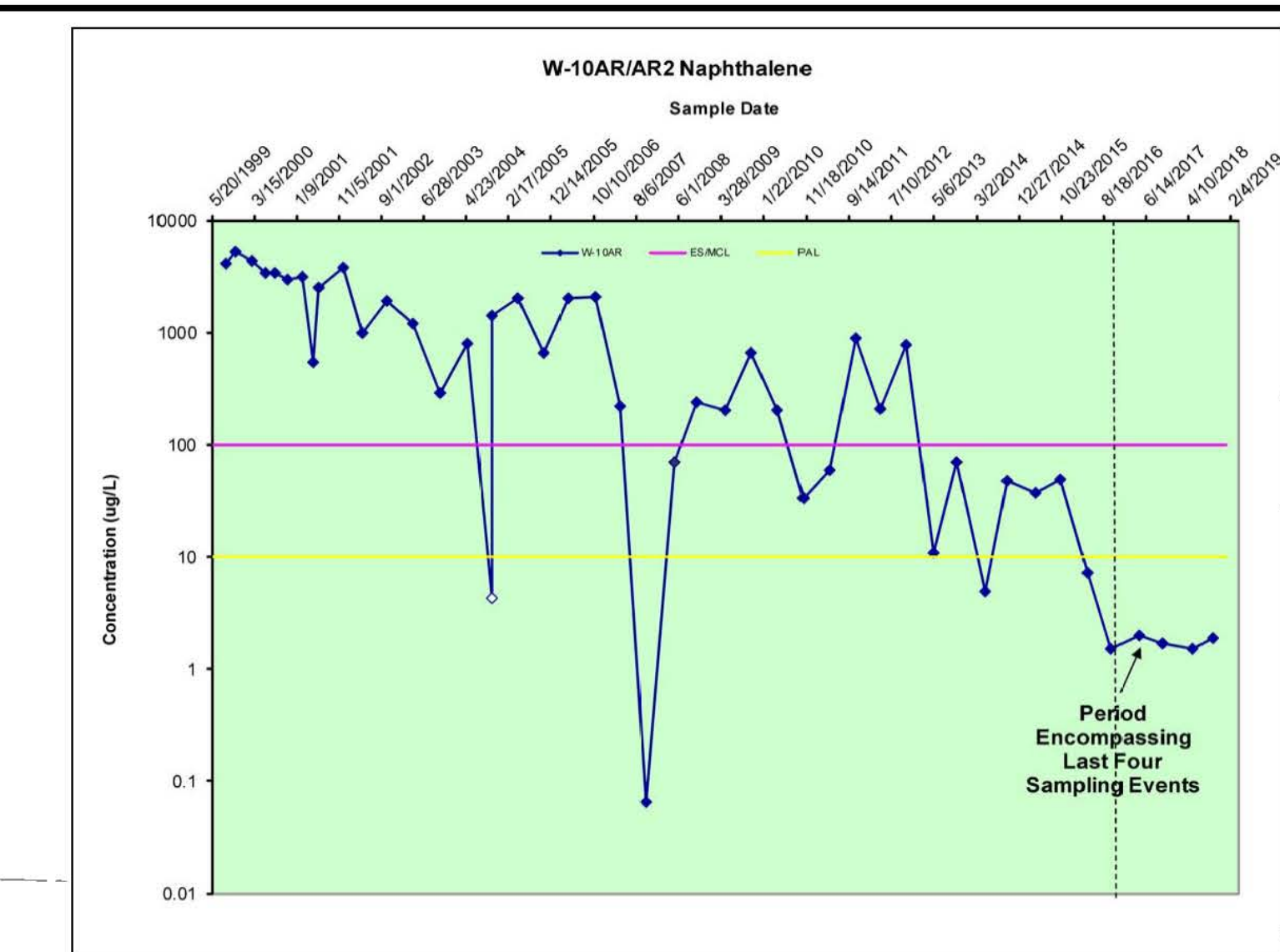
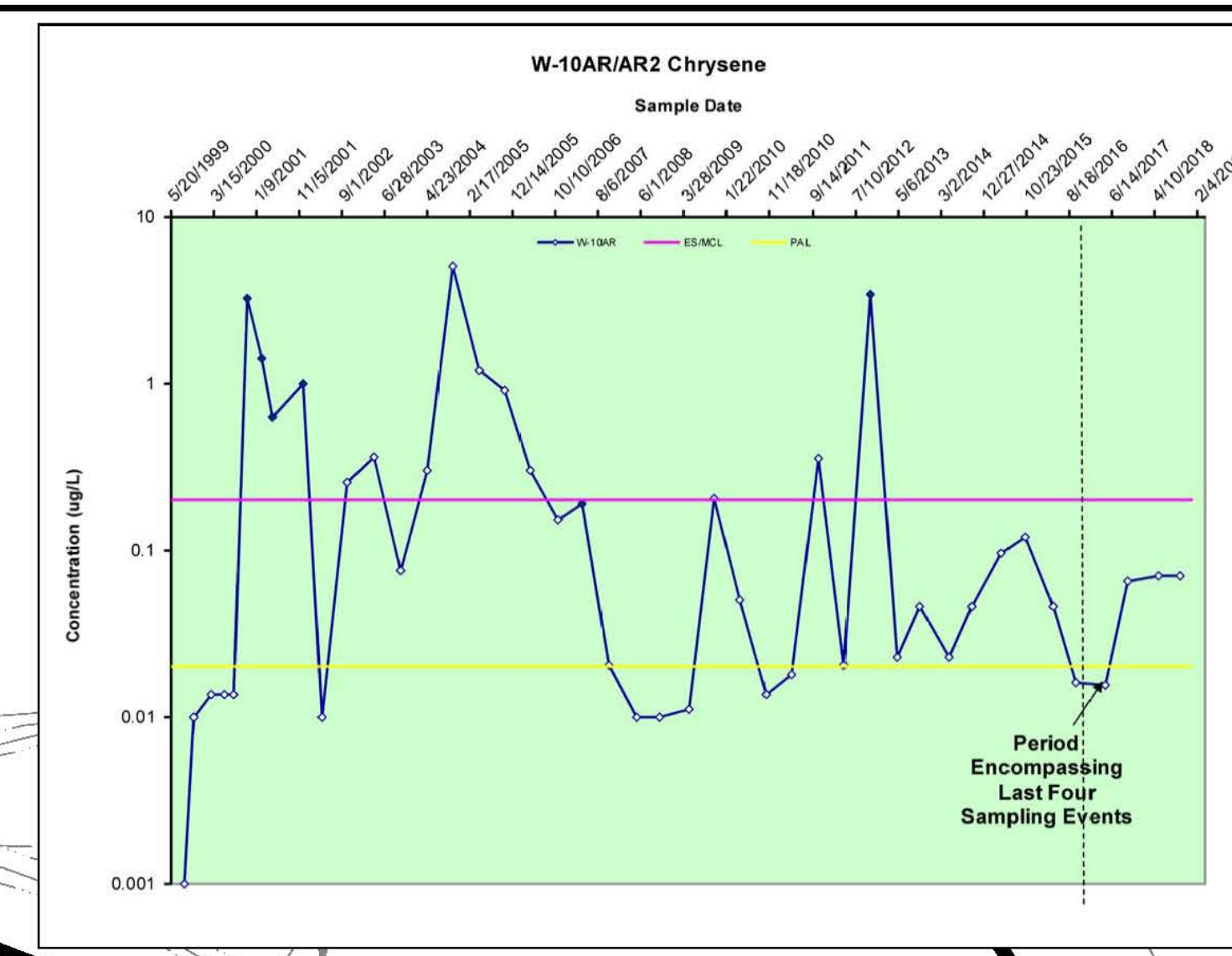
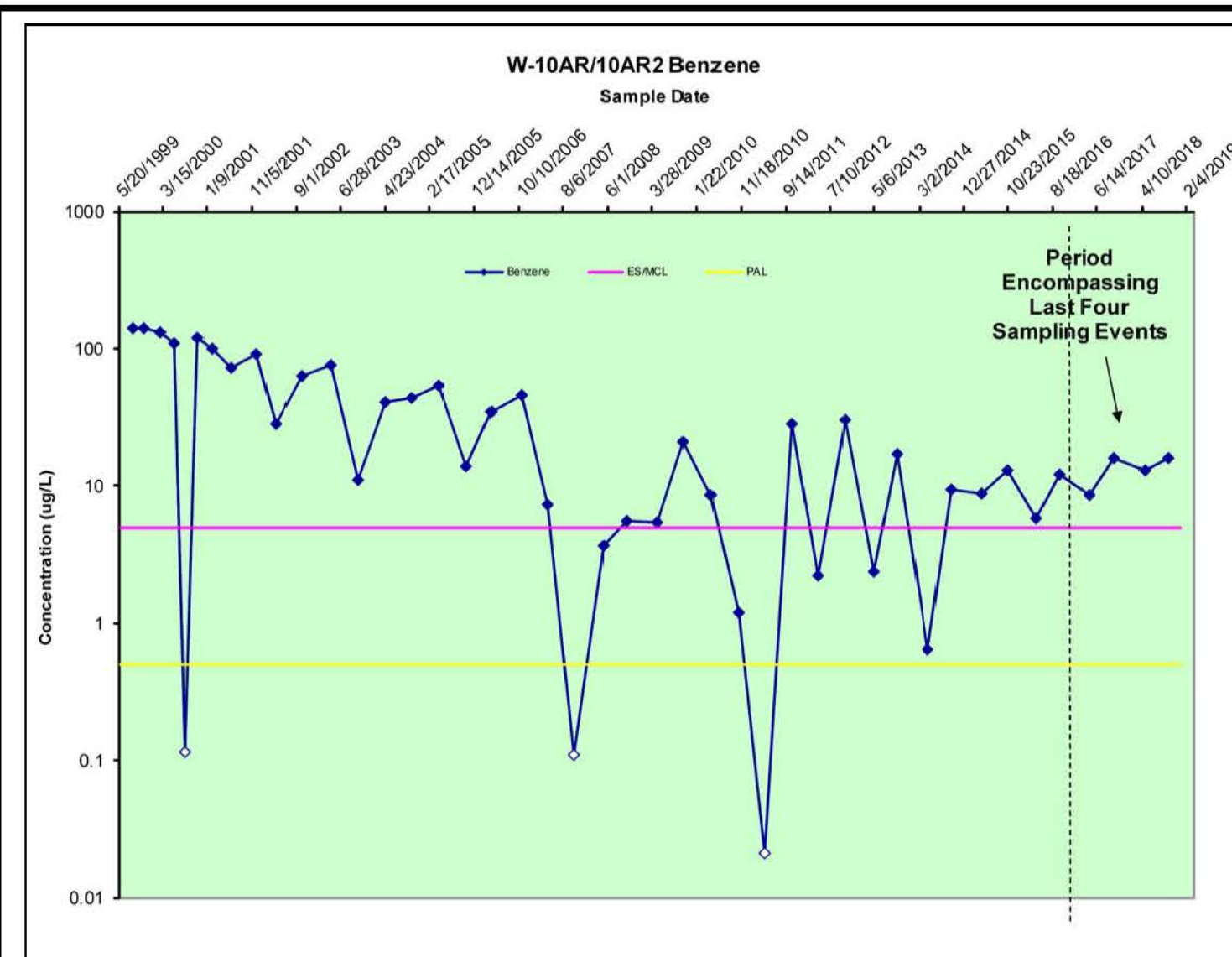
PROJECT NO: QM000818
DRAWING NUMBER
FIGURE 6

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REV	DATE	DESCRIPTION	APPD

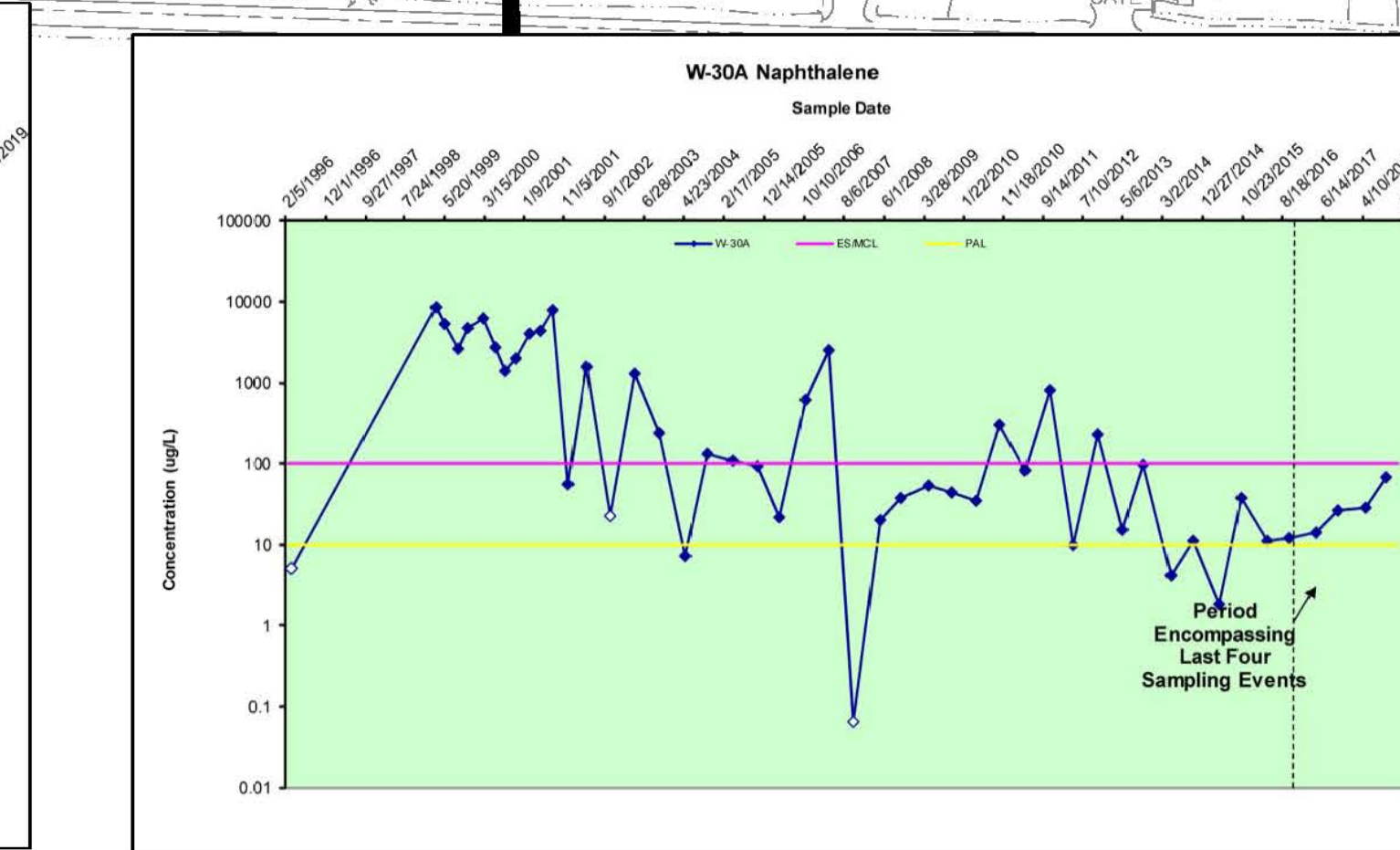
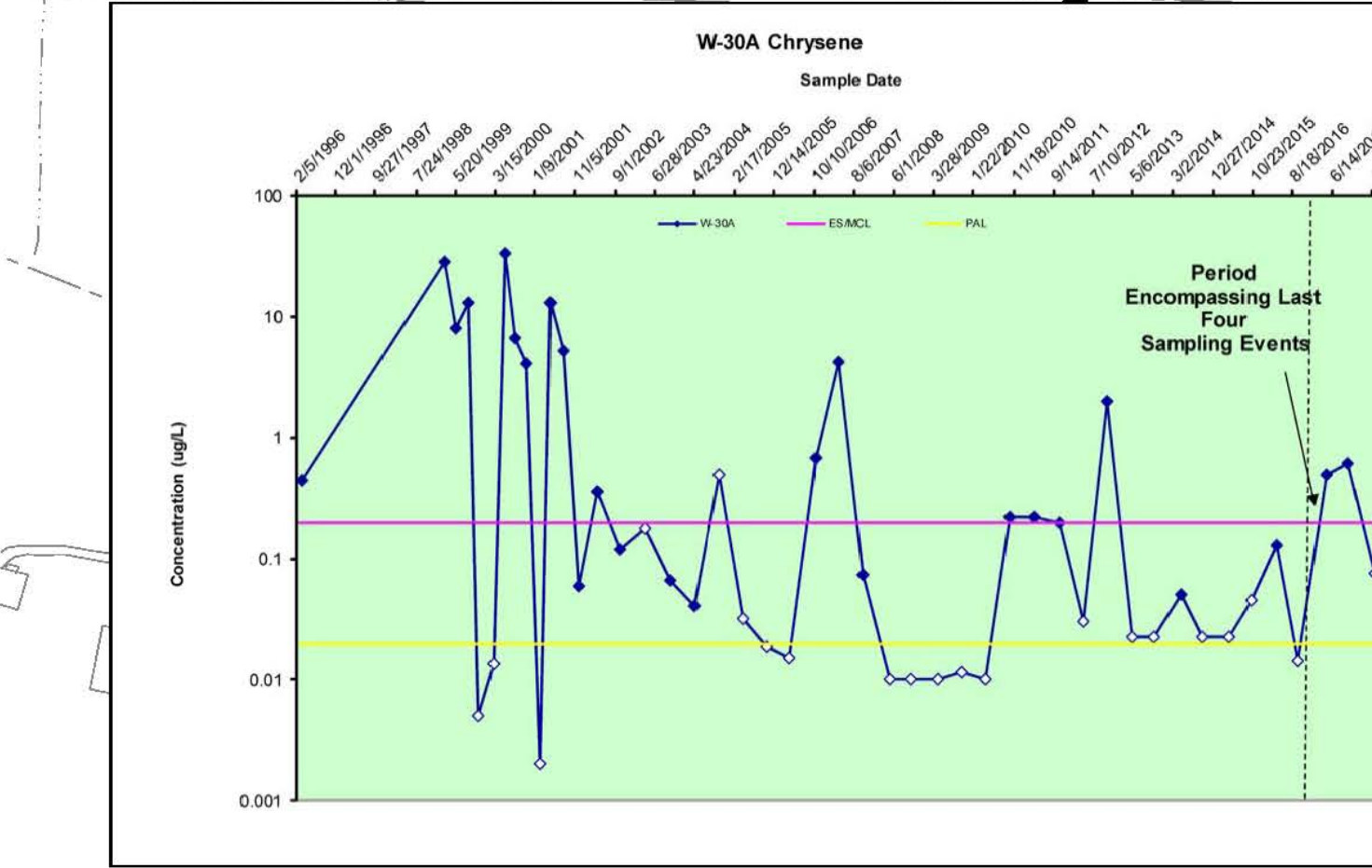
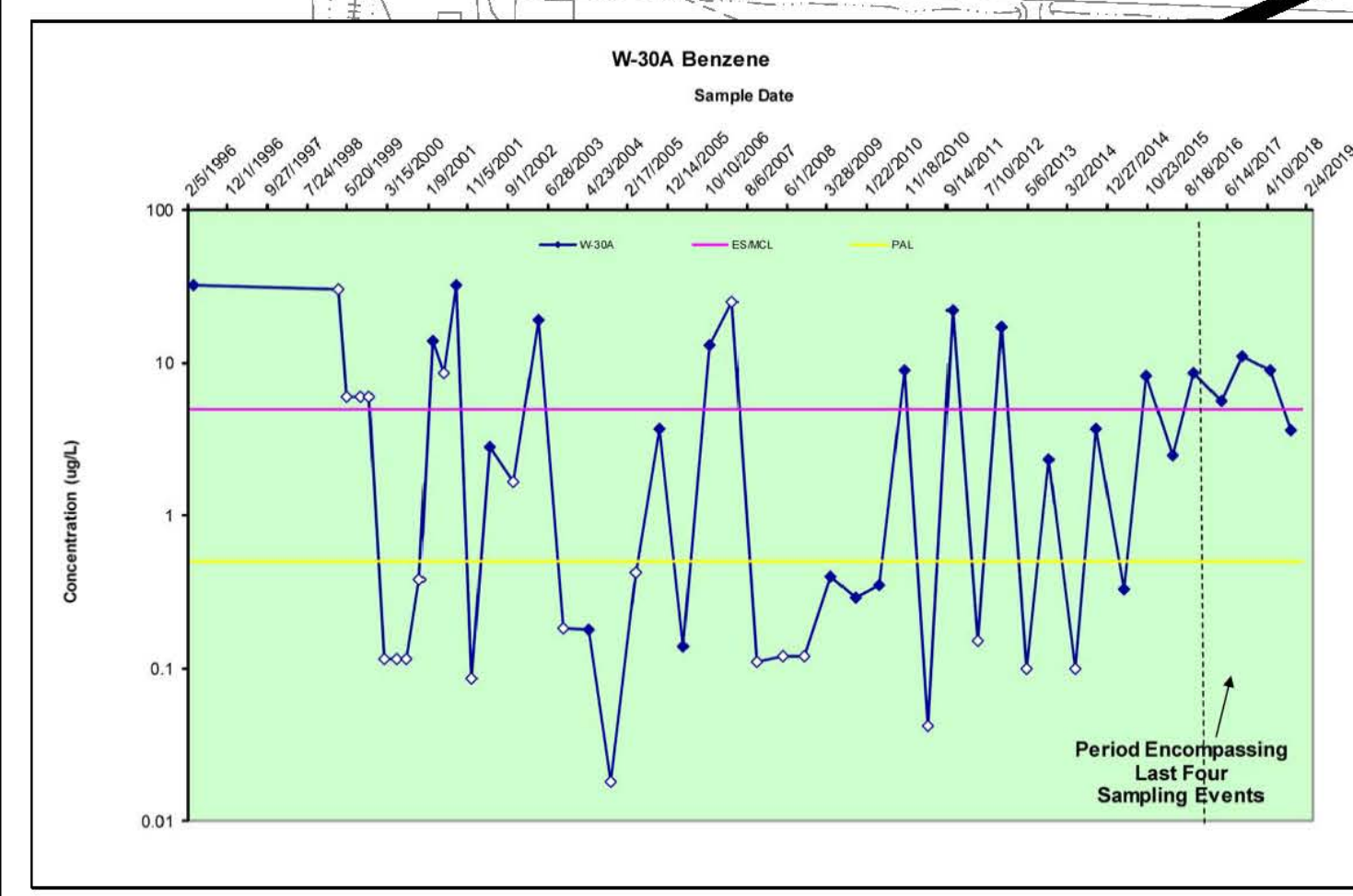
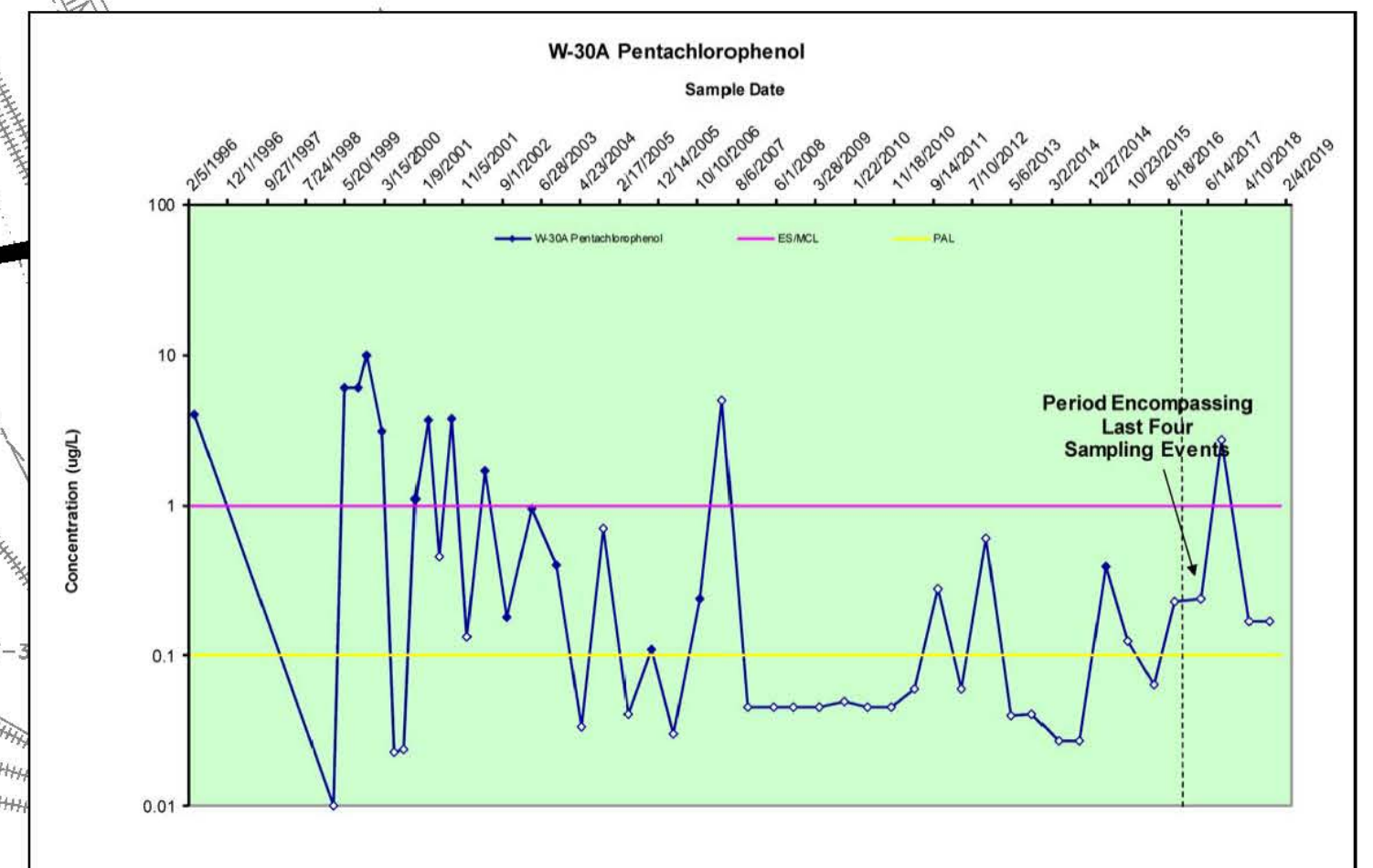
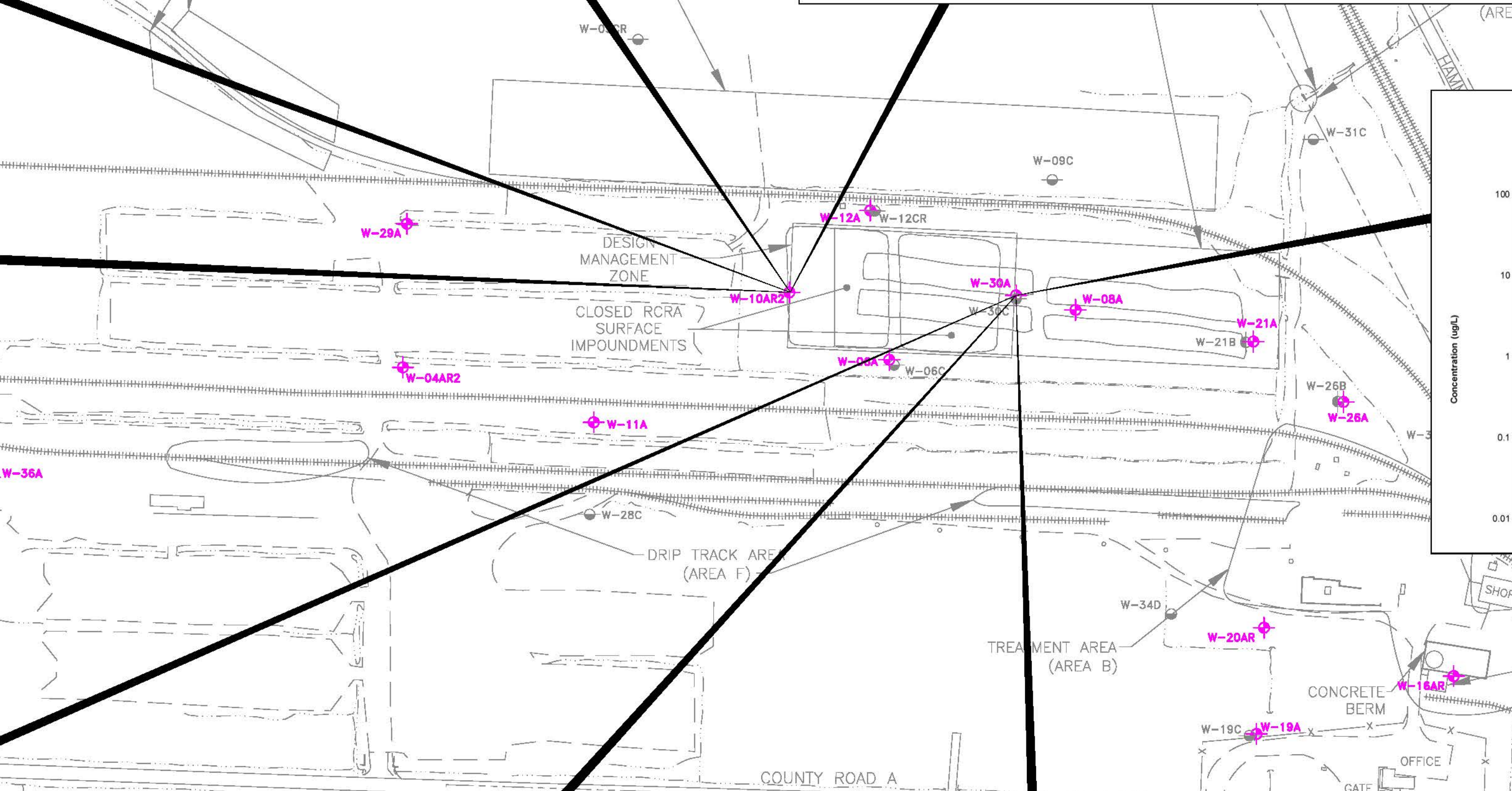
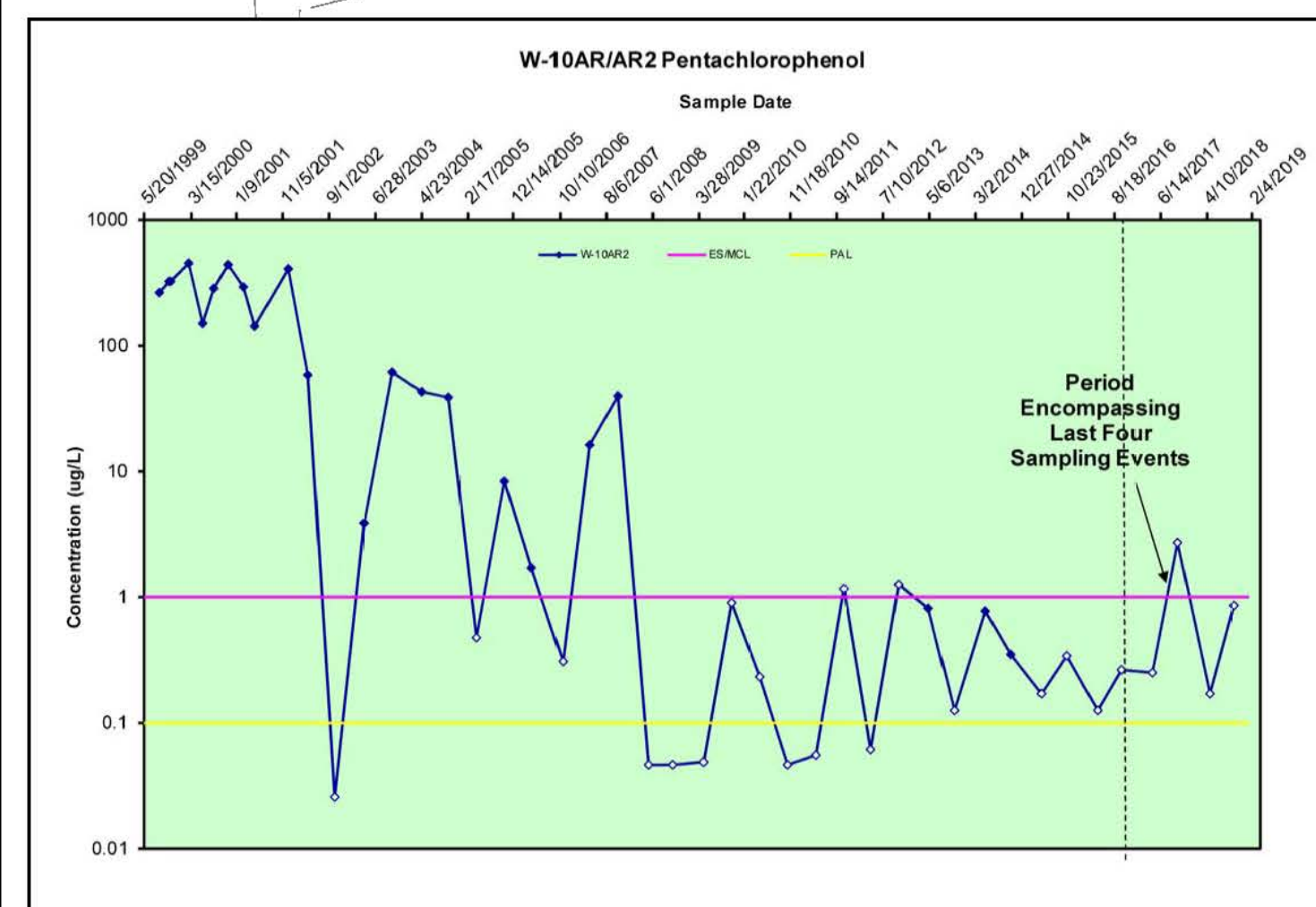
REFERENCE: WISCONSIN STATE PLANNER COORDINATE SYSTEM.

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LEGEND

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



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

REV #	DATE	DESCRIPTION	APPD

BEAZER EAST, INC.
 PITTSBURGH, PENNSYLVANIA

DRWN: KC	DATE: 10/30/18		FIELD & TECHNICAL SERVICES, LLC 200 THIRD AVENUE CARNEGIE, PA 15106
CHKD: KC	DATE: 10/30/18		
APPD: AMG	DATE: 11/20/18		
SCALE: AS SHOWN			
ISSUE DATE:		FORMER KOPPERS INC. FACILITY SUPERIOR, WISCONSIN	

PROJECT NO: 0M055618
 DRAWING NUMBER
FIGURE 7

APPENDIX A
Project Activity Milestone Summary

Former Koppers Superior Site - Project Activity Milestone Summary

Closure and Post Closure Plan

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

Design Management Zone

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

Monitoring Well Installation/Decommissioning

- During August 1988, 11 wells installed to monitor groundwater at the two impoundments were decommissioned to allow for capping of the impoundments.
 - ➔ The 11 decommissioned monitoring wells were L-1 S, L-2S, L-3S, L-3M, L-4S, L-4M, L-4D, L-5S, L-5M, L-5DR and L-17.
 - ➔ In accordance with the interim post closure monitoring plan, four monitoring wells (MW-1S, MW-4S, MW-4D, and MW-2S) were installed in November 1988 and 1989 to replace the decommissioned monitoring wells.
 - ➔ These four monitoring wells were subsequently re-designated (W-10B, W-12B, W-12C and W-6B, respectively) to provide a consistent nomenclature with 15 existing monitoring wells.
- In July and August of 1990, 26 new monitoring wells were installed at the Site as part of the Phase II RFI under the Site-wide RCRA corrective action program required by Federal Permit issued by the U.S. EPA September 30, 1988 pursuant to the Hazardous and Solid Waste Amendments (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.
- In October 2006, six new A-zone monitoring wells (W-35A through W-40A) were installed for supplemental monitoring purposes.
- On July 13, 2010, monitoring wells W-16A and W-17A were abandoned in preparation for the on-property Corrective Measures Implementation (CMI) activities.
- Monitoring well W-16A was replaced with W-16AR in April 2013.

Groundwater Monitoring Program

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

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

Site-Wide Corrective Action Monitoring Program

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

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

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

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

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

Surface Water and Streambed Sediment Activities

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

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

Soil Risk Evaluation Activities

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

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

Bedrock Investigation Activities

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

Additional Site Issues

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

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

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

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

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

APPENDIX B
Field Data and Notes

First Semi-Annual Event



WELL No.: W-04AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-04AR2</u>
Project Name:	<u>Superior 2018 1SA Sampling</u>	Date:	<u>05/03/2018 1241</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Brendan Rick</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>sunny 65</u>

WATER LEVEL DATA

a.) Depth To Groundwater:	<u>3.70</u> (ft)	e.) Depth to LNAPL:	<u>NP</u> (ft)
b.) Total Well Depth:	<u>14.10</u> (ft)	f.) Depth to DNAPL:	<u>NP</u> (ft)
c.) Length of Water Column:	<u>10.40</u> (ft)	g.) LNAPL Thickness:	<u>N/A</u> (ft)
d.) Well Volume:	<u>1.70</u> (gal)	h.) DNAPL Thickness:	<u>N/A</u> (ft)

WATER PURGE DATA

Purge Method:	<u>Non-Dedicated Bladder Pump</u>	Purge Start:	<u>05/03/2018 1253</u>
Conductivity Unit:	<u>ms/cm</u>	Purge End:	<u>05/03/2018 1323</u>
Total Volume Removed (gals):	<u>0.59</u>		

Field Equipment	Calibrated	Sampling Equipment	Dedicated
LaMotte 2020we Turbidity Meter 6110-4815	Yes	Geotech bladder pump 072	No
YSI 556 MPS 15M101116	Yes		
Heron Water Level Meter 200' 2666-T	No		

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	1253	75	15.29	7.45	1.076	-113.4	5.85	7.28	3.93	

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	1258	75	14.36	7.27	1.075	-273.8	2.68	6.59	3.97	
2	1303	75	12.66	7.26	1.064	-279.5	1.82	6.32	4.01	
3	1308	75	11.67	7.29	1.029	-265.1	1.74	6.37	4.02	
4	1313	75	11.62	7.32	1.004	-258.7	1.73	6.30	4.03	
5	1318	75	11.59	7.39	0.995	-257.3	1.75	6.26	4.04	
6	1323	75	11.56	7.42	0.987	-260.8	1.71	6.29	4.05	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-04AR2-050318

Sample Start time: 05/03/2018 1328

Sample Finish time: 05/03/2018 1445

Comments: _____



LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD

WELL No.: W-06A



Client: Beazer East, Inc.
 Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0556-18-091
 Location: Superior

Well ID: W-06A
 Date: 05/02/2018 1501
 Technician: Brendan Rick
 Weather Conditions: sunny 65 light breeze

WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.85</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.27</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.42</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.70</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/02/2018 1514</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/02/2018 1539</u>
Total Volume Removed (gals): <u>0.50</u>	

Field Equipment	Calibrated
Heron Water Level Meter 200' 2666-T	No
YSI 556 MPS 15M101116	Yes
LaMotte 2020we Turbidity Meter 6110-4815	Yes

Sampling Equipment	Dedicated
Geotech bladder pump 072	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1514	75	9.92	7.00	0.978	-189.7	7.44	7.24	3.70	

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	1519	75	9.56	7.02	0.953	-165.3	2.30	6.46	3.79	
2	1524	75	8.96	7.05	0.964	-159.8	1.42	6.41	3.88	
3	1529	75	8.64	7.06	0.958	-159.4	0.99	6.34	3.97	
4	1534	75	8.62	7.05	0.963	-159.3	0.97	6.38	4.06	
5	1539	75	8.59	7.04	0.956	-159.7	0.98	6.27	4.15	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06A-050218

Equipment Blank :SUPE-EB-01-050218

Sample Start time: 05/02/2018 1544

Sample Finish time: 05/02/2018 1705

Comments: _____



WELL No.: W-06C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-06C</u>
Project Name:	<u>Superior 2018 1SA Sampling</u>	Date:	<u>05/03/2018 0849</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>60s Sunny</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>11.70</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>32.31</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.27</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 0855</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 0920</u>
Total Volume Removed (gals): <u>1.65</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Hanna H198703 Turbidity Meter 08604023	Yes	Geotech Portable Bladder Pump U62540	No
Heron Dipper T Water Level Meter 200' 1312-T	No		
YSI 556 MPS 06M1536AM	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	0855	250	7.52	7.56	0.650	-105.2	2.28	2.40	11.72	

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	0900	250	7.62	6.88	0.644	-107.5	1.00	1.38	11.72	
2	0905	250	7.59	7.16	0.642	-133.4	0.65	1.27	11.72	
3	0910	250	7.50	7.28	0.641	-159.5	0.39	1.20	11.72	
4	0915	250	7.64	7.30	0.640	-162.9	0.40	1.19	11.72	
5	0920	250	7.70	7.36	0.639	-168.7	0.42	1.15	11.72	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06C-050318

MS/MSD Blank :SUPE-W-06C-MS/MSD-050318

Sample Start time: 05/03/2018 0925

Sample Finish time: 05/03/2018 1041

Comments: _____



WELL No.: W-10AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-10AR2</u>
Project Name:	<u>Superior 2018 1SA Sampling</u>	Date:	<u>05/03/2018 1516</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Brendan Rick</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>sunny 65</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>4.45</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>17.53</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>13.08</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>2.13</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 1524</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 1549</u>
Total Volume Removed (gals): <u>0.50</u>	

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Water Level Meter 200' 2666-T	No	Geotech bladder pump 072	No
YSI 556 MPS 15M101116	Yes		
LaMotte 2020we Turbidity Meter 6110-4815	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	1524	75	10.42	6.92	1.111	-286.8	3.45	9.43	4.60	

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	1529	75	9.73	6.85	1.123	-256.1	1.19	7.37	4.68	
2	1534	75	9.12	6.85	1.126	-227.6	0.89	7.28	4.76	
3	1539	75	8.92	6.87	1.121	-213.2	0.87	7.23	4.84	
4	1544	75	8.89	6.88	1.127	-218.4	0.85	7.19	4.92	
5	1549	75	8.93	6.90	1.123	-222.8	0.84	7.05	5.00	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-10AR2-050318

Sample Start time: 05/03/2018 1554

Sample Finish time: 05/03/2018 1702

Comments: _____



LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD

WELL No.: W-12A



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-12A</u>
Project Name:	<u>Superior 2018 1SA Sampling</u>	Date:	<u>05/03/2018 1108</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Ben Trask</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>6s Sunny</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>13.39</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.36</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.69</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 1120</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 1150</u>
Total Volume Removed (gals): <u>0.59</u>	

Field Equipment	Calibrated
Heron Dipper T Water Level Meter 200' 1312-T	No
Hanna H198703 Turbidity Meter 08604023	Yes
YSI 556 MPS 06M1536AM	Yes

Sampling Equipment	Dedicated
Geotech Portable Bladder Pump U62540	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1120	75	7.91	5.75	0.507	61.6	6.28	19.70	4.53	

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	1125	75	7.57	5.96	0.480	46.5	2.16	15.20	4.73	
2	1130	75	7.13	6.08	0.461	42.0	1.80	12.40	4.88	
3	1135	75	7.13	6.25	0.442	33.7	1.74	9.60	5.02	
4	1140	75	6.71	6.49	0.441	29.8	1.80	9.23	5.18	
5	1145	75	6.65	6.58	0.437	24.0	1.88	9.14	5.32	
6	1150	75	6.59	6.57	0.437	23.5	1.93	9.18	5.46	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12A-050318

Sample Start time: 05/03/2018 1155

Sample Finish time: 05/03/2018 1318

Comments: _____



LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD

WELL No.: W-12CR



Client:	Beazer East, Inc.	Well ID:	W-12CR
Project Name:	Superior 2018 1SA Sampling	Date:	05/03/2018 1330
Project Number:	OM-0556-18-091	Technician:	Ben Trask
Location:	Superior	Weather Conditions:	60s Sunny

WATER LEVEL DATA

a.) Depth To Groundwater: <u>14.70</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>47.69</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.99</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.38</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 1337</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 1402</u>
Total Volume Removed (gals): <u>1.16</u>	

Field Equipment	Calibrated
Hanna H198703 Turbidity Meter 08604023	Yes
YSI 556 MPS 06M1536AM	Yes
Heron Dipper T Water Level Meter 200' 1312-T	No

Sampling Equipment	Dedicated
Geotech Portable Bladder Pump U62540	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1337	175	11.11	6.80	1.122	-109.8	7.17	3.72	14.78	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1342	175	9.40	6.41	1.123	-120.3	9.73	3.04	14.78	
2	1347	175	9.25	6.65	1.113	-128.3	9.46	2.39	14.78	
3	1352	175	9.06	6.90	1.118	-137.2	9.42	2.30	14.78	
4	1357	175	8.99	6.94	1.115	-134.9	9.02	2.28	14.78	
5	1402	175	8.96	7.00	1.121	-144.4	9.03	2.25	14.78	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12CR-050318

Equipment Blank :SUPE-EB-02-050318

Sample Start time: 05/03/2018 1407

Sample Finish time: 05/03/2018 1438

Comments: _____



WELL No.: W-18D

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-18D</u>
Project Name:	<u>Superior 2018 1SA Sampling</u>	Date:	<u>05/03/2018 0838</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Brendan Rick</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>sunny 40</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>44.91</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>201.85</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>156.94</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>25.61</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 0859</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 0924</u>
Total Volume Removed (gals): <u>0.83</u>	

Field Equipment	Calibrated
LaMotte 2020we Turbidity Meter 6110-4815	Yes
YSI 556 MPS 15M101116	Yes
Heron Water Level Meter 200' 2666-T	No

Sampling Equipment	Dedicated
Geotech bladder pump 072	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	0859	125	8.40	10.18	0.482	-268.0	8.87	8.94	44.98	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
1	0904	125	8.17	10.50	0.490	-266.5	4.19	7.38	44.98	
2	0909	125	7.94	10.60	0.497	-266.2	2.87	7.16	44.98	
3	0914	125	8.14	10.69	0.496	-267.3	1.29	7.25	44.98	
4	0919	125	8.19	10.74	0.497	-270.1	1.25	7.16	44.98	
5	0924	125	8.18	10.75	0.504	-270.6	1.26	7.03	44.98	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8270C_SVOC+Naphth	8270C_SVOC+na phtha	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-18D-050318

Sample Start time: 05/03/2018 0929

Sample Finish time: 05/03/2018 1005

Comments: _____



WELL No.: **W-28C**

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	Beazer East, Inc.	Well ID:	W-28C
Project Name:	Superior 2018 1SA Sampling	Date:	05/03/2018 1036
Project Number:	OM-0556-18-091	Technician:	Brendan Rick
Location:	Superior	Weather Conditions:	sunny 50

WATER LEVEL DATA

a.) Depth To Groundwater: <u>13.37</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>45.45</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.08</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.24</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 1043</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 1108</u>
Total Volume Removed (gals): <u>1.32</u>	

Field Equipment	Calibrated
YSI 556 MPS 15M101116	Yes
LaMotte 2020we Turbidity Meter 6110-4815	Yes
Heron Water Level Meter 200' 2666-T	No

Sampling Equipment	Dedicated
Geotech bladder pump 072	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1043	200	8.42	7.80	0.882	-292.4	3.11	7.34	13.41	

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	1048	200	8.23	7.77	0.897	-284.6	1.58	6.46	13.41	
2	1053	200	8.09	7.74	0.907	-280.6	1.12	6.51	13.41	
3	1058	200	7.95	7.79	0.902	-260.7	0.94	6.38	13.41	
4	1103	200	8.05	7.83	0.896	-260.6	0.98	6.42	13.41	
5	1108	200	8.03	7.82	0.903	-263.9	0.93	6.34	13.41	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-28C-050318

Trip Blank :SUPE-TB-02-050318

Blind Duplicate :SUPE-W-99-050318

Sample Start time: 05/03/2018 1113

Sample Finish time: 05/03/2018 1222

Comments: _____



WELL No.: W-30A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client: <u>Beazer East, Inc.</u>	Well ID: <u>W-30A</u>
Project Name: <u>Superior 2018 1SA Sampling</u>	Date: <u>05/03/2018 1453</u>
Project Number: <u>OM-0556-18-091</u>	Technician: <u>Ben Trask</u>
Location: <u>Superior</u>	Weather Conditions: <u>60s Sunny</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.98</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.30</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.32</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.68</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/03/2018 1510</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/03/2018 1535</u>
Total Volume Removed (gals): <u>0.50</u>	

Field Equipment	Calibrated
YSI 556 MPS 06M1536AM	Yes
Heron Dipper T Water Level Meter 200' 1312-T	No
Hanna H198703 Turbidity Meter 08604023	Yes

Sampling Equipment	Dedicated
Geotech Portable Bladder Pump U62540	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1510	75	8.23	5.88	1.194	-12.3	2.43	20.30	3.73	

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	1515	75	7.57	5.89	1.176	-7.5	1.62	21.90	4.06	
2	1520	75	7.17	6.11	1.144	-14.6	1.34	14.60	4.32	
3	1525	75	7.26	6.37	1.074	-23.3	0.84	9.70	4.61	
4	1530	75	7.31	6.32	1.086	-28.0	0.76	9.62	4.88	
5	1535	75	7.40	6.35	1.091	-33.3	0.80	9.51	5.02	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30A-050318

Sample Start time: 05/03/2018 1540

Sample Finish time: 05/03/2018 1705

Comments: _____



WELL No.: W-30C

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client: <u>Beazer East, Inc.</u>	Well ID: <u>W-30C</u>
Project Name: <u>Superior 2018 1SA Sampling</u>	Date: <u>05/02/2018 1513</u>
Project Number: <u>OM-0556-18-091</u>	Technician: <u>Ben Trask</u>
Location: <u>Superior</u>	Weather Conditions: <u>60s Sunny</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>14.25</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>48.70</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>34.45</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.62</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>05/02/2018 1521</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>05/02/2018 1546</u>
Total Volume Removed (gals): <u>0.99</u>	

Field Equipment	Calibrated
YSI 556 MPS 06M1536AM	Yes
Hanna H198703 Turbidity Meter 08604023	Yes
Heron Dipper T Water Level Meter 200' 1312-T	No

Sampling Equipment	Dedicated
Geotech Portable Bladder Pump U62540X	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	1521	150	11.25	6.56	0.849	-116.3	6.60	23.60	14.27	

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	1526	150	10.23	6.44	0.812	-111.7	1.05	13.70	14.27	
2	1531	150	10.23	6.85	0.792	-113.8	0.96	6.52	14.27	
3	1536	150	9.80	7.38	0.774	-108.9	0.94	5.43	14.27	
4	1541	150	9.81	7.40	0.771	-106.8	0.98	5.21	14.27	
5	1546	150	9.78	7.45	0.767	-103.1	0.92	5.15	14.27	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TAPIT	8021B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 1SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 1SA Sampling_001
TAKNOX	8290_Dioxins/Furans	8290_Dioxins/Furans	2	2	1 liter amber glass	None	Superior 2018 1SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30C-050218

Trip Blank :SUPE-TB-01-050218

Sample Start time: 05/02/2018 1552

Sample Finish time: 05/02/2018 1624

Comments: _____

Second Semi-Annual Event



WELL No.: W-04AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	Beazer East, Inc.	Well ID:	W-04AR2
Project Name:	Superior 2018 2SA Sampling	Date:	10/02/2018 1119
Project Number:	OM-0556-18-091	Technician:	Brendan Rick
Location:	Superior	Weather Conditions:	overcast 47

WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.85</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>10.20</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.66</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 1124</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1204</u>
Total Volume Removed (gals): <u>1.06</u>	

Field Equipment	Calibrated
LaMotte 2020we Turbidity Meter 6110-4815	Yes
YSI 556 MPS 15M101116	Yes
Heron Water Level Meter 200' 2666-T	No

Sampling Equipment	Dedicated
geotech bladder pump 14365	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1124	100	11.70	7.44	0.977	70.5	2.93	6.18	3.91	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1129	100	11.41	7.34	1.010	65.2	1.17	5.73	3.94	
2	1134	100	11.47	7.31	1.017	56.9	0.91	5.47	3.96	
3	1139	100	11.57	7.27	1.012	45.5	0.85	5.39	3.97	
4	1144	100	11.73	7.25	0.975	37.6	0.82	5.26	3.97	
5	1149	100	11.87	7.25	0.925	39.4	0.81	5.23	3.97	
6	1154	100	11.99	7.24	0.907	45.1	0.78	5.16	3.97	
7	1159	100	12.03	7.21	0.897	51.3	0.79	5.08	3.97	
8	1204	100	12.05	7.18	0.895	54.2	0.76	5.01	3.97	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-04AR2-100218

Sample Start time: 10/02/2018 1209

Sample Finish time: 10/02/2018 1245

Comments: _____



WELL No.: W-06A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-06A</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 1055</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Jena Lexie</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>48 cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>3.50</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.18</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>9.68</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.58</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 1105</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1140</u>
Total Volume Removed (gals): <u>0.92</u>	

Field Equipment	Calibrated
YSI 556 MPS 13A101191	Yes
Heron Water level meter 30897	No
LaMotte 2020we 4705-3514	Yes

Sampling Equipment	Dedicated
QED sample pro bladder pump 11207	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1105	100	12.28	7.44	0.351	65.5	8.46	5.50	3.72	

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	1110	100	12.56	7.09	0.313	91.8	5.63	4.94	3.85	
2	1115	100	12.51	7.05	0.324	100.0	4.07	4.60	3.94	
3	1120	100	12.23	6.99	0.356	88.0	2.98	4.57	3.98	
4	1125	100	12.08	7.02	0.415	82.3	1.71	4.46	4.00	
5	1130	100	12.03	7.05	0.460	84.8	1.59	4.40	4.03	
6	1135	100	12.01	7.09	0.463	82.5	1.61	4.32	4.05	
7	1140	100	11.99	7.12	0.465	85.1	1.60	4.21	4.09	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06A-100218

Sample Start time: 10/02/2018 1144

Sample Finish time: 10/02/2018 1310

Comments: _____



WELL No.: W-06C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-06C</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 1221</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Jena Lexie</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>50 cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>11.38</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>32.63</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.32</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 1225</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1255</u>
Total Volume Removed (gals): <u>1.59</u>	

Field Equipment	Calibrated
YSI 556 MPS 13A101191	Yes
Heron Water level meter 30897	No
LaMotte 2020we 4705-3514	Yes

Sampling Equipment	Dedicated
QED sample pro bladder pump 11207	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1225	200	8.64	7.82	0.611	-87.5	9.34	7.80	11.45	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1230	200	7.92	7.93	0.608	-91.3	2.56	5.87	11.45	
2	1235	200	7.87	7.98	0.606	-95.7	0.86	3.94	11.45	
3	1240	200	7.74	8.06	0.607	-108.1	0.79	3.82	11.45	
4	1245	200	7.75	8.08	0.607	-109.2	0.78	3.74	11.45	
5	1250	200	7.77	8.07	0.607	-109.6	0.76	3.70	11.45	
6	1255	200	7.77	8.07	0.607	-109.4	0.75	3.67	11.45	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-06C-100218

Equipment Blank :SUPE-EB-01-100218

Sample Start time: 10/02/2018 1257

Sample Finish time: 10/02/2018 1311

Comments: _____



WELL No.: W-10AR2

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-10AR2</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 1501</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Brendan Rick</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>overcast 50</u>

WATER LEVEL DATA			
a.) Depth To Groundwater:	<u>7.85</u>	(ft)	
b.) Total Well Depth:	<u>16.53</u>	(ft)	
c.) Length of Water Column:	<u>8.68</u>	(ft)	
d.) Well Volume:	<u>1.42</u>	(gal)	
e.) Depth to LNAPL:	<u>NP</u>	(ft)	
f.) Depth to DNAPL:	<u>NP</u>	(ft)	
g.) LNAPL Thickness:	<u>N/A</u>	(ft)	
h.) DNAPL Thickness:	<u>N/A</u>	(ft)	

WATER PURGE DATA	
Purge Method:	<u>Non-Dedicated Bladder Pump</u>
Conductivity Unit:	<u>ms/cm</u>
Total Volume Removed (gals):	<u>0.92</u>
Purge Start:	<u>10/02/2018 1534</u>
Purge End:	<u>10/02/2018 1609</u>

Field Equipment	Calibrated	Sampling Equipment	Dedicated
Heron Water Level Meter 200' 2666-T	No	geotech bladder pump 14365	No
LaMotte 2020we Turbidity Meter 6110-4815	Yes		
YSI 556 MPS 15M101116	Yes		

PRE-PURGE VALUES										
Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1534	100	8.97	6.86	1.039	-27.0	2.97	7.34	7.91	

PURGE VALUES										
Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1539	100	9.05	6.87	1.052	-29.5	1.26	7.26	7.93	
2	1544	100	9.05	6.88	1.067	-31.0	0.85	7.17	7.93	
3	1549	100	9.08	6.88	1.070	-30.4	0.64	7.08	7.93	
4	1554	100	9.15	6.88	1.073	-30.4	0.51	6.81	7.93	
5	1559	100	9.18	6.89	1.075	-31.6	0.43	6.76	7.93	
6	1604	100	9.18	6.89	1.075	-31.9	0.44	6.64	7.93	
7	1609	100	9.19	6.89	1.075	-30.0	0.42	6.57	7.93	

SAMPLE COLLECTION INFORMATION								
Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program	
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001	
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001	

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-10AR2-100218

Sample Start time: 10/02/2018 1614

Sample Finish time: 10/02/2018 1650

Comments: _____



WELL No.: W-12A

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client: <u>Beazer East, Inc.</u>	Well ID: <u>W-12A</u>
Project Name: <u>Superior 2018 2SA Sampling</u>	Date: <u>10/02/2018 1334</u>
Project Number: <u>OM-0556-18-091</u>	Technician: <u>Jena Lexie</u>
Location: <u>Superior</u>	Weather Conditions: <u>52 cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>4.35</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>9.00</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.47</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 1340</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1405</u>
Total Volume Removed (gals): <u>0.66</u>	

Field Equipment	Calibrated
Heron Water level meter 30897	No
YSI 556 MPS 13A101191	Yes
LaMotte 2020we 4705-3514	Yes

Sampling Equipment	Dedicated
QED sample pro bladder pump 11207	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1340	100	11.80	7.40	0.430	27.7	6.56	15.20	4.45	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	1345	100	12.01	7.32	0.426	47.5	1.51	9.24	5.34	
2	1350	100	12.17	7.25	0.441	60.7	0.97	6.35	5.81	
3	1355	100	12.19	7.22	0.448	63.0	0.76	6.28	5.85	
4	1400	100	12.24	7.16	0.450	70.2	0.78	6.25	5.85	
5	1405	100	12.30	7.15	0.453	70.9	0.77	6.21	5.85	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12A-100218

Sample Start time: 10/02/2018 1408

Sample Finish time: 10/02/2018 1430

Comments:



WELL No.: W-12CR

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-12CR</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 1448</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Jena Lexie</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>50 cloudy</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>15.20</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>47.70</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.50</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.30</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 1450</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1520</u>
Total Volume Removed (gals): <u>1.19</u>	

Field Equipment	Calibrated
Heron Water level meter 30897	No
YSI 556 MPS 13A101191	Yes
LaMotte 2020we 4705-3514	Yes

Sampling Equipment	Dedicated
QED sample pro bladder pump 11207	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	1450	150	7.81	7.89	1.079	-73.9	3.00	7.12	15.25	

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	1455	150	7.59	7.73	1.067	-82.3	1.98	6.31	15.25	
2	1500	150	7.53	7.69	1.066	-75.9	0.63	6.08	15.25	
3	1505	150	7.52	7.66	1.065	-86.3	0.60	5.70	15.25	
4	1510	150	7.49	7.65	1.063	-101.2	0.57	5.61	15.25	
5	1515	150	7.46	7.64	1.063	-105.7	0.56	5.58	15.25	
6	1520	150	7.45	7.64	1.064	-106.6	0.55	5.55	15.25	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-12CR-100218

Sample Start time: 10/02/2018 1523

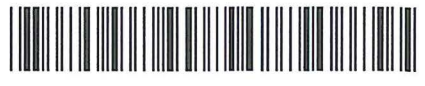
Sample Finish time: 10/02/2018 1544

Comments: _____



WELL No.: W-18D

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-18D</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 1256</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Brendan Rick</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>overcast 50</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>45.92</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>201.83</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>155.91</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>25.44</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 1311</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1346</u>
Total Volume Removed (gals): <u>0.92</u>	

Field Equipment	Calibrated
Heron Water Level Meter 200' 2666-T	No
LaMotte 2020we Turbidity Meter 6110-4815	Yes
YSI 556 MPS 15M101116	Yes

Sampling Equipment	Dedicated
geotech bladder pump 14365	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	1311	100	9.83	9.78	0.479	59.9	4.42	9.76	45.96	

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	1316	100	9.16	10.33	0.465	49.2	2.39	8.37	45.97	
2	1321	100	8.81	10.87	0.458	38.6	1.64	8.21	45.97	
3	1326	100	8.69	11.08	0.457	30.3	1.35	8.19	45.97	
4	1331	100	8.67	11.18	0.454	20.8	1.27	8.05	45.97	
5	1336	100	8.72	11.23	0.461	13.2	1.21	8.01	45.97	
6	1341	100	8.68	11.26	0.465	8.3	1.18	7.97	45.97	
7	1346	100	8.58	11.26	0.467	4.2	1.16	7.86	45.97	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8270C_SVOC+Naphth	8270C_SVOC+na phtha	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-18D-100218

Sample Start time: 10/02/2018 1351

Sample Finish time: 10/02/2018 1425

Comments:



WELL No.: W-28C

LOW-FLOW GROUNDWATER SAMPLE COLLECTION RECORD



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-28C</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 0911</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Brendan Rick</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>overcast 45</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>13.85</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>46.38</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>32.53</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.31</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 0914</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 0959</u>
Total Volume Removed (gals): <u>1.78</u>	

Field Equipment	Calibrated
LaMotte 2020we Turbidity Meter 6110-4815	Yes
Heron Water Level Meter 200' 2666-T	No
YSI 556 MPS 15M101116	Yes

Sampling Equipment	Dedicated
geotech bladder pump 14365	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
Initial	0914	150	7.67	7.53	0.801	136.8	13.40	8.71	13.88	

PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+- 0.10	+- 3.000 %	+- 10	+- 10 %	+- 10 %		
1	0919	150	7.38	7.68	0.811	97.2	5.47	7.46	13.89	
2	0924	150	6.73	7.72	0.822	4.4	3.99	7.28	13.89	
3	0929	150	6.70	7.72	0.850	-56.6	3.46	7.04	13.89	
4	0934	150	6.63	7.74	0.862	-91.3	3.18	6.86	13.89	
5	0939	150	6.62	7.74	0.872	-100.3	3.05	6.87	13.89	
6	0944	150	6.65	7.73	0.885	-107.1	2.94	6.74	13.89	
7	0949	150	6.65	7.72	0.909	-112.9	2.04	6.61	13.89	
8	0954	150	6.63	7.71	0.913	-114.0	1.98	6.57	13.89	
9	0959	150	6.61	7.71	0.923	-116.8	1.92	6.54	13.89	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle	Bottle	BottleType	Preservative	Program
			QTY Required	QTY Collected			
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-28C-100218

Trip Blank :SUPE-TB-01-100218

MS/MSD Blank :SUPE-W-28C-MS/MSD-100218

Sample Start time: 10/02/2018 1004

Sample Finish time: 10/02/2018 1110

Comments: _____



WELL No.: W-30A

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-30A</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/03/2018 0827</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Jena Lexie</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>53 cloudy, drizzle</u>

WATER LEVEL DATA

a.) Depth To Groundwater: <u>2.63</u> (ft)	e.) Depth to LNAPL: <u>NP</u> (ft)
b.) Total Well Depth: <u>13.29</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>10.66</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>1.74</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/03/2018 0838</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/03/2018 0913</u>
Total Volume Removed (gals): <u>0.83</u>	

Field Equipment	Calibrated
YSI 556 MPS 13A101191	Yes
Heron Water Level Meter 150' 30897	No
LaMotte2020we turbidity meter 4705-3514	Yes

Sampling Equipment	Dedicated
QED sample pro bladder pump 11207	No
QED MP50 controller/compressor 1399	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	0838	90	12.02	6.70	1.146	-48.5	4.09	29.60	3.16	

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	0843	90	11.98	6.69	1.199	-59.0	2.70	18.70	3.24	
2	0848	90	12.01	6.75	1.111	-58.2	0.87	11.80	3.30	
3	0853	90	12.03	6.77	1.064	-55.8	0.66	8.68	3.32	
4	0858	90	12.05	6.79	1.012	-52.0	0.64	8.52	3.35	
5	0903	90	12.05	6.80	0.984	-49.0	0.63	8.50	3.38	
6	0908	90	12.06	6.80	0.978	-48.3	0.61	8.47	3.40	
7	0913	90	12.06	6.81	0.971	-47.3	0.60	8.40	3.42	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+nap htha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30A-100318

Trip Blank :SUPE-TB-02-100318

Equipment Blank :SUPE-EB-02-100318

Blind Duplicate :SUPE-M-99-100318

Sample Start time: 10/03/2018 0915

Sample Finish time: 10/03/2018 1025

Comments: _____



WELL No.: W-30C

**LOW-FLOW GROUNDWATER
SAMPLE COLLECTION RECORD**



Client:	<u>Beazer East, Inc.</u>	Well ID:	<u>W-30C</u>
Project Name:	<u>Superior 2018 2SA Sampling</u>	Date:	<u>10/02/2018 0931</u>
Project Number:	<u>OM-0556-18-091</u>	Technician:	<u>Jena Lexie</u>
Location:	<u>Superior</u>	Weather Conditions:	<u>48 cloudy</u>

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>48.70</u> (ft)	f.) Depth to DNAPL: <u>NP</u> (ft)
c.) Length of Water Column: <u>35.95</u> (ft)	g.) LNAPL Thickness: <u>N/A</u> (ft)
d.) Well Volume: <u>5.87</u> (gal)	h.) DNAPL Thickness: <u>N/A</u> (ft)

WATER PURGE DATA

Purge Method: <u>Non-Dedicated Bladder Pump</u>	Purge Start: <u>10/02/2018 0939</u>
Conductivity Unit: <u>ms/cm</u>	Purge End: <u>10/02/2018 1009</u>
Total Volume Removed (gals): <u>0.79</u>	

Field Equipment	Calibrated
YSI 556 MPS 13A101191	Yes
Heron Water level meter 30897	No
LaMotte 2020we 4705-3514	Yes

Sampling Equipment	Dedicated
QED sample pro bladder pump 11207	No

PRE-PURGE VALUES

Reading #	Time	Purge Rate ml/minute	Temp (degrees C)	pH (s.u.)	Specific Conductivity (ms/cm)	Eh/ORP (mV)	Dissolved O2 (mg/l)	Turbidity (NTU)	Water Level (ft)	Notes
			Constant	+ - 0.10	+ - 3.000 %	+ - 10	+ - 10 %	+ - 10 %		
Initial	0939	100	8.19	8.03	0.715	169.4	4.45	3.70	12.80	

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	0944	100	7.98	8.02	0.711	172.8	3.92	2.13	12.80	
2	0949	100	7.94	8.09	0.709	169.2	2.77	2.08	12.80	
3	0954	100	7.92	8.16	0.708	162.5	1.59	2.00	12.80	
4	0959	100	7.92	8.19	0.707	157.6	1.24	1.89	12.80	
5	1004	100	7.91	8.19	0.707	156.6	1.21	1.86	12.80	
6	1009	100	7.85	8.20	0.707	153.4	1.19	1.81	12.80	

SAMPLE COLLECTION INFORMATION

Lab	Parameter	Method	Bottle QTY Required	Bottle QTY Collected	BottleType	Preservative	Program
TABUF	8260B_VOA+naphtha	8260B_VOA+naphtha	2	3	40 ml glass vial	HCL	Superior 2018 2SA Sampling_001
TABUF	8270C_SVOC (less naphtha)	8270C_SVOC (less naphtha)	3	3	1 liter amber bottle	None	Superior 2018 2SA Sampling_001

SAMPLE IDENTIFICATION(S)

Normal Sample :SUPE-W-30C-100218

Sample Start time: 10/02/2018 1013

Sample Finish time: 10/02/2018 1030

Comments: _____

APPENDIX C

Analytical Data

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-135500-1

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

For:

Field & Technical Services LLC

200 Third Avenue

Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie



Authorized for release by:

6/4/2018 5:15:00 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

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LINKS

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

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

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

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Definitions/Glossary

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

TestAmerica Job ID: 480-135500-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Reported value was between the limit of detection and the limit of quantitation.

GC/MS Semi VOA

Qualifier	Qualifier Description
^c	CCV Recovery is outside acceptance limits.
J	Reported value was between the limit of detection and the limit of quantitation.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
F2	MS/MSD RPD exceeds control limits

Glossary

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

Case Narrative

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

TestAmerica Job ID: 480-135500-1

Job ID: 480-135500-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-135500-1

Revised : to add methylphenol 3 & 4 to SVOC list

Comments

No additional comments.

Receipt

The samples were received on 5/5/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 2.7° C, 2.9° C, 3.0° C, 3.2° C, 3.3° C and 3.6° C.

Receipt Exceptions

Due to a shipping error, SVOC Sample SUPE- W-18D-050318 (480-135500-14) was extracted one day outside of holding time fby the Chicago lab.

GC/MS VOA

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

GC/MS Semi VOA (Buffalo)

All SVOC samples were analyzed at the Buffalo in order to meet the Pentachlorophenol RL of 1 ppb.

Method(s) 8270D LL: The continuing calibration verification (CCV) associated with batch 480-413347 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D LL: The continuing calibration verification (CCV) associated with batch 480-413347 recovered outside acceptance criteria, low biased, for Benzyl alcohol and Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D LL: The continuing calibration verification (CCV) associated with batch 480-413347 recovered above the upper control limit for Carbazole, 3-Nitroaniline, 4-Nitroaniline and Hexachlorobutadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SUPE-W-18D-050318.

Method(s) 8270D LL: The laboratory control sample (LCS) for preparation batch 480-413163 and analytical batch 480-413347 recovered outside control limits for the following analytes: Carbazole. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D LL: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 480-413163 and analytical batch 480-413347 recovered outside control limits for the following analyte(s): Benzoic acid. Benzoic acid has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8270D: Surrogate recovery for the following samples was outside the upper control limit: SUPE-W-99-050318 and SUPE-W-04AR2-050318. These samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Sample SUPE- W-18D-050318 (480-135500-14) was extracted within holding time and analyzed in Buffalo for Pentachlorophenol as well as all compounds in the full SVOC list with the exception of 2,3,5,6 Tetrachlorophenol which the lab does not analyze for. Additionally, the Buffalo lab does not hold Wisconsin certification for 2-chlorophenol, 2-methylphenol and 2-nitrophenol as indicated on certification summary.

GC/MS Semi VOA (Chicago)

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 500-431644 was outside the method criteria for the following analyte(s): bis(chloroisopropyl) ether, 2,4-Dinitrophenol and 4-Nitrophenol. 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;

Case Narrative

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

TestAmerica Job ID: 480-135500-1

Job ID: 480-135500-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 500-431890 was outside the method criteria for the following analyte(s): bis(chloroisopropyl) ether, 2,4-Dinitrophenol, 4-Nitrophenol, Hexachlorocyclopentadiene and 2-Fluorobiphenyl. 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(s) 8270D: The continuing calibration verification (CCV) analyzed in batch 500-431968 was outside the method criteria for the following analyte: Benzoic acid. 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(s) 8270D: The continuing calibration verification (CCV) associated with batch 500-431968 recovered above the upper control limit for bis(chloroisopropyl) ether, 2-Nitroaniline and Phenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SUPE-EB-02-050318, SUPE-W-30A-050318, SUPE-W-30C-050318, SUPE-W-99-050318, SUPE-W-28C-050318, SUPE-W-10AR2-050318 and SUPE-W-04AR2-050318.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 500-431815 and 500-431815 and analytical batch 500-431890 recovered outside control limits for the following analytes: Chrysene and Isophorone. These analytes were biased high in the LCS and were not detected in the associated sample; therefore, the data have been reported. SUPE-W-18D-050318 and LCS 500-431815/2-A

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

Organic Prep

Method(s) 3510C: 3510C__LL

The following sample was prepared outside of preparation holding time because the sample was not shipped by the Buffalo lab with the others and it was received in the Chicago lab one day past holding time. : 480-135500-14. The holding time was up on 05/10/18 and the sample was extracted on 05/11/18,

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

No Detections.

Client Sample ID: SUPE-EB-01-050218

Lab Sample ID: 480-135500-2

No Detections.

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

No Detections.

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

No Detections.

Client Sample ID: SUPE-W-12CR-050318

Lab Sample ID: 480-135500-5

No Detections.

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

No Detections.

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	4.5		1.0	0.75	ug/L	1		8260C	Total/NA
Benzene	8.9		1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	22		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	2.8		2.0	0.66	ug/L	1		8260C	Total/NA
Naphthalene	29		1.0	0.43	ug/L	1		8260C	Total/NA
o-Xylene	3.9		1.0	0.76	ug/L	1		8260C	Total/NA
Toluene	0.75	J	1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	6.7		2.0	0.66	ug/L	1		8260C	Total/NA
Acenaphthene	15		1.0	0.38	ug/L	1		8270D	Total/NA
Acenaphthylene	0.49	J	1.0	0.34	ug/L	1		8270D	Total/NA
Anthracene	0.47	J	1.0	0.34	ug/L	1		8270D	Total/NA
Dibenzofuran	2.1		2.1	0.37	ug/L	1		8270D	Total/NA
Fluoranthene	0.58	J	1.0	0.34	ug/L	1		8270D	Total/NA
Fluorene	1.2		1.0	0.40	ug/L	1		8270D	Total/NA
Pyrene	0.57	J	1.0	0.50	ug/L	1		8270D	Total/NA
Benzo[a]anthracene	0.16	J	0.21	0.046	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

No Detections.

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

No Detections.

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	5.2		1.0	0.75	ug/L	1		8260C	Total/NA
Benzene	13		1.0	0.41	ug/L	1		8260C	Total/NA
Ethylbenzene	21		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	2.5		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	13		1.0	0.76	ug/L	1		8260C	Total/NA
Toluene	1.3		1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	16		2.0	0.66	ug/L	1		8260C	Total/NA
Acenaphthene	16		0.99	0.36	ug/L	1		8270D	Total/NA
Acenaphthylene	0.68	J	0.99	0.32	ug/L	1		8270D	Total/NA
Dibenzofuran	1.5	J	2.0	0.35	ug/L	1		8270D	Total/NA
Fluoranthene	0.62	J	0.99	0.32	ug/L	1		8270D	Total/NA
Fluorene	2.0		0.99	0.38	ug/L	1		8270D	Total/NA
Pyrene	0.59	J	0.99	0.48	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.92	J	1.0	0.32	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-TB-02-050318

Lab Sample ID: 480-135500-13

No Detections.

Client Sample ID: SUPE-W-18D-050318

Lab Sample ID: 480-135500-14

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
2,4-Dichlorophenol	0.17	J	0.50	0.056	ug/L	1		8270D LL	Total/NA
2,4,5-Trichlorophenol	0.17	J	5.0	0.065	ug/L	1		8270D LL	Total/NA
Bis(2-ethylhexyl) phthalate	0.67	J	5.0	0.42	ug/L	1		8270D LL	Total/NA
Di-n-butyl phthalate	1.6	J H	4.8	0.77	ug/L	1		8270D	Total/NA

Client Sample ID: SUPE-W-TB-01-050218

Lab Sample ID: 480-135500-15

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

Date Collected: 05/02/18 15:44

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/11/18 01:39	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/11/18 01:39	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/11/18 01:39	1
Benzene	<0.41		1.0	0.41	ug/L			05/11/18 01:39	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/11/18 01:39	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/11/18 01:39	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/11/18 01:39	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/11/18 01:39	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/11/18 01:39	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/11/18 01:39	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/11/18 01:39	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/11/18 01:39	1
Styrene	<0.73		1.0	0.73	ug/L			05/11/18 01:39	1
Toluene	<0.51		1.0	0.51	ug/L			05/11/18 01:39	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/11/18 01:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		77 - 120		05/11/18 01:39	1
4-Bromofluorobenzene (Surr)	94		73 - 120		05/11/18 01:39	1
Dibromofluoromethane (Surr)	96		75 - 123		05/11/18 01:39	1
Toluene-d8 (Surr)	83		80 - 120		05/11/18 01:39	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 14:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		24 - 146	05/08/18 14:14	05/09/18 14:25	1
2-Fluorobiphenyl	87		37 - 120	05/08/18 14:14	05/09/18 14:25	1
2-Fluorophenol (Surr)	47		10 - 120	05/08/18 14:14	05/09/18 14:25	1
Nitrobenzene-d5 (Surr)	69		26 - 120	05/08/18 14:14	05/09/18 14:25	1
Phenol-d5 (Surr)	32		11 - 120	05/08/18 14:14	05/09/18 14:25	1
p-Terphenyl-d14	115		64 - 127	05/08/18 14:14	05/09/18 14:25	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/10/18 22:55	1
1,2-Dichlorobenzene	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/10/18 22:55	1
1,3-Dichlorobenzene	<0.24		1.9	0.24	ug/L		05/09/18 14:20	05/10/18 22:55	1
1,4-Dichlorobenzene	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/10/18 22:55	1
1-Methylnaphthalene	<0.48		1.9	0.48	ug/L		05/09/18 14:20	05/10/18 22:55	1
bis(chloroisopropyl) ether	<0.29	^c	1.9	0.29	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,3,4,6-Tetrachlorophenol	<1.4		4.8	1.4	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,4,5-Trichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,4,6-Trichlorophenol	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,4-Dichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,4-Dinitrophenol	<7.1	^c	19	7.1	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,4-Dinitrotoluene	<0.29		0.96	0.29	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,6-Dinitrotoluene	<0.11		0.96	0.11	ug/L		05/09/18 14:20	05/10/18 22:55	1
2-Chloronaphthalene	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/10/18 22:55	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

Date Collected: 05/02/18 15:44

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	<0.77		4.8	0.77	ug/L		05/09/18 14:20	05/10/18 22:55	1
2-Methylnaphthalene	<0.12		1.9	0.12	ug/L		05/09/18 14:20	05/10/18 22:55	1
2-Methylphenol	<0.30		1.9	0.30	ug/L		05/09/18 14:20	05/10/18 22:55	1
2-Nitroaniline	<1.0		4.8	1.0	ug/L		05/09/18 14:20	05/10/18 22:55	1
2-Nitrophenol	<2.1		9.6	2.1	ug/L		05/09/18 14:20	05/10/18 22:55	1
3-Nitroaniline	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/10/18 22:55	1
4,6-Dinitro-2-methylphenol	<4.7		19	4.7	ug/L		05/09/18 14:20	05/10/18 22:55	1
4-Bromophenyl phenyl ether	<0.87		4.8	0.87	ug/L		05/09/18 14:20	05/10/18 22:55	1
4-Chloro-3-methylphenol	<2.1		9.6	2.1	ug/L		05/09/18 14:20	05/10/18 22:55	1
4-Chloroaniline	<2.0		9.6	2.0	ug/L		05/09/18 14:20	05/10/18 22:55	1
4-Chlorophenyl phenyl ether	<0.78		4.8	0.78	ug/L		05/09/18 14:20	05/10/18 22:55	1
4-Nitroaniline	<3.8		9.6	3.8	ug/L		05/09/18 14:20	05/10/18 22:55	1
4-Nitrophenol	<2.2	^c	19	2.2	ug/L		05/09/18 14:20	05/10/18 22:55	1
Acenaphthene	<0.34		0.96	0.34	ug/L		05/09/18 14:20	05/10/18 22:55	1
Acenaphthylene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/10/18 22:55	1
Anthracene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzo[a]pyrene	<0.054		0.19	0.054	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzo[b]fluoranthene	<0.056		0.19	0.056	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzo[g,h,i]perylene	<0.40		0.96	0.40	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzo[k]fluoranthene	<0.071		0.19	0.071	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzoic acid	<4.4		19	4.4	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzyl alcohol	<2.9		19	2.9	ug/L		05/09/18 14:20	05/10/18 22:55	1
Bis(2-chloroethoxy)methane	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/10/18 22:55	1
Bis(2-chloroethyl)ether	<0.34		1.9	0.34	ug/L		05/09/18 14:20	05/10/18 22:55	1
Bis(2-ethylhexyl) phthalate	<2.3		9.6	2.3	ug/L		05/09/18 14:20	05/10/18 22:55	1
Butyl benzyl phthalate	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/10/18 22:55	1
Chrysene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/10/18 22:55	1
Dibenz(a,h)anthracene	<0.061		0.29	0.061	ug/L		05/09/18 14:20	05/10/18 22:55	1
Dibenzofuran	<0.34		1.9	0.34	ug/L		05/09/18 14:20	05/10/18 22:55	1
Diethyl phthalate	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/10/18 22:55	1
Dimethyl phthalate	<0.36		1.9	0.36	ug/L		05/09/18 14:20	05/10/18 22:55	1
Di-n-butyl phthalate	<0.77		4.8	0.77	ug/L		05/09/18 14:20	05/10/18 22:55	1
Di-n-octyl phthalate	<2.4		9.6	2.4	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,3,5,6-Tetrachlorophenol	<2.4		4.8	2.4	ug/L		05/09/18 14:20	05/10/18 22:55	1
Fluoranthene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/10/18 22:55	1
Fluorene	<0.36		0.96	0.36	ug/L		05/09/18 14:20	05/10/18 22:55	1
Hexachlorobenzene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/10/18 22:55	1
Hexachlorobutadiene	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/10/18 22:55	1
Hexachlorocyclopentadiene	<3.3		19	3.3	ug/L		05/09/18 14:20	05/10/18 22:55	1
Hexachloroethane	<0.93		4.8	0.93	ug/L		05/09/18 14:20	05/10/18 22:55	1
Indeno[1,2,3-cd]pyrene	<0.080		0.19	0.080	ug/L		05/09/18 14:20	05/10/18 22:55	1
Isophorone	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/10/18 22:55	1
Nitrobenzene	<0.43		0.96	0.43	ug/L		05/09/18 14:20	05/10/18 22:55	1
N-Nitrosodi-n-propylamine	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/10/18 22:55	1
N-Nitrosodiphenylamine	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/10/18 22:55	1
Phenol	<0.34		4.8	0.34	ug/L		05/09/18 14:20	05/10/18 22:55	1
Pyrene	<0.46		0.96	0.46	ug/L		05/09/18 14:20	05/10/18 22:55	1
2,4-Dimethylphenol	<3.2		9.6	3.2	ug/L		05/09/18 14:20	05/10/18 22:55	1
Benzo[a]anthracene	<0.042		0.19	0.042	ug/L		05/09/18 14:20	05/10/18 22:55	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

Date Collected: 05/02/18 15:44

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	<0.34		0.96	0.34	ug/L		05/09/18 14:20	05/10/18 22:55	1
3,3'-Dichlorobenzidine	<0.90		4.8	0.90	ug/L		05/09/18 14:20	05/10/18 22:55	1
3 & 4 Methylphenol	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/10/18 22:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	109		40 - 145				05/09/18 14:20	05/10/18 22:55	1
2-Fluorobiphenyl	82	^c	34 - 110				05/09/18 14:20	05/10/18 22:55	1
2-Fluorophenol (Surr)	66		27 - 110				05/09/18 14:20	05/10/18 22:55	1
Nitrobenzene-d5 (Surr)	83		36 - 120				05/09/18 14:20	05/10/18 22:55	1
Phenol-d5 (Surr)	36		20 - 100				05/09/18 14:20	05/10/18 22:55	1
Terphenyl-d14 (Surr)	100		40 - 145				05/09/18 14:20	05/10/18 22:55	1

Client Sample ID: SUPE-EB-01-050218

Lab Sample ID: 480-135500-2

Date Collected: 05/02/18 17:15

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/11/18 02:03	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/11/18 02:03	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/11/18 02:03	1
Benzene	<0.41		1.0	0.41	ug/L			05/11/18 02:03	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/11/18 02:03	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/11/18 02:03	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/11/18 02:03	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/11/18 02:03	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/11/18 02:03	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/11/18 02:03	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/11/18 02:03	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/11/18 02:03	1
Styrene	<0.73		1.0	0.73	ug/L			05/11/18 02:03	1
Toluene	<0.51		1.0	0.51	ug/L			05/11/18 02:03	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/11/18 02:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		77 - 120					05/11/18 02:03	1
4-Bromofluorobenzene (Surr)	95		73 - 120					05/11/18 02:03	1
Dibromofluoromethane (Surr)	98		75 - 123					05/11/18 02:03	1
Toluene-d8 (Surr)	85		80 - 120					05/11/18 02:03	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 14:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		24 - 146				05/08/18 14:14	05/09/18 14:54	1
2-Fluorobiphenyl	80		37 - 120				05/08/18 14:14	05/09/18 14:54	1
2-Fluorophenol (Surr)	44		10 - 120				05/08/18 14:14	05/09/18 14:54	1
Nitrobenzene-d5 (Surr)	62		26 - 120				05/08/18 14:14	05/09/18 14:54	1
Phenol-d5 (Surr)	31		11 - 120				05/08/18 14:14	05/09/18 14:54	1
p-Terphenyl-d14	112		64 - 127				05/08/18 14:14	05/09/18 14:54	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.31		2.1	0.31	ug/L		05/09/18 14:20	05/10/18 23:19	1
1,2-Dichlorobenzene	<0.30		2.1	0.30	ug/L		05/09/18 14:20	05/10/18 23:19	1
1,3-Dichlorobenzene	<0.26		2.1	0.26	ug/L		05/09/18 14:20	05/10/18 23:19	1
1,4-Dichlorobenzene	<0.28		2.1	0.28	ug/L		05/09/18 14:20	05/10/18 23:19	1
1-Methylnaphthalene	<0.51		2.1	0.51	ug/L		05/09/18 14:20	05/10/18 23:19	1
bis(chloroisopropyl) ether	<0.31	^c	2.1	0.31	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,3,4,6-Tetrachlorophenol	<1.6		5.1	1.6	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,4,5-Trichlorophenol	<2.4		10	2.4	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,4,6-Trichlorophenol	<1.1		5.1	1.1	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,4-Dinitrophenol	<7.6	^c	21	7.6	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,4-Dinitrotoluene	<0.31		1.0	0.31	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,6-Dinitrotoluene	<0.12		1.0	0.12	ug/L		05/09/18 14:20	05/10/18 23:19	1
2-Chloronaphthalene	<0.35		2.1	0.35	ug/L		05/09/18 14:20	05/10/18 23:19	1
2-Chlorophenol	<0.82		5.1	0.82	ug/L		05/09/18 14:20	05/10/18 23:19	1
2-Methylnaphthalene	<0.13		2.1	0.13	ug/L		05/09/18 14:20	05/10/18 23:19	1
2-Methylphenol	<0.32		2.1	0.32	ug/L		05/09/18 14:20	05/10/18 23:19	1
2-Nitroaniline	<1.1		5.1	1.1	ug/L		05/09/18 14:20	05/10/18 23:19	1
2-Nitrophenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/10/18 23:19	1
3-Nitroaniline	<2.4		10	2.4	ug/L		05/09/18 14:20	05/10/18 23:19	1
4,6-Dinitro-2-methylphenol	<5.1		21	5.1	ug/L		05/09/18 14:20	05/10/18 23:19	1
4-Bromophenyl phenyl ether	<0.94		5.1	0.94	ug/L		05/09/18 14:20	05/10/18 23:19	1
4-Chloro-3-methylphenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/10/18 23:19	1
4-Chloroaniline	<2.2		10	2.2	ug/L		05/09/18 14:20	05/10/18 23:19	1
4-Chlorophenyl phenyl ether	<0.83		5.1	0.83	ug/L		05/09/18 14:20	05/10/18 23:19	1
4-Nitroaniline	<4.0		10	4.0	ug/L		05/09/18 14:20	05/10/18 23:19	1
4-Nitrophenol	<2.4	^c	21	2.4	ug/L		05/09/18 14:20	05/10/18 23:19	1
Acenaphthene	<0.37		1.0	0.37	ug/L		05/09/18 14:20	05/10/18 23:19	1
Acenaphthylene	<0.33		1.0	0.33	ug/L		05/09/18 14:20	05/10/18 23:19	1
Anthracene	<0.33		1.0	0.33	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzo[a]pyrene	<0.058		0.21	0.058	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzo[b]fluoranthene	<0.060		0.21	0.060	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzo[g,h,i]perylene	<0.43		1.0	0.43	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzo[k]fluoranthene	<0.076		0.21	0.076	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzoic acid	<4.7		21	4.7	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzyl alcohol	<3.1		21	3.1	ug/L		05/09/18 14:20	05/10/18 23:19	1
Bis(2-chloroethoxy)methane	<0.31		2.1	0.31	ug/L		05/09/18 14:20	05/10/18 23:19	1
Bis(2-chloroethyl)ether	<0.36		2.1	0.36	ug/L		05/09/18 14:20	05/10/18 23:19	1
Bis(2-ethylhexyl) phthalate	<2.5		10	2.5	ug/L		05/09/18 14:20	05/10/18 23:19	1
Butyl benzyl phthalate	<0.28		2.1	0.28	ug/L		05/09/18 14:20	05/10/18 23:19	1
Chrysene	<0.14		0.51	0.14	ug/L		05/09/18 14:20	05/10/18 23:19	1
Dibenz(a,h)anthracene	<0.066		0.31	0.066	ug/L		05/09/18 14:20	05/10/18 23:19	1
Dibenzofuran	<0.36		2.1	0.36	ug/L		05/09/18 14:20	05/10/18 23:19	1
Diethyl phthalate	<0.45		2.1	0.45	ug/L		05/09/18 14:20	05/10/18 23:19	1
Dimethyl phthalate	<0.39		2.1	0.39	ug/L		05/09/18 14:20	05/10/18 23:19	1
Di-n-butyl phthalate	<0.82		5.1	0.82	ug/L		05/09/18 14:20	05/10/18 23:19	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,3,5,6-Tetrachlorophenol	<2.6		5.1	2.6	ug/L		05/09/18 14:20	05/10/18 23:19	1
Fluoranthene	<0.33		1.0	0.33	ug/L		05/09/18 14:20	05/10/18 23:19	1
Fluorene	<0.39		1.0	0.39	ug/L		05/09/18 14:20	05/10/18 23:19	1
Hexachlorobenzene	<0.14		0.51	0.14	ug/L		05/09/18 14:20	05/10/18 23:19	1
Hexachlorobutadiene	<1.1		5.1	1.1	ug/L		05/09/18 14:20	05/10/18 23:19	1
Hexachlorocyclopentadiene	<3.5		21	3.5	ug/L		05/09/18 14:20	05/10/18 23:19	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-EB-01-050218

Lab Sample ID: 480-135500-2

Date Collected: 05/02/18 17:15

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	<1.0		5.1	1.0	ug/L		05/09/18 14:20	05/10/18 23:19	1
Indeno[1,2,3-cd]pyrene	<0.086		0.21	0.086	ug/L		05/09/18 14:20	05/10/18 23:19	1
Isophorone	<0.30		2.1	0.30	ug/L		05/09/18 14:20	05/10/18 23:19	1
Nitrobenzene	<0.46		1.0	0.46	ug/L		05/09/18 14:20	05/10/18 23:19	1
N-Nitrosodi-n-propylamine	<0.14		0.51	0.14	ug/L		05/09/18 14:20	05/10/18 23:19	1
N-Nitrosodiphenylamine	<0.35		2.1	0.35	ug/L		05/09/18 14:20	05/10/18 23:19	1
Phenol	<0.37		5.1	0.37	ug/L		05/09/18 14:20	05/10/18 23:19	1
Pyrene	<0.49		1.0	0.49	ug/L		05/09/18 14:20	05/10/18 23:19	1
2,4-Dimethylphenol	<3.4		10	3.4	ug/L		05/09/18 14:20	05/10/18 23:19	1
Benzo[a]anthracene	<0.045		0.21	0.045	ug/L		05/09/18 14:20	05/10/18 23:19	1
Phenanthrene	<0.36		1.0	0.36	ug/L		05/09/18 14:20	05/10/18 23:19	1
3,3'-Dichlorobenzidine	<0.97		5.1	0.97	ug/L		05/09/18 14:20	05/10/18 23:19	1
3 & 4 Methylphenol	<0.45		2.1	0.45	ug/L		05/09/18 14:20	05/10/18 23:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		40 - 145	05/09/18 14:20	05/10/18 23:19	1
2-Fluorobiphenyl	73	^c	34 - 110	05/09/18 14:20	05/10/18 23:19	1
2-Fluorophenol (Surr)	68		27 - 110	05/09/18 14:20	05/10/18 23:19	1
Nitrobenzene-d5 (Surr)	76		36 - 120	05/09/18 14:20	05/10/18 23:19	1
Phenol-d5 (Surr)	38		20 - 100	05/09/18 14:20	05/10/18 23:19	1
Terphenyl-d14 (Surr)	99		40 - 145	05/09/18 14:20	05/10/18 23:19	1

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

Date Collected: 05/03/18 09:25

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 01:48	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 01:48	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 01:48	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 01:48	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 01:48	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 01:48	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 01:48	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 01:48	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 01:48	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 01:48	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 01:48	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 01:48	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 01:48	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 01:48	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 01:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		05/12/18 01:48	1
4-Bromofluorobenzene (Surr)	103		73 - 120		05/12/18 01:48	1
Dibromofluoromethane (Surr)	102		75 - 123		05/12/18 01:48	1
Toluene-d8 (Surr)	101		80 - 120		05/12/18 01:48	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

Date Collected: 05/03/18 09:25

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 13:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		24 - 146				05/08/18 14:14	05/09/18 13:56	1
2-Fluorobiphenyl	93		37 - 120				05/08/18 14:14	05/09/18 13:56	1
2-Fluorophenol (Surr)	51		10 - 120				05/08/18 14:14	05/09/18 13:56	1
Nitrobenzene-d5 (Surr)	74		26 - 120				05/08/18 14:14	05/09/18 13:56	1
Phenol-d5 (Surr)	35		11 - 120				05/08/18 14:14	05/09/18 13:56	1
p-Terphenyl-d14	95		64 - 127				05/08/18 14:14	05/09/18 13:56	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/12/18 02:06	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/12/18 02:06	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		05/09/18 14:20	05/12/18 02:06	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/12/18 02:06	1
1-Methylnaphthalene	<0.50		2.0	0.50	ug/L		05/09/18 14:20	05/12/18 02:06	1
bis(chloroisopropyl) ether	<0.30	^c	2.0	0.30	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,3,4,6-Tetrachlorophenol	<1.5		5.0	1.5	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,4,5-Trichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,4-Dinitrophenol	<7.5	^c	20	7.5	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,4-Dinitrotoluene	<0.30		1.0	0.30	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,6-Dinitrotoluene	<0.12		1.0	0.12	ug/L		05/09/18 14:20	05/12/18 02:06	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/12/18 02:06	1
2-Chlorophenol	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/12/18 02:06	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/09/18 14:20	05/12/18 02:06	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		05/09/18 14:20	05/12/18 02:06	1
2-Nitroaniline	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/12/18 02:06	1
2-Nitrophenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/12/18 02:06	1
3-Nitroaniline	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 02:06	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		05/09/18 14:20	05/12/18 02:06	1
4-Bromophenyl phenyl ether	<0.92		5.0	0.92	ug/L		05/09/18 14:20	05/12/18 02:06	1
4-Chloro-3-methylphenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/12/18 02:06	1
4-Chloroaniline	<2.1		10	2.1	ug/L		05/09/18 14:20	05/12/18 02:06	1
4-Chlorophenyl phenyl ether	<0.81		5.0	0.81	ug/L		05/09/18 14:20	05/12/18 02:06	1
4-Nitroaniline	<4.0		10	4.0	ug/L		05/09/18 14:20	05/12/18 02:06	1
4-Nitrophenol	<2.4	^c	20	2.4	ug/L		05/09/18 14:20	05/12/18 02:06	1
Acenaphthene	<0.36		1.0	0.36	ug/L		05/09/18 14:20	05/12/18 02:06	1
Acenaphthylene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/12/18 02:06	1
Anthracene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzo[g,h,i]perylene	<0.42		1.0	0.42	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzo[k]fluoranthene	<0.074		0.20	0.074	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzoic acid	<4.6		20	4.6	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzyl alcohol	<3.1		20	3.1	ug/L		05/09/18 14:20	05/12/18 02:06	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/12/18 02:06	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/12/18 02:06	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

Date Collected: 05/03/18 09:25

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	<2.4		10	2.4	ug/L		05/09/18 14:20	05/12/18 02:06	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/12/18 02:06	1
Chrysene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/12/18 02:06	1
Dibenz(a,h)anthracene	<0.064		0.30	0.064	ug/L		05/09/18 14:20	05/12/18 02:06	1
Dibenzofuran	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/12/18 02:06	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/12/18 02:06	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		05/09/18 14:20	05/12/18 02:06	1
Di-n-butyl phthalate	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/12/18 02:06	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,3,5,6-Tetrachlorophenol	<2.5		5.0	2.5	ug/L		05/09/18 14:20	05/12/18 02:06	1
Fluoranthene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/12/18 02:06	1
Fluorene	<0.38		1.0	0.38	ug/L		05/09/18 14:20	05/12/18 02:06	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/12/18 02:06	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/12/18 02:06	1
Hexachlorocyclopentadiene	<3.5	^c	20	3.5	ug/L		05/09/18 14:20	05/12/18 02:06	1
Hexachloroethane	<0.98		5.0	0.98	ug/L		05/09/18 14:20	05/12/18 02:06	1
Indeno[1,2,3-cd]pyrene	<0.084		0.20	0.084	ug/L		05/09/18 14:20	05/12/18 02:06	1
Isophorone	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/12/18 02:06	1
Nitrobenzene	<0.45		1.0	0.45	ug/L		05/09/18 14:20	05/12/18 02:06	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/12/18 02:06	1
N-Nitrosodiphenylamine	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/12/18 02:06	1
Phenol	<0.36		5.0	0.36	ug/L		05/09/18 14:20	05/12/18 02:06	1
Pyrene	<0.48		1.0	0.48	ug/L		05/09/18 14:20	05/12/18 02:06	1
2,4-Dimethylphenol	<3.4		10	3.4	ug/L		05/09/18 14:20	05/12/18 02:06	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		05/09/18 14:20	05/12/18 02:06	1
Phenanthrene	<0.35		1.0	0.35	ug/L		05/09/18 14:20	05/12/18 02:06	1
3,3'-Dichlorobenzidine	<0.95		5.0	0.95	ug/L		05/09/18 14:20	05/12/18 02:06	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/12/18 02:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	110		40 - 145	05/09/18 14:20	05/12/18 02:06	1
2-Fluorobiphenyl	80	^c	34 - 110	05/09/18 14:20	05/12/18 02:06	1
2-Fluorophenol (Surr)	66		27 - 110	05/09/18 14:20	05/12/18 02:06	1
Nitrobenzene-d5 (Surr)	75		36 - 120	05/09/18 14:20	05/12/18 02:06	1
Phenol-d5 (Surr)	36		20 - 100	05/09/18 14:20	05/12/18 02:06	1
Terphenyl-d14 (Surr)	98		40 - 145	05/09/18 14:20	05/12/18 02:06	1

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

Date Collected: 05/03/18 11:55

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 02:15	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 02:15	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 02:15	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 02:15	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 02:15	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 02:15	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 02:15	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

Date Collected: 05/03/18 11:55

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 02:15	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 02:15	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 02:15	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 02:15	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 02:15	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 02:15	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 02:15	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 02:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/12/18 02:15	1
4-Bromofluorobenzene (Surr)	101		73 - 120		05/12/18 02:15	1
Dibromofluoromethane (Surr)	101		75 - 123		05/12/18 02:15	1
Toluene-d8 (Surr)	100		80 - 120		05/12/18 02:15	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 15:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		24 - 146	05/08/18 14:14	05/09/18 15:24	1
2-Fluorobiphenyl	80		37 - 120	05/08/18 14:14	05/09/18 15:24	1
2-Fluorophenol (Surr)	42		10 - 120	05/08/18 14:14	05/09/18 15:24	1
Nitrobenzene-d5 (Surr)	63		26 - 120	05/08/18 14:14	05/09/18 15:24	1
Phenol-d5 (Surr)	28		11 - 120	05/08/18 14:14	05/09/18 15:24	1
p-Terphenyl-d14	75		64 - 127	05/08/18 14:14	05/09/18 15:24	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/10/18 23:44	1
1,2-Dichlorobenzene	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/10/18 23:44	1
1,3-Dichlorobenzene	<0.24		1.9	0.24	ug/L		05/09/18 14:20	05/10/18 23:44	1
1,4-Dichlorobenzene	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/10/18 23:44	1
1-Methylnaphthalene	<0.48		1.9	0.48	ug/L		05/09/18 14:20	05/10/18 23:44	1
bis(chloroisopropyl) ether	<0.29	^c	1.9	0.29	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,3,4,6-Tetrachlorophenol	<1.4		4.8	1.4	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,4,5-Trichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,4,6-Trichlorophenol	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,4-Dichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,4-Dinitrophenol	<7.1	^c	19	7.1	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,4-Dinitrotoluene	<0.29		0.96	0.29	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,6-Dinitrotoluene	<0.11		0.96	0.11	ug/L		05/09/18 14:20	05/10/18 23:44	1
2-Chloronaphthalene	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/10/18 23:44	1
2-Chlorophenol	<0.76		4.8	0.76	ug/L		05/09/18 14:20	05/10/18 23:44	1
2-Methylnaphthalene	<0.12		1.9	0.12	ug/L		05/09/18 14:20	05/10/18 23:44	1
2-Methylphenol	<0.30		1.9	0.30	ug/L		05/09/18 14:20	05/10/18 23:44	1
2-Nitroaniline	<1.0		4.8	1.0	ug/L		05/09/18 14:20	05/10/18 23:44	1
2-Nitrophenol	<2.0		9.6	2.0	ug/L		05/09/18 14:20	05/10/18 23:44	1
3-Nitroaniline	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/10/18 23:44	1
4,6-Dinitro-2-methylphenol	<4.7		19	4.7	ug/L		05/09/18 14:20	05/10/18 23:44	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

Date Collected: 05/03/18 11:55

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	<0.87		4.8	0.87	ug/L		05/09/18 14:20	05/10/18 23:44	1
4-Chloro-3-methylphenol	<2.1		9.6	2.1	ug/L		05/09/18 14:20	05/10/18 23:44	1
4-Chloroaniline	<2.0		9.6	2.0	ug/L		05/09/18 14:20	05/10/18 23:44	1
4-Chlorophenyl phenyl ether	<0.77		4.8	0.77	ug/L		05/09/18 14:20	05/10/18 23:44	1
4-Nitroaniline	<3.8		9.6	3.8	ug/L		05/09/18 14:20	05/10/18 23:44	1
4-Nitrophenol	<2.2	^c	19	2.2	ug/L		05/09/18 14:20	05/10/18 23:44	1
Acenaphthene	<0.34		0.96	0.34	ug/L		05/09/18 14:20	05/10/18 23:44	1
Acenaphthylene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/10/18 23:44	1
Anthracene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzo[a]pyrene	<0.054		0.19	0.054	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzo[b]fluoranthene	<0.055		0.19	0.055	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzo[g,h,i]perylene	<0.40		0.96	0.40	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzo[k]fluoranthene	<0.071		0.19	0.071	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzoic acid	<4.4		19	4.4	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzyl alcohol	<2.9		19	2.9	ug/L		05/09/18 14:20	05/10/18 23:44	1
Bis(2-chloroethoxy)methane	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/10/18 23:44	1
Bis(2-chloroethyl)ether	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/10/18 23:44	1
Bis(2-ethylhexyl) phthalate	<2.3		9.6	2.3	ug/L		05/09/18 14:20	05/10/18 23:44	1
Butyl benzyl phthalate	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/10/18 23:44	1
Chrysene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/10/18 23:44	1
Dibenz(a,h)anthracene	<0.061		0.29	0.061	ug/L		05/09/18 14:20	05/10/18 23:44	1
Dibenzofuran	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/10/18 23:44	1
Diethyl phthalate	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/10/18 23:44	1
Dimethyl phthalate	<0.36		1.9	0.36	ug/L		05/09/18 14:20	05/10/18 23:44	1
Di-n-butyl phthalate	<0.76		4.8	0.76	ug/L		05/09/18 14:20	05/10/18 23:44	1
Di-n-octyl phthalate	<2.4		9.6	2.4	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,3,5,6-Tetrachlorophenol	<2.4		4.8	2.4	ug/L		05/09/18 14:20	05/10/18 23:44	1
Fluoranthene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/10/18 23:44	1
Fluorene	<0.36		0.96	0.36	ug/L		05/09/18 14:20	05/10/18 23:44	1
Hexachlorobenzene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/10/18 23:44	1
Hexachlorobutadiene	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/10/18 23:44	1
Hexachlorocyclopentadiene	<3.3		19	3.3	ug/L		05/09/18 14:20	05/10/18 23:44	1
Hexachloroethane	<0.93		4.8	0.93	ug/L		05/09/18 14:20	05/10/18 23:44	1
Indeno[1,2,3-cd]pyrene	<0.080		0.19	0.080	ug/L		05/09/18 14:20	05/10/18 23:44	1
Isophorone	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/10/18 23:44	1
Nitrobenzene	<0.43		0.96	0.43	ug/L		05/09/18 14:20	05/10/18 23:44	1
N-Nitrosodi-n-propylamine	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/10/18 23:44	1
N-Nitrosodiphenylamine	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/10/18 23:44	1
Phenol	<0.34		4.8	0.34	ug/L		05/09/18 14:20	05/10/18 23:44	1
Pyrene	<0.46		0.96	0.46	ug/L		05/09/18 14:20	05/10/18 23:44	1
2,4-Dimethylphenol	<3.2		9.6	3.2	ug/L		05/09/18 14:20	05/10/18 23:44	1
Benzo[a]anthracene	<0.042		0.19	0.042	ug/L		05/09/18 14:20	05/10/18 23:44	1
Phenanthrene	<0.33		0.96	0.33	ug/L		05/09/18 14:20	05/10/18 23:44	1
3,3'-Dichlorobenzidine	<0.90		4.8	0.90	ug/L		05/09/18 14:20	05/10/18 23:44	1
3 & 4 Methylphenol	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/10/18 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		40 - 145	05/09/18 14:20	05/10/18 23:44	1
2-Fluorobiphenyl	76	^c	34 - 110	05/09/18 14:20	05/10/18 23:44	1
2-Fluorophenol (Surr)	49		27 - 110	05/09/18 14:20	05/10/18 23:44	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-12A-050318

Date Collected: 05/03/18 11:55

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-4

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	74		36 - 120	05/09/18 14:20	05/10/18 23:44	1
Phenol-d5 (Surr)	27		20 - 100	05/09/18 14:20	05/10/18 23:44	1
Terphenyl-d14 (Surr)	82		40 - 145	05/09/18 14:20	05/10/18 23:44	1

Client Sample ID: SUPE-W-12CR-050318

Date Collected: 05/03/18 14:07

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-5

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 02:42	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 02:42	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 02:42	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 02:42	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 02:42	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 02:42	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 02:42	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 02:42	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 02:42	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 02:42	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 02:42	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 02:42	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 02:42	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 02:42	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 02:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/12/18 02:42	1
4-Bromofluorobenzene (Surr)	102		73 - 120		05/12/18 02:42	1
Dibromofluoromethane (Surr)	100		75 - 123		05/12/18 02:42	1
Toluene-d8 (Surr)	97		80 - 120		05/12/18 02:42	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 15:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	94		24 - 146	05/08/18 14:14	05/09/18 15:53	1
2-Fluorobiphenyl	83		37 - 120	05/08/18 14:14	05/09/18 15:53	1
2-Fluorophenol (Surr)	46		10 - 120	05/08/18 14:14	05/09/18 15:53	1
Nitrobenzene-d5 (Surr)	65		26 - 120	05/08/18 14:14	05/09/18 15:53	1
Phenol-d5 (Surr)	30		11 - 120	05/08/18 14:14	05/09/18 15:53	1
p-Terphenyl-d14	112		64 - 127	05/08/18 14:14	05/09/18 15:53	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/11/18 00:08	1
1,2-Dichlorobenzene	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/11/18 00:08	1
1,3-Dichlorobenzene	<0.24		1.9	0.24	ug/L		05/09/18 14:20	05/11/18 00:08	1
1,4-Dichlorobenzene	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/11/18 00:08	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-12CR-050318

Lab Sample ID: 480-135500-5

Date Collected: 05/03/18 14:07

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.48		1.9	0.48	ug/L		05/09/18 14:20	05/11/18 00:08	1
bis(chloroisopropyl) ether	<0.29	^c	1.9	0.29	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,3,4,6-Tetrachlorophenol	<1.4		4.8	1.4	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,4,5-Trichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,4,6-Trichlorophenol	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,4-Dichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,4-Dinitrophenol	<7.1	^c	19	7.1	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,4-Dinitrotoluene	<0.29		0.96	0.29	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,6-Dinitrotoluene	<0.11		0.96	0.11	ug/L		05/09/18 14:20	05/11/18 00:08	1
2-Chloronaphthalene	<0.32		1.9	0.32	ug/L		05/09/18 14:20	05/11/18 00:08	1
2-Chlorophenol	<0.76		4.8	0.76	ug/L		05/09/18 14:20	05/11/18 00:08	1
2-Methylnaphthalene	<0.12		1.9	0.12	ug/L		05/09/18 14:20	05/11/18 00:08	1
2-Methylphenol	<0.30		1.9	0.30	ug/L		05/09/18 14:20	05/11/18 00:08	1
2-Nitroaniline	<1.0		4.8	1.0	ug/L		05/09/18 14:20	05/11/18 00:08	1
2-Nitrophenol	<2.0		9.6	2.0	ug/L		05/09/18 14:20	05/11/18 00:08	1
3-Nitroaniline	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/11/18 00:08	1
4,6-Dinitro-2-methylphenol	<4.7		19	4.7	ug/L		05/09/18 14:20	05/11/18 00:08	1
4-Bromophenyl phenyl ether	<0.87		4.8	0.87	ug/L		05/09/18 14:20	05/11/18 00:08	1
4-Chloro-3-methylphenol	<2.1		9.6	2.1	ug/L		05/09/18 14:20	05/11/18 00:08	1
4-Chloroaniline	<2.0		9.6	2.0	ug/L		05/09/18 14:20	05/11/18 00:08	1
4-Chlorophenyl phenyl ether	<0.77		4.8	0.77	ug/L		05/09/18 14:20	05/11/18 00:08	1
4-Nitroaniline	<3.8		9.6	3.8	ug/L		05/09/18 14:20	05/11/18 00:08	1
4-Nitrophenol	<2.2	^c	19	2.2	ug/L		05/09/18 14:20	05/11/18 00:08	1
Acenaphthene	<0.34		0.96	0.34	ug/L		05/09/18 14:20	05/11/18 00:08	1
Acenaphthylene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/11/18 00:08	1
Anthracene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzo[a]pyrene	<0.053		0.19	0.053	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzo[b]fluoranthene	<0.055		0.19	0.055	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzo[g,h,i]perylene	<0.40		0.96	0.40	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzo[k]fluoranthene	<0.071		0.19	0.071	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzoic acid	<4.4		19	4.4	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzyl alcohol	<2.9		19	2.9	ug/L		05/09/18 14:20	05/11/18 00:08	1
Bis(2-chloroethoxy)methane	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/11/18 00:08	1
Bis(2-chloroethyl)ether	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/11/18 00:08	1
Bis(2-ethylhexyl) phthalate	<2.3		9.6	2.3	ug/L		05/09/18 14:20	05/11/18 00:08	1
Butyl benzyl phthalate	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/11/18 00:08	1
Chrysene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/11/18 00:08	1
Dibenz(a,h)anthracene	<0.061		0.29	0.061	ug/L		05/09/18 14:20	05/11/18 00:08	1
Dibenzofuran	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/11/18 00:08	1
Diethyl phthalate	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/11/18 00:08	1
Dimethyl phthalate	<0.36		1.9	0.36	ug/L		05/09/18 14:20	05/11/18 00:08	1
Di-n-butyl phthalate	<0.76		4.8	0.76	ug/L		05/09/18 14:20	05/11/18 00:08	1
Di-n-octyl phthalate	<2.4		9.6	2.4	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,3,5,6-Tetrachlorophenol	<2.4		4.8	2.4	ug/L		05/09/18 14:20	05/11/18 00:08	1
Fluoranthene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/11/18 00:08	1
Fluorene	<0.36		0.96	0.36	ug/L		05/09/18 14:20	05/11/18 00:08	1
Hexachlorobenzene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/11/18 00:08	1
Hexachlorobutadiene	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/11/18 00:08	1
Hexachlorocyclopentadiene	<3.3		19	3.3	ug/L		05/09/18 14:20	05/11/18 00:08	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-12CR-050318

Lab Sample ID: 480-135500-5

Date Collected: 05/03/18 14:07

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	<0.93		4.8	0.93	ug/L		05/09/18 14:20	05/11/18 00:08	1
Indeno[1,2,3-cd]pyrene	<0.080		0.19	0.080	ug/L		05/09/18 14:20	05/11/18 00:08	1
Isophorone	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/11/18 00:08	1
Nitrobenzene	<0.43		0.96	0.43	ug/L		05/09/18 14:20	05/11/18 00:08	1
N-Nitrosodi-n-propylamine	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/11/18 00:08	1
N-Nitrosodiphenylamine	<0.32		1.9	0.32	ug/L		05/09/18 14:20	05/11/18 00:08	1
Phenol	<0.34		4.8	0.34	ug/L		05/09/18 14:20	05/11/18 00:08	1
Pyrene	<0.46		0.96	0.46	ug/L		05/09/18 14:20	05/11/18 00:08	1
2,4-Dimethylphenol	<3.2		9.6	3.2	ug/L		05/09/18 14:20	05/11/18 00:08	1
Benzo[a]anthracene	<0.042		0.19	0.042	ug/L		05/09/18 14:20	05/11/18 00:08	1
Phenanthrene	<0.33		0.96	0.33	ug/L		05/09/18 14:20	05/11/18 00:08	1
3,3'-Dichlorobenzidine	<0.90		4.8	0.90	ug/L		05/09/18 14:20	05/11/18 00:08	1
3 & 4 Methylphenol	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/11/18 00:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		40 - 145	05/09/18 14:20	05/11/18 00:08	1
2-Fluorobiphenyl	57	^c	34 - 110	05/09/18 14:20	05/11/18 00:08	1
2-Fluorophenol (Surr)	43		27 - 110	05/09/18 14:20	05/11/18 00:08	1
Nitrobenzene-d5 (Surr)	55		36 - 120	05/09/18 14:20	05/11/18 00:08	1
Phenol-d5 (Surr)	21		20 - 100	05/09/18 14:20	05/11/18 00:08	1
Terphenyl-d14 (Surr)	67		40 - 145	05/09/18 14:20	05/11/18 00:08	1

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

Date Collected: 05/03/18 14:42

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 03:09	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 03:09	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 03:09	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 03:09	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 03:09	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 03:09	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 03:09	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 03:09	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 03:09	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 03:09	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 03:09	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 03:09	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 03:09	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 03:09	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 03:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/12/18 03:09	1
4-Bromofluorobenzene (Surr)	102		73 - 120		05/12/18 03:09	1
Dibromofluoromethane (Surr)	99		75 - 123		05/12/18 03:09	1
Toluene-d8 (Surr)	98		80 - 120		05/12/18 03:09	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

Date Collected: 05/03/18 14:42

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		24 - 146				05/08/18 14:14	05/09/18 16:22	1
2-Fluorobiphenyl	91		37 - 120				05/08/18 14:14	05/09/18 16:22	1
2-Fluorophenol (Surr)	51		10 - 120				05/08/18 14:14	05/09/18 16:22	1
Nitrobenzene-d5 (Surr)	75		26 - 120				05/08/18 14:14	05/09/18 16:22	1
Phenol-d5 (Surr)	35		11 - 120				05/08/18 14:14	05/09/18 16:22	1
p-Terphenyl-d14	113		64 - 127				05/08/18 14:14	05/09/18 16:22	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.32		2.1	0.32	ug/L		05/09/18 14:20	05/12/18 21:44	1
1,2-Dichlorobenzene	<0.31		2.1	0.31	ug/L		05/09/18 14:20	05/12/18 21:44	1
1,3-Dichlorobenzene	<0.26		2.1	0.26	ug/L		05/09/18 14:20	05/12/18 21:44	1
1,4-Dichlorobenzene	<0.28		2.1	0.28	ug/L		05/09/18 14:20	05/12/18 21:44	1
1-Methylnaphthalene	<0.53		2.1	0.53	ug/L		05/09/18 14:20	05/12/18 21:44	1
bis(chloroisopropyl) ether	<0.32	^c	2.1	0.32	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,3,4,6-Tetrachlorophenol	<1.6		5.3	1.6	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,4,5-Trichlorophenol	<2.4		11	2.4	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,4,6-Trichlorophenol	<1.2		5.3	1.2	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,4-Dichlorophenol	<2.4		11	2.4	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,4-Dinitrophenol	<7.8		21	7.8	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,4-Dinitrotoluene	<0.32		1.1	0.32	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,6-Dinitrotoluene	<0.13		1.1	0.13	ug/L		05/09/18 14:20	05/12/18 21:44	1
2-Chloronaphthalene	<0.36		2.1	0.36	ug/L		05/09/18 14:20	05/12/18 21:44	1
2-Chlorophenol	<0.84		5.3	0.84	ug/L		05/09/18 14:20	05/12/18 21:44	1
2-Methylnaphthalene	<0.14		2.1	0.14	ug/L		05/09/18 14:20	05/12/18 21:44	1
2-Methylphenol	<0.33		2.1	0.33	ug/L		05/09/18 14:20	05/12/18 21:44	1
2-Nitroaniline	<1.1	^c	5.3	1.1	ug/L		05/09/18 14:20	05/12/18 21:44	1
2-Nitrophenol	<2.3		11	2.3	ug/L		05/09/18 14:20	05/12/18 21:44	1
3-Nitroaniline	<2.4		11	2.4	ug/L		05/09/18 14:20	05/12/18 21:44	1
4,6-Dinitro-2-methylphenol	<5.2		21	5.2	ug/L		05/09/18 14:20	05/12/18 21:44	1
4-Bromophenyl phenyl ether	<0.96		5.3	0.96	ug/L		05/09/18 14:20	05/12/18 21:44	1
4-Chloro-3-methylphenol	<2.3		11	2.3	ug/L		05/09/18 14:20	05/12/18 21:44	1
4-Chloroaniline	<2.2		11	2.2	ug/L		05/09/18 14:20	05/12/18 21:44	1
4-Chlorophenyl phenyl ether	<0.85		5.3	0.85	ug/L		05/09/18 14:20	05/12/18 21:44	1
4-Nitroaniline	<4.1		11	4.1	ug/L		05/09/18 14:20	05/12/18 21:44	1
4-Nitrophenol	<2.5		21	2.5	ug/L		05/09/18 14:20	05/12/18 21:44	1
Acenaphthene	<0.38		1.1	0.38	ug/L		05/09/18 14:20	05/12/18 21:44	1
Acenaphthylene	<0.34		1.1	0.34	ug/L		05/09/18 14:20	05/12/18 21:44	1
Anthracene	<0.34		1.1	0.34	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzo[a]pyrene	<0.059		0.21	0.059	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzo[b]fluoranthene	<0.061		0.21	0.061	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzo[g,h,i]perylene	<0.44		1.1	0.44	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzo[k]fluoranthene	<0.078		0.21	0.078	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzoic acid	<4.8	^c	21	4.8	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzyl alcohol	<3.2		21	3.2	ug/L		05/09/18 14:20	05/12/18 21:44	1
Bis(2-chloroethoxy)methane	<0.32		2.1	0.32	ug/L		05/09/18 14:20	05/12/18 21:44	1
Bis(2-chloroethyl)ether	<0.37		2.1	0.37	ug/L		05/09/18 14:20	05/12/18 21:44	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

Date Collected: 05/03/18 14:42

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	<2.6		11	2.6	ug/L		05/09/18 14:20	05/12/18 21:44	1
Butyl benzyl phthalate	<0.28		2.1	0.28	ug/L		05/09/18 14:20	05/12/18 21:44	1
Chrysene	<0.15		0.53	0.15	ug/L		05/09/18 14:20	05/12/18 21:44	1
Dibenz(a,h)anthracene	<0.067		0.32	0.067	ug/L		05/09/18 14:20	05/12/18 21:44	1
Dibenzofuran	<0.37		2.1	0.37	ug/L		05/09/18 14:20	05/12/18 21:44	1
Diethyl phthalate	<0.46		2.1	0.46	ug/L		05/09/18 14:20	05/12/18 21:44	1
Dimethyl phthalate	<0.40		2.1	0.40	ug/L		05/09/18 14:20	05/12/18 21:44	1
Di-n-butyl phthalate	<0.84		5.3	0.84	ug/L		05/09/18 14:20	05/12/18 21:44	1
Di-n-octyl phthalate	<2.6		11	2.6	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,3,5,6-Tetrachlorophenol	<2.6		5.3	2.6	ug/L		05/09/18 14:20	05/12/18 21:44	1
Fluoranthene	<0.34		1.1	0.34	ug/L		05/09/18 14:20	05/12/18 21:44	1
Fluorene	<0.40		1.1	0.40	ug/L		05/09/18 14:20	05/12/18 21:44	1
Hexachlorobenzene	<0.15		0.53	0.15	ug/L		05/09/18 14:20	05/12/18 21:44	1
Hexachlorobutadiene	<1.2		5.3	1.2	ug/L		05/09/18 14:20	05/12/18 21:44	1
Hexachlorocyclopentadiene	<3.6		21	3.6	ug/L		05/09/18 14:20	05/12/18 21:44	1
Hexachloroethane	<1.0		5.3	1.0	ug/L		05/09/18 14:20	05/12/18 21:44	1
Indeno[1,2,3-cd]pyrene	<0.088		0.21	0.088	ug/L		05/09/18 14:20	05/12/18 21:44	1
Isophorone	<0.31		2.1	0.31	ug/L		05/09/18 14:20	05/12/18 21:44	1
Nitrobenzene	<0.47		1.1	0.47	ug/L		05/09/18 14:20	05/12/18 21:44	1
N-Nitrosodi-n-propylamine	<0.15		0.53	0.15	ug/L		05/09/18 14:20	05/12/18 21:44	1
N-Nitrosodiphenylamine	<0.36		2.1	0.36	ug/L		05/09/18 14:20	05/12/18 21:44	1
Phenol	<0.38	^c	5.3	0.38	ug/L		05/09/18 14:20	05/12/18 21:44	1
Pyrene	<0.50		1.1	0.50	ug/L		05/09/18 14:20	05/12/18 21:44	1
2,4-Dimethylphenol	<3.5		11	3.5	ug/L		05/09/18 14:20	05/12/18 21:44	1
Benzo[a]anthracene	<0.046		0.21	0.046	ug/L		05/09/18 14:20	05/12/18 21:44	1
Phenanthrene	<0.37		1.1	0.37	ug/L		05/09/18 14:20	05/12/18 21:44	1
3,3'-Dichlorobenzidine	<0.99		5.3	0.99	ug/L		05/09/18 14:20	05/12/18 21:44	1
3 & 4 Methylphenol	<0.46		2.1	0.46	ug/L		05/09/18 14:20	05/12/18 21:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		40 - 145	05/09/18 14:20	05/12/18 21:44	1
2-Fluorobiphenyl	103		34 - 110	05/09/18 14:20	05/12/18 21:44	1
2-Fluorophenol (Surr)	71		27 - 110	05/09/18 14:20	05/12/18 21:44	1
Nitrobenzene-d5 (Surr)	109		36 - 120	05/09/18 14:20	05/12/18 21:44	1
Phenol-d5 (Surr)	38		20 - 100	05/09/18 14:20	05/12/18 21:44	1
Terphenyl-d14 (Surr)	110		40 - 145	05/09/18 14:20	05/12/18 21:44	1

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Date Collected: 05/03/18 15:40

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 03:36	1
1,2,4-Trimethylbenzene	4.5		1.0	0.75	ug/L			05/12/18 03:36	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 03:36	1
Benzene	8.9		1.0	0.41	ug/L			05/12/18 03:36	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 03:36	1
Ethylbenzene	22		1.0	0.74	ug/L			05/12/18 03:36	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 03:36	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Date Collected: 05/03/18 15:40

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	2.8		2.0	0.66	ug/L			05/12/18 03:36	1
Naphthalene	29		1.0	0.43	ug/L			05/12/18 03:36	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 03:36	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 03:36	1
o-Xylene	3.9		1.0	0.76	ug/L			05/12/18 03:36	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 03:36	1
Toluene	0.75 J		1.0	0.51	ug/L			05/12/18 03:36	1
Xylenes, Total	6.7		2.0	0.66	ug/L			05/12/18 03:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		77 - 120		05/12/18 03:36	1
4-Bromofluorobenzene (Surr)	99		73 - 120		05/12/18 03:36	1
Dibromofluoromethane (Surr)	105		75 - 123		05/12/18 03:36	1
Toluene-d8 (Surr)	97		80 - 120		05/12/18 03:36	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		24 - 146	05/08/18 14:14	05/09/18 16:52	1
2-Fluorobiphenyl	74		37 - 120	05/08/18 14:14	05/09/18 16:52	1
2-Fluorophenol (Surr)	42		10 - 120	05/08/18 14:14	05/09/18 16:52	1
Nitrobenzene-d5 (Surr)	59		26 - 120	05/08/18 14:14	05/09/18 16:52	1
Phenol-d5 (Surr)	27		11 - 120	05/08/18 14:14	05/09/18 16:52	1
p-Terphenyl-d14	77		64 - 127	05/08/18 14:14	05/09/18 16:52	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.31		2.1	0.31	ug/L		05/09/18 14:20	05/12/18 22:12	1
1,2-Dichlorobenzene	<0.30		2.1	0.30	ug/L		05/09/18 14:20	05/12/18 22:12	1
1,3-Dichlorobenzene	<0.26		2.1	0.26	ug/L		05/09/18 14:20	05/12/18 22:12	1
1,4-Dichlorobenzene	<0.28		2.1	0.28	ug/L		05/09/18 14:20	05/12/18 22:12	1
1-Methylnaphthalene	<0.52		2.1	0.52	ug/L		05/09/18 14:20	05/12/18 22:12	1
bis(chloroisopropyl) ether	<0.31	^c	2.1	0.31	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,3,4,6-Tetrachlorophenol	<1.6		5.2	1.6	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,4,5-Trichlorophenol	<2.4		10	2.4	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,4,6-Trichlorophenol	<1.2		5.2	1.2	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,4-Dichlorophenol	<2.4		10	2.4	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,4-Dinitrophenol	<7.8		21	7.8	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,4-Dinitrotoluene	<0.31		1.0	0.31	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,6-Dinitrotoluene	<0.13		1.0	0.13	ug/L		05/09/18 14:20	05/12/18 22:12	1
2-Chloronaphthalene	<0.36		2.1	0.36	ug/L		05/09/18 14:20	05/12/18 22:12	1
2-Chlorophenol	<0.84		5.2	0.84	ug/L		05/09/18 14:20	05/12/18 22:12	1
2-Methylnaphthalene	<0.14		2.1	0.14	ug/L		05/09/18 14:20	05/12/18 22:12	1
2-Methylphenol	<0.33		2.1	0.33	ug/L		05/09/18 14:20	05/12/18 22:12	1
2-Nitroaniline	<1.1	^c	5.2	1.1	ug/L		05/09/18 14:20	05/12/18 22:12	1
2-Nitrophenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/12/18 22:12	1
3-Nitroaniline	<2.4		10	2.4	ug/L		05/09/18 14:20	05/12/18 22:12	1
4,6-Dinitro-2-methylphenol	<5.2		21	5.2	ug/L		05/09/18 14:20	05/12/18 22:12	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Date Collected: 05/03/18 15:40

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	<0.96		5.2	0.96	ug/L		05/09/18 14:20	05/12/18 22:12	1
4-Chloro-3-methylphenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 22:12	1
4-Chloroaniline	<2.2		10	2.2	ug/L		05/09/18 14:20	05/12/18 22:12	1
4-Chlorophenyl phenyl ether	<0.85		5.2	0.85	ug/L		05/09/18 14:20	05/12/18 22:12	1
4-Nitroaniline	<4.1		10	4.1	ug/L		05/09/18 14:20	05/12/18 22:12	1
4-Nitrophenol	<2.5		21	2.5	ug/L		05/09/18 14:20	05/12/18 22:12	1
Acenaphthene	15		1.0	0.38	ug/L		05/09/18 14:20	05/12/18 22:12	1
Acenaphthylene	0.49	J	1.0	0.34	ug/L		05/09/18 14:20	05/12/18 22:12	1
Anthracene	0.47	J	1.0	0.34	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzo[a]pyrene	<0.059		0.21	0.059	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzo[b]fluoranthene	<0.061		0.21	0.061	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzo[g,h,i]perylene	<0.44		1.0	0.44	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzo[k]fluoranthene	<0.078		0.21	0.078	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzoic acid	<4.8	^{^c}	21	4.8	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzyl alcohol	<3.2		21	3.2	ug/L		05/09/18 14:20	05/12/18 22:12	1
Bis(2-chloroethoxy)methane	<0.31		2.1	0.31	ug/L		05/09/18 14:20	05/12/18 22:12	1
Bis(2-chloroethyl)ether	<0.37		2.1	0.37	ug/L		05/09/18 14:20	05/12/18 22:12	1
Bis(2-ethylhexyl) phthalate	<2.6		10	2.6	ug/L		05/09/18 14:20	05/12/18 22:12	1
Butyl benzyl phthalate	<0.28		2.1	0.28	ug/L		05/09/18 14:20	05/12/18 22:12	1
Chrysene	<0.15		0.52	0.15	ug/L		05/09/18 14:20	05/12/18 22:12	1
Dibenz(a,h)anthracene	<0.067		0.31	0.067	ug/L		05/09/18 14:20	05/12/18 22:12	1
Dibenzofuran	2.1		2.1	0.37	ug/L		05/09/18 14:20	05/12/18 22:12	1
Diethyl phthalate	<0.46		2.1	0.46	ug/L		05/09/18 14:20	05/12/18 22:12	1
Dimethyl phthalate	<0.40		2.1	0.40	ug/L		05/09/18 14:20	05/12/18 22:12	1
Di-n-butyl phthalate	<0.84		5.2	0.84	ug/L		05/09/18 14:20	05/12/18 22:12	1
Di-n-octyl phthalate	<2.6		10	2.6	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,3,5,6-Tetrachlorophenol	<2.6		5.2	2.6	ug/L		05/09/18 14:20	05/12/18 22:12	1
Fluoranthene	0.58	J	1.0	0.34	ug/L		05/09/18 14:20	05/12/18 22:12	1
Fluorene	1.2		1.0	0.40	ug/L		05/09/18 14:20	05/12/18 22:12	1
Hexachlorobenzene	<0.15		0.52	0.15	ug/L		05/09/18 14:20	05/12/18 22:12	1
Hexachlorobutadiene	<1.2		5.2	1.2	ug/L		05/09/18 14:20	05/12/18 22:12	1
Hexachlorocyclopentadiene	<3.6		21	3.6	ug/L		05/09/18 14:20	05/12/18 22:12	1
Hexachloroethane	<1.0		5.2	1.0	ug/L		05/09/18 14:20	05/12/18 22:12	1
Indeno[1,2,3-cd]pyrene	<0.088		0.21	0.088	ug/L		05/09/18 14:20	05/12/18 22:12	1
Isophorone	<0.30		2.1	0.30	ug/L		05/09/18 14:20	05/12/18 22:12	1
Nitrobenzene	<0.47		1.0	0.47	ug/L		05/09/18 14:20	05/12/18 22:12	1
N-Nitrosodi-n-propylamine	<0.15		0.52	0.15	ug/L		05/09/18 14:20	05/12/18 22:12	1
N-Nitrosodiphenylamine	<0.36		2.1	0.36	ug/L		05/09/18 14:20	05/12/18 22:12	1
Phenol	<0.38	^{^c}	5.2	0.38	ug/L		05/09/18 14:20	05/12/18 22:12	1
Pyrene	0.57	J	1.0	0.50	ug/L		05/09/18 14:20	05/12/18 22:12	1
2,4-Dimethylphenol	<3.5		10	3.5	ug/L		05/09/18 14:20	05/12/18 22:12	1
Benzo[a]anthracene	0.16	J	0.21	0.046	ug/L		05/09/18 14:20	05/12/18 22:12	1
Phenanthrene	<0.37		1.0	0.37	ug/L		05/09/18 14:20	05/12/18 22:12	1
3,3'-Dichlorobenzidine	<0.99		5.2	0.99	ug/L		05/09/18 14:20	05/12/18 22:12	1
3 & 4 Methylphenol	<0.46		2.1	0.46	ug/L		05/09/18 14:20	05/12/18 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	103		40 - 145	05/09/18 14:20	05/12/18 22:12	1
2-Fluorobiphenyl	98		34 - 110	05/09/18 14:20	05/12/18 22:12	1
2-Fluorophenol (Surr)	75		27 - 110	05/09/18 14:20	05/12/18 22:12	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-30A-050318

Date Collected: 05/03/18 15:40

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-7

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	109		36 - 120	05/09/18 14:20	05/12/18 22:12	1
Phenol-d5 (Surr)	45		20 - 100	05/09/18 14:20	05/12/18 22:12	1
Terphenyl-d14 (Surr)	82		40 - 145	05/09/18 14:20	05/12/18 22:12	1

Client Sample ID: SUPE-W-30C-050318

Date Collected: 05/02/18 15:52

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-8

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/11/18 02:27	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/11/18 02:27	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/11/18 02:27	1
Benzene	<0.41		1.0	0.41	ug/L			05/11/18 02:27	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/11/18 02:27	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/11/18 02:27	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/11/18 02:27	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/11/18 02:27	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/11/18 02:27	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/11/18 02:27	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/11/18 02:27	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/11/18 02:27	1
Styrene	<0.73		1.0	0.73	ug/L			05/11/18 02:27	1
Toluene	<0.51		1.0	0.51	ug/L			05/11/18 02:27	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/11/18 02:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		77 - 120		05/11/18 02:27	1
4-Bromofluorobenzene (Surr)	95		73 - 120		05/11/18 02:27	1
Dibromofluoromethane (Surr)	100		75 - 123		05/11/18 02:27	1
Toluene-d8 (Surr)	86		80 - 120		05/11/18 02:27	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	91		24 - 146	05/08/18 14:14	05/09/18 17:21	1
2-Fluorobiphenyl	91		37 - 120	05/08/18 14:14	05/09/18 17:21	1
2-Fluorophenol (Surr)	45		10 - 120	05/08/18 14:14	05/09/18 17:21	1
Nitrobenzene-d5 (Surr)	67		26 - 120	05/08/18 14:14	05/09/18 17:21	1
Phenol-d5 (Surr)	31		11 - 120	05/08/18 14:14	05/09/18 17:21	1
p-Terphenyl-d14	114		64 - 127	05/08/18 14:14	05/09/18 17:21	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/12/18 22:40	1
1,2-Dichlorobenzene	<0.28		2.0	0.28	ug/L		05/09/18 14:20	05/12/18 22:40	1
1,3-Dichlorobenzene	<0.24		2.0	0.24	ug/L		05/09/18 14:20	05/12/18 22:40	1
1,4-Dichlorobenzene	<0.26		2.0	0.26	ug/L		05/09/18 14:20	05/12/18 22:40	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

Date Collected: 05/02/18 15:52

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.49		2.0	0.49	ug/L		05/09/18 14:20	05/12/18 22:40	1
bis(chloroisopropyl) ether	<0.29	^c	2.0	0.29	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,3,4,6-Tetrachlorophenol	<1.5		4.9	1.5	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,4,5-Trichlorophenol	<2.2		9.8	2.2	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,4,6-Trichlorophenol	<1.1		4.9	1.1	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,4-Dichlorophenol	<2.2		9.8	2.2	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,4-Dinitrophenol	<7.3		20	7.3	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,4-Dinitrotoluene	<0.29		0.98	0.29	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,6-Dinitrotoluene	<0.12		0.98	0.12	ug/L		05/09/18 14:20	05/12/18 22:40	1
2-Chloronaphthalene	<0.33		2.0	0.33	ug/L		05/09/18 14:20	05/12/18 22:40	1
2-Chlorophenol	<0.78		4.9	0.78	ug/L		05/09/18 14:20	05/12/18 22:40	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/09/18 14:20	05/12/18 22:40	1
2-Methylphenol	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/12/18 22:40	1
2-Nitroaniline	<1.1	^c	4.9	1.1	ug/L		05/09/18 14:20	05/12/18 22:40	1
2-Nitrophenol	<2.1		9.8	2.1	ug/L		05/09/18 14:20	05/12/18 22:40	1
3-Nitroaniline	<2.2		9.8	2.2	ug/L		05/09/18 14:20	05/12/18 22:40	1
4,6-Dinitro-2-methylphenol	<4.8		20	4.8	ug/L		05/09/18 14:20	05/12/18 22:40	1
4-Bromophenyl phenyl ether	<0.89		4.9	0.89	ug/L		05/09/18 14:20	05/12/18 22:40	1
4-Chloro-3-methylphenol	<2.1		9.8	2.1	ug/L		05/09/18 14:20	05/12/18 22:40	1
4-Chloroaniline	<2.1		9.8	2.1	ug/L		05/09/18 14:20	05/12/18 22:40	1
4-Chlorophenyl phenyl ether	<0.79		4.9	0.79	ug/L		05/09/18 14:20	05/12/18 22:40	1
4-Nitroaniline	<3.8		9.8	3.8	ug/L		05/09/18 14:20	05/12/18 22:40	1
4-Nitrophenol	<2.3		20	2.3	ug/L		05/09/18 14:20	05/12/18 22:40	1
Acenaphthene	<0.35		0.98	0.35	ug/L		05/09/18 14:20	05/12/18 22:40	1
Acenaphthylene	<0.31		0.98	0.31	ug/L		05/09/18 14:20	05/12/18 22:40	1
Anthracene	<0.31		0.98	0.31	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzo[a]pyrene	<0.055		0.20	0.055	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzo[b]fluoranthene	<0.057		0.20	0.057	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzo[g,h,i]perylene	<0.41		0.98	0.41	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzo[k]fluoranthene	<0.072		0.20	0.072	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzoic acid	<4.5	^c	20	4.5	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzyl alcohol	<3.0		20	3.0	ug/L		05/09/18 14:20	05/12/18 22:40	1
Bis(2-chloroethoxy)methane	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/12/18 22:40	1
Bis(2-chloroethyl)ether	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/12/18 22:40	1
Bis(2-ethylhexyl) phthalate	<2.4		9.8	2.4	ug/L		05/09/18 14:20	05/12/18 22:40	1
Butyl benzyl phthalate	<0.26		2.0	0.26	ug/L		05/09/18 14:20	05/12/18 22:40	1
Chrysene	<0.14		0.49	0.14	ug/L		05/09/18 14:20	05/12/18 22:40	1
Dibenz(a,h)anthracene	<0.062		0.29	0.062	ug/L		05/09/18 14:20	05/12/18 22:40	1
Dibenzofuran	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/12/18 22:40	1
Diethyl phthalate	<0.43		2.0	0.43	ug/L		05/09/18 14:20	05/12/18 22:40	1
Dimethyl phthalate	<0.37		2.0	0.37	ug/L		05/09/18 14:20	05/12/18 22:40	1
Di-n-butyl phthalate	<0.78		4.9	0.78	ug/L		05/09/18 14:20	05/12/18 22:40	1
Di-n-octyl phthalate	<2.4		9.8	2.4	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,3,5,6-Tetrachlorophenol	<2.4		4.9	2.4	ug/L		05/09/18 14:20	05/12/18 22:40	1
Fluoranthene	<0.31		0.98	0.31	ug/L		05/09/18 14:20	05/12/18 22:40	1
Fluorene	<0.37		0.98	0.37	ug/L		05/09/18 14:20	05/12/18 22:40	1
Hexachlorobenzene	<0.14		0.49	0.14	ug/L		05/09/18 14:20	05/12/18 22:40	1
Hexachlorobutadiene	<1.1		4.9	1.1	ug/L		05/09/18 14:20	05/12/18 22:40	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		05/09/18 14:20	05/12/18 22:40	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

Date Collected: 05/02/18 15:52

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	<0.95		4.9	0.95	ug/L		05/09/18 14:20	05/12/18 22:40	1
Indeno[1,2,3-cd]pyrene	<0.082		0.20	0.082	ug/L		05/09/18 14:20	05/12/18 22:40	1
Isophorone	<0.28		2.0	0.28	ug/L		05/09/18 14:20	05/12/18 22:40	1
Nitrobenzene	<0.44		0.98	0.44	ug/L		05/09/18 14:20	05/12/18 22:40	1
N-Nitrosodi-n-propylamine	<0.14		0.49	0.14	ug/L		05/09/18 14:20	05/12/18 22:40	1
N-Nitrosodiphenylamine	<0.33		2.0	0.33	ug/L		05/09/18 14:20	05/12/18 22:40	1
Phenol	<0.35	^c	4.9	0.35	ug/L		05/09/18 14:20	05/12/18 22:40	1
Pyrene	<0.47		0.98	0.47	ug/L		05/09/18 14:20	05/12/18 22:40	1
2,4-Dimethylphenol	<3.3		9.8	3.3	ug/L		05/09/18 14:20	05/12/18 22:40	1
Benzo[a]anthracene	<0.043		0.20	0.043	ug/L		05/09/18 14:20	05/12/18 22:40	1
Phenanthrene	<0.34		0.98	0.34	ug/L		05/09/18 14:20	05/12/18 22:40	1
3,3'-Dichlorobenzidine	<0.92		4.9	0.92	ug/L		05/09/18 14:20	05/12/18 22:40	1
3 & 4 Methylphenol	<0.43		2.0	0.43	ug/L		05/09/18 14:20	05/12/18 22:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		40 - 145				05/09/18 14:20	05/12/18 22:40	1
2-Fluorobiphenyl	102		34 - 110				05/09/18 14:20	05/12/18 22:40	1
2-Fluorophenol (Surr)	63		27 - 110				05/09/18 14:20	05/12/18 22:40	1
Nitrobenzene-d5 (Surr)	111		36 - 120				05/09/18 14:20	05/12/18 22:40	1
Phenol-d5 (Surr)	33		20 - 100				05/09/18 14:20	05/12/18 22:40	1
Terphenyl-d14 (Surr)	106		40 - 145				05/09/18 14:20	05/12/18 22:40	1

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Date Collected: 05/03/18 01:01

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 04:03	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 04:03	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 04:03	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 04:03	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 04:03	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 04:03	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 04:03	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 04:03	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 04:03	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 04:03	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 04:03	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 04:03	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 04:03	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 04:03	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 04:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120					05/12/18 04:03	1
4-Bromofluorobenzene (Surr)	105		73 - 120					05/12/18 04:03	1
Dibromofluoromethane (Surr)	102		75 - 123					05/12/18 04:03	1
Toluene-d8 (Surr)	99		80 - 120					05/12/18 04:03	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Date Collected: 05/03/18 01:01

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		24 - 146				05/08/18 14:14	05/09/18 17:50	1
2-Fluorobiphenyl	92		37 - 120				05/08/18 14:14	05/09/18 17:50	1
2-Fluorophenol (Surr)	48		10 - 120				05/08/18 14:14	05/09/18 17:50	1
Nitrobenzene-d5 (Surr)	72		26 - 120				05/08/18 14:14	05/09/18 17:50	1
Phenol-d5 (Surr)	31		11 - 120				05/08/18 14:14	05/09/18 17:50	1
p-Terphenyl-d14	115		64 - 127				05/08/18 14:14	05/09/18 17:50	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/12/18 23:07	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/12/18 23:07	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		05/09/18 14:20	05/12/18 23:07	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/12/18 23:07	1
1-Methylnaphthalene	<0.50		2.0	0.50	ug/L		05/09/18 14:20	05/12/18 23:07	1
bis(chloroisopropyl) ether	<0.30	^c	2.0	0.30	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,3,4,6-Tetrachlorophenol	<1.5		5.0	1.5	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,4,5-Trichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,4-Dinitrophenol	<7.4		20	7.4	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,4-Dinitrotoluene	<0.30		1.0	0.30	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,6-Dinitrotoluene	<0.12		1.0	0.12	ug/L		05/09/18 14:20	05/12/18 23:07	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/12/18 23:07	1
2-Chlorophenol	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/12/18 23:07	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/09/18 14:20	05/12/18 23:07	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		05/09/18 14:20	05/12/18 23:07	1
2-Nitroaniline	<1.1	^c	5.0	1.1	ug/L		05/09/18 14:20	05/12/18 23:07	1
2-Nitrophenol	<2.1		10	2.1	ug/L		05/09/18 14:20	05/12/18 23:07	1
3-Nitroaniline	<2.3		10	2.3	ug/L		05/09/18 14:20	05/12/18 23:07	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		05/09/18 14:20	05/12/18 23:07	1
4-Bromophenyl phenyl ether	<0.91		5.0	0.91	ug/L		05/09/18 14:20	05/12/18 23:07	1
4-Chloro-3-methylphenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/12/18 23:07	1
4-Chloroaniline	<2.1		10	2.1	ug/L		05/09/18 14:20	05/12/18 23:07	1
4-Chlorophenyl phenyl ether	<0.81		5.0	0.81	ug/L		05/09/18 14:20	05/12/18 23:07	1
4-Nitroaniline	<3.9		10	3.9	ug/L		05/09/18 14:20	05/12/18 23:07	1
4-Nitrophenol	<2.3		20	2.3	ug/L		05/09/18 14:20	05/12/18 23:07	1
Acenaphthene	<0.36		1.0	0.36	ug/L		05/09/18 14:20	05/12/18 23:07	1
Acenaphthylene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/12/18 23:07	1
Anthracene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzo[g,h,i]perylene	<0.42		1.0	0.42	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzo[k]fluoranthene	<0.074		0.20	0.074	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzoic acid	<4.6	^c	20	4.6	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzyl alcohol	<3.1		20	3.1	ug/L		05/09/18 14:20	05/12/18 23:07	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/12/18 23:07	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/12/18 23:07	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Date Collected: 05/03/18 01:01

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	<2.4		10	2.4	ug/L		05/09/18 14:20	05/12/18 23:07	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/12/18 23:07	1
Chrysene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/12/18 23:07	1
Dibenz(a,h)anthracene	<0.064		0.30	0.064	ug/L		05/09/18 14:20	05/12/18 23:07	1
Dibenzofuran	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/12/18 23:07	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/12/18 23:07	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		05/09/18 14:20	05/12/18 23:07	1
Di-n-butyl phthalate	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/12/18 23:07	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,3,5,6-Tetrachlorophenol	<2.5		5.0	2.5	ug/L		05/09/18 14:20	05/12/18 23:07	1
Fluoranthene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/12/18 23:07	1
Fluorene	<0.38		1.0	0.38	ug/L		05/09/18 14:20	05/12/18 23:07	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/12/18 23:07	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/12/18 23:07	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		05/09/18 14:20	05/12/18 23:07	1
Hexachloroethane	<0.97		5.0	0.97	ug/L		05/09/18 14:20	05/12/18 23:07	1
Indeno[1,2,3-cd]pyrene	<0.084		0.20	0.084	ug/L		05/09/18 14:20	05/12/18 23:07	1
Isophorone	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/12/18 23:07	1
Nitrobenzene	<0.45		1.0	0.45	ug/L		05/09/18 14:20	05/12/18 23:07	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/12/18 23:07	1
N-Nitrosodiphenylamine	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/12/18 23:07	1
Phenol	<0.36	^c	5.0	0.36	ug/L		05/09/18 14:20	05/12/18 23:07	1
Pyrene	<0.48		1.0	0.48	ug/L		05/09/18 14:20	05/12/18 23:07	1
2,4-Dimethylphenol	<3.3		10	3.3	ug/L		05/09/18 14:20	05/12/18 23:07	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		05/09/18 14:20	05/12/18 23:07	1
Phenanthrene	<0.35		1.0	0.35	ug/L		05/09/18 14:20	05/12/18 23:07	1
3,3'-Dichlorobenzidine	<0.94		5.0	0.94	ug/L		05/09/18 14:20	05/12/18 23:07	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/12/18 23:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	119		40 - 145	05/09/18 14:20	05/12/18 23:07	1
2-Fluorobiphenyl	121	X	34 - 110	05/09/18 14:20	05/12/18 23:07	1
2-Fluorophenol (Surr)	84		27 - 110	05/09/18 14:20	05/12/18 23:07	1
Nitrobenzene-d5 (Surr)	123	X	36 - 120	05/09/18 14:20	05/12/18 23:07	1
Phenol-d5 (Surr)	28		20 - 100	05/09/18 14:20	05/12/18 23:07	1
Terphenyl-d14 (Surr)	122		40 - 145	05/09/18 14:20	05/12/18 23:07	1

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 04:30	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 04:30	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 04:30	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 04:30	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 04:30	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 04:30	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 04:30	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 04:30	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 04:30	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 04:30	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 04:30	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 04:30	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 04:30	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 04:30	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 04:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/12/18 04:30	1
4-Bromofluorobenzene (Surr)	104		73 - 120		05/12/18 04:30	1
Dibromofluoromethane (Surr)	100		75 - 123		05/12/18 04:30	1
Toluene-d8 (Surr)	99		80 - 120		05/12/18 04:30	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 18:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		24 - 146	05/08/18 14:14	05/09/18 18:19	1
2-Fluorobiphenyl	89		37 - 120	05/08/18 14:14	05/09/18 18:19	1
2-Fluorophenol (Surr)	48		10 - 120	05/08/18 14:14	05/09/18 18:19	1
Nitrobenzene-d5 (Surr)	67		26 - 120	05/08/18 14:14	05/09/18 18:19	1
Phenol-d5 (Surr)	31		11 - 120	05/08/18 14:14	05/09/18 18:19	1
p-Terphenyl-d14	114		64 - 127	05/08/18 14:14	05/09/18 18:19	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/12/18 23:35	1
1,2-Dichlorobenzene	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/12/18 23:35	1
1,3-Dichlorobenzene	<0.24		1.9	0.24	ug/L		05/09/18 14:20	05/12/18 23:35	1
1,4-Dichlorobenzene	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/12/18 23:35	1
1-Methylnaphthalene	<0.48		1.9	0.48	ug/L		05/09/18 14:20	05/12/18 23:35	1
bis(chloroisopropyl) ether	<0.29	^c	1.9	0.29	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,3,4,6-Tetrachlorophenol	<1.5		4.8	1.5	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,4,5-Trichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,4,6-Trichlorophenol	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,4-Dichlorophenol	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,4-Dinitrophenol	<7.1		19	7.1	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,4-Dinitrotoluene	<0.29		0.96	0.29	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,6-Dinitrotoluene	<0.12		0.96	0.12	ug/L		05/09/18 14:20	05/12/18 23:35	1
2-Chloronaphthalene	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/12/18 23:35	1
2-Chlorophenol	<0.77		4.8	0.77	ug/L		05/09/18 14:20	05/12/18 23:35	1
2-Methylnaphthalene	<0.13		1.9	0.13	ug/L		05/09/18 14:20	05/12/18 23:35	1
2-Methylphenol	<0.30		1.9	0.30	ug/L		05/09/18 14:20	05/12/18 23:35	1
2-Nitroaniline	<1.0	^c	4.8	1.0	ug/L		05/09/18 14:20	05/12/18 23:35	1
2-Nitrophenol	<2.1		9.6	2.1	ug/L		05/09/18 14:20	05/12/18 23:35	1
3-Nitroaniline	<2.2		9.6	2.2	ug/L		05/09/18 14:20	05/12/18 23:35	1
4,6-Dinitro-2-methylphenol	<4.7		19	4.7	ug/L		05/09/18 14:20	05/12/18 23:35	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	<0.88		4.8	0.88	ug/L		05/09/18 14:20	05/12/18 23:35	1
4-Chloro-3-methylphenol	<2.1		9.6	2.1	ug/L		05/09/18 14:20	05/12/18 23:35	1
4-Chloroaniline	<2.0		9.6	2.0	ug/L		05/09/18 14:20	05/12/18 23:35	1
4-Chlorophenyl phenyl ether	<0.78		4.8	0.78	ug/L		05/09/18 14:20	05/12/18 23:35	1
4-Nitroaniline	<3.8		9.6	3.8	ug/L		05/09/18 14:20	05/12/18 23:35	1
4-Nitrophenol	<2.3		19	2.3	ug/L		05/09/18 14:20	05/12/18 23:35	1
Acenaphthene	<0.35		0.96	0.35	ug/L		05/09/18 14:20	05/12/18 23:35	1
Acenaphthylene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/12/18 23:35	1
Anthracene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzo[a]pyrene	<0.054		0.19	0.054	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzo[b]fluoranthene	<0.056		0.19	0.056	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzo[g,h,i]perylene	<0.40		0.96	0.40	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzo[k]fluoranthene	<0.071		0.19	0.071	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzoic acid	<4.4	^c	19	4.4	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzyl alcohol	<2.9		19	2.9	ug/L		05/09/18 14:20	05/12/18 23:35	1
Bis(2-chloroethoxy)methane	<0.29		1.9	0.29	ug/L		05/09/18 14:20	05/12/18 23:35	1
Bis(2-chloroethyl)ether	<0.34		1.9	0.34	ug/L		05/09/18 14:20	05/12/18 23:35	1
Bis(2-ethylhexyl) phthalate	<2.3		9.6	2.3	ug/L		05/09/18 14:20	05/12/18 23:35	1
Butyl benzyl phthalate	<0.26		1.9	0.26	ug/L		05/09/18 14:20	05/12/18 23:35	1
Chrysene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/12/18 23:35	1
Dibenz(a,h)anthracene	<0.062		0.29	0.062	ug/L		05/09/18 14:20	05/12/18 23:35	1
Dibenzofuran	<0.34		1.9	0.34	ug/L		05/09/18 14:20	05/12/18 23:35	1
Diethyl phthalate	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/12/18 23:35	1
Dimethyl phthalate	<0.37		1.9	0.37	ug/L		05/09/18 14:20	05/12/18 23:35	1
Di-n-butyl phthalate	<0.77		4.8	0.77	ug/L		05/09/18 14:20	05/12/18 23:35	1
Di-n-octyl phthalate	<2.4		9.6	2.4	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,3,5,6-Tetrachlorophenol	<2.4		4.8	2.4	ug/L		05/09/18 14:20	05/12/18 23:35	1
Fluoranthene	<0.31		0.96	0.31	ug/L		05/09/18 14:20	05/12/18 23:35	1
Fluorene	<0.37		0.96	0.37	ug/L		05/09/18 14:20	05/12/18 23:35	1
Hexachlorobenzene	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/12/18 23:35	1
Hexachlorobutadiene	<1.1		4.8	1.1	ug/L		05/09/18 14:20	05/12/18 23:35	1
Hexachlorocyclopentadiene	<3.3		19	3.3	ug/L		05/09/18 14:20	05/12/18 23:35	1
Hexachloroethane	<0.93		4.8	0.93	ug/L		05/09/18 14:20	05/12/18 23:35	1
Indeno[1,2,3-cd]pyrene	<0.081		0.19	0.081	ug/L		05/09/18 14:20	05/12/18 23:35	1
Isophorone	<0.28		1.9	0.28	ug/L		05/09/18 14:20	05/12/18 23:35	1
Nitrobenzene	<0.43		0.96	0.43	ug/L		05/09/18 14:20	05/12/18 23:35	1
N-Nitrosodi-n-propylamine	<0.13		0.48	0.13	ug/L		05/09/18 14:20	05/12/18 23:35	1
N-Nitrosodiphenylamine	<0.33		1.9	0.33	ug/L		05/09/18 14:20	05/12/18 23:35	1
Phenol	<0.35	^c	4.8	0.35	ug/L		05/09/18 14:20	05/12/18 23:35	1
Pyrene	<0.46		0.96	0.46	ug/L		05/09/18 14:20	05/12/18 23:35	1
2,4-Dimethylphenol	<3.2		9.6	3.2	ug/L		05/09/18 14:20	05/12/18 23:35	1
Benzo[a]anthracene	<0.042		0.19	0.042	ug/L		05/09/18 14:20	05/12/18 23:35	1
Phenanthrene	<0.34		0.96	0.34	ug/L		05/09/18 14:20	05/12/18 23:35	1
3,3'-Dichlorobenzidine	<0.90		4.8	0.90	ug/L		05/09/18 14:20	05/12/18 23:35	1
3 & 4 Methylphenol	<0.42		1.9	0.42	ug/L		05/09/18 14:20	05/12/18 23:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	107		40 - 145	05/09/18 14:20	05/12/18 23:35	1
2-Fluorobiphenyl	110		34 - 110	05/09/18 14:20	05/12/18 23:35	1
2-Fluorophenol (Surr)	70		27 - 110	05/09/18 14:20	05/12/18 23:35	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	118		36 - 120	05/09/18 14:20	05/12/18 23:35	1
Phenol-d5 (Surr)	32		20 - 100	05/09/18 14:20	05/12/18 23:35	1
Terphenyl-d14 (Surr)	115		40 - 145	05/09/18 14:20	05/12/18 23:35	1

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Date Collected: 05/03/18 15:54

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 04:57	1
1,2,4-Trimethylbenzene	5.2		1.0	0.75	ug/L			05/12/18 04:57	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 04:57	1
Benzene	13		1.0	0.41	ug/L			05/12/18 04:57	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 04:57	1
Ethylbenzene	21		1.0	0.74	ug/L			05/12/18 04:57	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 04:57	1
m-Xylene & p-Xylene	2.5		2.0	0.66	ug/L			05/12/18 04:57	1
Naphthalene	1.5		1.0	0.43	ug/L			05/12/18 04:57	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 04:57	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 04:57	1
o-Xylene	13		1.0	0.76	ug/L			05/12/18 04:57	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 04:57	1
Toluene	1.3		1.0	0.51	ug/L			05/12/18 04:57	1
Xylenes, Total	16		2.0	0.66	ug/L			05/12/18 04:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		05/12/18 04:57	1
4-Bromofluorobenzene (Surr)	101		73 - 120		05/12/18 04:57	1
Dibromofluoromethane (Surr)	101		75 - 123		05/12/18 04:57	1
Toluene-d8 (Surr)	98		80 - 120		05/12/18 04:57	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		24 - 146	05/08/18 14:14	05/09/18 18:49	1
2-Fluorobiphenyl	93		37 - 120	05/08/18 14:14	05/09/18 18:49	1
2-Fluorophenol (Surr)	52		10 - 120	05/08/18 14:14	05/09/18 18:49	1
Nitrobenzene-d5 (Surr)	72		26 - 120	05/08/18 14:14	05/09/18 18:49	1
Phenol-d5 (Surr)	33		11 - 120	05/08/18 14:14	05/09/18 18:49	1
p-Terphenyl-d14	114		64 - 127	05/08/18 14:14	05/09/18 18:49	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:02	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/13/18 00:02	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		05/09/18 14:20	05/13/18 00:02	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/13/18 00:02	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Date Collected: 05/03/18 15:54

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.50		2.0	0.50	ug/L		05/09/18 14:20	05/13/18 00:02	1
bis(chloroisopropyl) ether	<0.30	^c	2.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,3,4,6-Tetrachlorophenol	<1.5		5.0	1.5	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,4,5-Trichlorophenol	<2.3		9.9	2.3	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,4-Dichlorophenol	<2.3		9.9	2.3	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,4-Dinitrophenol	<7.4		20	7.4	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,4-Dinitrotoluene	<0.30		0.99	0.30	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,6-Dinitrotoluene	<0.12		0.99	0.12	ug/L		05/09/18 14:20	05/13/18 00:02	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/13/18 00:02	1
2-Chlorophenol	<0.79		5.0	0.79	ug/L		05/09/18 14:20	05/13/18 00:02	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/09/18 14:20	05/13/18 00:02	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		05/09/18 14:20	05/13/18 00:02	1
2-Nitroaniline	<1.1	^c	5.0	1.1	ug/L		05/09/18 14:20	05/13/18 00:02	1
2-Nitrophenol	<2.1		9.9	2.1	ug/L		05/09/18 14:20	05/13/18 00:02	1
3-Nitroaniline	<2.3		9.9	2.3	ug/L		05/09/18 14:20	05/13/18 00:02	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		05/09/18 14:20	05/13/18 00:02	1
4-Bromophenyl phenyl ether	<0.90		5.0	0.90	ug/L		05/09/18 14:20	05/13/18 00:02	1
4-Chloro-3-methylphenol	<2.2		9.9	2.2	ug/L		05/09/18 14:20	05/13/18 00:02	1
4-Chloroaniline	<2.1		9.9	2.1	ug/L		05/09/18 14:20	05/13/18 00:02	1
4-Chlorophenyl phenyl ether	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/13/18 00:02	1
4-Nitroaniline	<3.9		9.9	3.9	ug/L		05/09/18 14:20	05/13/18 00:02	1
4-Nitrophenol	<2.3		20	2.3	ug/L		05/09/18 14:20	05/13/18 00:02	1
Acenaphthene	16		0.99	0.36	ug/L		05/09/18 14:20	05/13/18 00:02	1
Acenaphthylene	0.68 J		0.99	0.32	ug/L		05/09/18 14:20	05/13/18 00:02	1
Anthracene	<0.32		0.99	0.32	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzo[g,h,i]perylene	<0.42		0.99	0.42	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzo[k]fluoranthene	<0.073		0.20	0.073	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzoic acid	<4.5	^c	20	4.5	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzyl alcohol	<3.0		20	3.0	ug/L		05/09/18 14:20	05/13/18 00:02	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:02	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/13/18 00:02	1
Bis(2-ethylhexyl) phthalate	<2.4		9.9	2.4	ug/L		05/09/18 14:20	05/13/18 00:02	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/13/18 00:02	1
Chrysene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/13/18 00:02	1
Dibenz(a,h)anthracene	<0.063		0.30	0.063	ug/L		05/09/18 14:20	05/13/18 00:02	1
Dibenzofuran	1.5 J		2.0	0.35	ug/L		05/09/18 14:20	05/13/18 00:02	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/13/18 00:02	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		05/09/18 14:20	05/13/18 00:02	1
Di-n-butyl phthalate	<0.79		5.0	0.79	ug/L		05/09/18 14:20	05/13/18 00:02	1
Di-n-octyl phthalate	<2.4		9.9	2.4	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,3,5,6-Tetrachlorophenol	<2.5		5.0	2.5	ug/L		05/09/18 14:20	05/13/18 00:02	1
Fluoranthene	0.62 J		0.99	0.32	ug/L		05/09/18 14:20	05/13/18 00:02	1
Fluorene	2.0		0.99	0.38	ug/L		05/09/18 14:20	05/13/18 00:02	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/13/18 00:02	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/13/18 00:02	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		05/09/18 14:20	05/13/18 00:02	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Date Collected: 05/03/18 15:54

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	<0.96		5.0	0.96	ug/L		05/09/18 14:20	05/13/18 00:02	1
Indeno[1,2,3-cd]pyrene	<0.083		0.20	0.083	ug/L		05/09/18 14:20	05/13/18 00:02	1
Isophorone	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/13/18 00:02	1
Nitrobenzene	<0.45		0.99	0.45	ug/L		05/09/18 14:20	05/13/18 00:02	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/13/18 00:02	1
N-Nitrosodiphenylamine	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/13/18 00:02	1
Phenol	<0.36	^c	5.0	0.36	ug/L		05/09/18 14:20	05/13/18 00:02	1
Pyrene	0.59	J	0.99	0.48	ug/L		05/09/18 14:20	05/13/18 00:02	1
2,4-Dimethylphenol	<3.3		9.9	3.3	ug/L		05/09/18 14:20	05/13/18 00:02	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		05/09/18 14:20	05/13/18 00:02	1
Phenanthrene	<0.35		0.99	0.35	ug/L		05/09/18 14:20	05/13/18 00:02	1
3,3'-Dichlorobenzidine	<0.93		5.0	0.93	ug/L		05/09/18 14:20	05/13/18 00:02	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/13/18 00:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		40 - 145				05/09/18 14:20	05/13/18 00:02	1
2-Fluorobiphenyl	100		34 - 110				05/09/18 14:20	05/13/18 00:02	1
2-Fluorophenol (Surr)	68		27 - 110				05/09/18 14:20	05/13/18 00:02	1
Nitrobenzene-d5 (Surr)	112		36 - 120				05/09/18 14:20	05/13/18 00:02	1
Phenol-d5 (Surr)	40		20 - 100				05/09/18 14:20	05/13/18 00:02	1
Terphenyl-d14 (Surr)	100		40 - 145				05/09/18 14:20	05/13/18 00:02	1

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Date Collected: 05/03/18 13:28

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 05:24	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 05:24	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 05:24	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 05:24	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 05:24	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 05:24	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 05:24	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 05:24	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 05:24	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 05:24	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 05:24	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 05:24	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 05:24	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 05:24	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 05:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120					05/12/18 05:24	1
4-Bromofluorobenzene (Surr)	98		73 - 120					05/12/18 05:24	1
Dibromofluoromethane (Surr)	99		75 - 123					05/12/18 05:24	1
Toluene-d8 (Surr)	96		80 - 120					05/12/18 05:24	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Date Collected: 05/03/18 13:28

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		24 - 146				05/08/18 14:14	05/09/18 19:18	1
2-Fluorobiphenyl	91		37 - 120				05/08/18 14:14	05/09/18 19:18	1
2-Fluorophenol (Surr)	49		10 - 120				05/08/18 14:14	05/09/18 19:18	1
Nitrobenzene-d5 (Surr)	71		26 - 120				05/08/18 14:14	05/09/18 19:18	1
Phenol-d5 (Surr)	33		11 - 120				05/08/18 14:14	05/09/18 19:18	1
p-Terphenyl-d14	116		64 - 127				05/08/18 14:14	05/09/18 19:18	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:30	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/13/18 00:30	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		05/09/18 14:20	05/13/18 00:30	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/13/18 00:30	1
1-Methylnaphthalene	<0.50		2.0	0.50	ug/L		05/09/18 14:20	05/13/18 00:30	1
bis(chloroisopropyl) ether	<0.30	^c	2.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,3,4,6-Tetrachlorophenol	<1.5		5.0	1.5	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,4,5-Trichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,4-Dinitrophenol	<7.4		20	7.4	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,4-Dinitrotoluene	<0.30		1.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,6-Dinitrotoluene	<0.12		1.0	0.12	ug/L		05/09/18 14:20	05/13/18 00:30	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/13/18 00:30	1
2-Chlorophenol	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/13/18 00:30	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/09/18 14:20	05/13/18 00:30	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		05/09/18 14:20	05/13/18 00:30	1
2-Nitroaniline	<1.1	^c	5.0	1.1	ug/L		05/09/18 14:20	05/13/18 00:30	1
2-Nitrophenol	<2.1		10	2.1	ug/L		05/09/18 14:20	05/13/18 00:30	1
3-Nitroaniline	<2.3		10	2.3	ug/L		05/09/18 14:20	05/13/18 00:30	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		05/09/18 14:20	05/13/18 00:30	1
4-Bromophenyl phenyl ether	<0.91		5.0	0.91	ug/L		05/09/18 14:20	05/13/18 00:30	1
4-Chloro-3-methylphenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/13/18 00:30	1
4-Chloroaniline	<2.1		10	2.1	ug/L		05/09/18 14:20	05/13/18 00:30	1
4-Chlorophenyl phenyl ether	<0.81		5.0	0.81	ug/L		05/09/18 14:20	05/13/18 00:30	1
4-Nitroaniline	<3.9		10	3.9	ug/L		05/09/18 14:20	05/13/18 00:30	1
4-Nitrophenol	<2.3		20	2.3	ug/L		05/09/18 14:20	05/13/18 00:30	1
Acenaphthene	<0.36		1.0	0.36	ug/L		05/09/18 14:20	05/13/18 00:30	1
Acenaphthylene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/13/18 00:30	1
Anthracene	0.92	J	1.0	0.32	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzo[g,h,i]perylene	<0.42		1.0	0.42	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzo[k]fluoranthene	<0.074		0.20	0.074	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzoic acid	<4.6	^c	20	4.6	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzyl alcohol	<3.1		20	3.1	ug/L		05/09/18 14:20	05/13/18 00:30	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/13/18 00:30	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/13/18 00:30	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Date Collected: 05/03/18 13:28

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	<2.4		10	2.4	ug/L		05/09/18 14:20	05/13/18 00:30	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/13/18 00:30	1
Chrysene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/13/18 00:30	1
Dibenz(a,h)anthracene	<0.064		0.30	0.064	ug/L		05/09/18 14:20	05/13/18 00:30	1
Dibenzofuran	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/13/18 00:30	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/13/18 00:30	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		05/09/18 14:20	05/13/18 00:30	1
Di-n-butyl phthalate	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/13/18 00:30	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,3,5,6-Tetrachlorophenol	<2.5		5.0	2.5	ug/L		05/09/18 14:20	05/13/18 00:30	1
Fluoranthene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/13/18 00:30	1
Fluorene	<0.38		1.0	0.38	ug/L		05/09/18 14:20	05/13/18 00:30	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/13/18 00:30	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/13/18 00:30	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		05/09/18 14:20	05/13/18 00:30	1
Hexachloroethane	<0.97		5.0	0.97	ug/L		05/09/18 14:20	05/13/18 00:30	1
Indeno[1,2,3-cd]pyrene	<0.084		0.20	0.084	ug/L		05/09/18 14:20	05/13/18 00:30	1
Isophorone	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/13/18 00:30	1
Nitrobenzene	<0.45		1.0	0.45	ug/L		05/09/18 14:20	05/13/18 00:30	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/13/18 00:30	1
N-Nitrosodiphenylamine	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/13/18 00:30	1
Phenol	<0.36	^c	5.0	0.36	ug/L		05/09/18 14:20	05/13/18 00:30	1
Pyrene	<0.48		1.0	0.48	ug/L		05/09/18 14:20	05/13/18 00:30	1
2,4-Dimethylphenol	<3.3		10	3.3	ug/L		05/09/18 14:20	05/13/18 00:30	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		05/09/18 14:20	05/13/18 00:30	1
Phenanthrene	<0.35		1.0	0.35	ug/L		05/09/18 14:20	05/13/18 00:30	1
3,3'-Dichlorobenzidine	<0.94		5.0	0.94	ug/L		05/09/18 14:20	05/13/18 00:30	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/13/18 00:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	110		40 - 145	05/09/18 14:20	05/13/18 00:30	1
2-Fluorobiphenyl	113	X	34 - 110	05/09/18 14:20	05/13/18 00:30	1
2-Fluorophenol (Surr)	72		27 - 110	05/09/18 14:20	05/13/18 00:30	1
Nitrobenzene-d5 (Surr)	124	X	36 - 120	05/09/18 14:20	05/13/18 00:30	1
Phenol-d5 (Surr)	45		20 - 100	05/09/18 14:20	05/13/18 00:30	1
Terphenyl-d14 (Surr)	111		40 - 145	05/09/18 14:20	05/13/18 00:30	1

Client Sample ID: SUPE-TB-02-050318

Lab Sample ID: 480-135500-13

Date Collected: 05/03/18 00:00

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 01:21	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 01:21	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 01:21	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 01:21	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 01:21	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 01:21	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 01:21	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-TB-02-050318

Lab Sample ID: 480-135500-13

Date Collected: 05/03/18 00:00

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 01:21	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 01:21	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 01:21	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 01:21	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 01:21	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 01:21	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 01:21	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 01:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		77 - 120		05/12/18 01:21	1
4-Bromofluorobenzene (Surr)	107		73 - 120		05/12/18 01:21	1
Dibromofluoromethane (Surr)	103		75 - 123		05/12/18 01:21	1
Toluene-d8 (Surr)	99		80 - 120		05/12/18 01:21	1

Client Sample ID: SUPE-W-18D-050318

Lab Sample ID: 480-135500-14

Date Collected: 05/03/18 09:29

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.057		0.50	0.057	ug/L		05/08/18 14:14	05/09/18 19:47	1
1,3-Dichlorobenzene	<0.082		0.50	0.082	ug/L		05/08/18 14:14	05/09/18 19:47	1
1,4-Dichlorobenzene	<0.068		0.50	0.068	ug/L		05/08/18 14:14	05/09/18 19:47	1
1-Methylnaphthalene	<0.12		0.50	0.12	ug/L		05/08/18 14:14	05/09/18 19:47	1
1,2,4-Trichlorobenzene	<0.092		0.50	0.092	ug/L		05/08/18 14:14	05/09/18 19:47	1
2-Chloronaphthalene	<0.066		0.50	0.066	ug/L		05/08/18 14:14	05/09/18 19:47	1
2-Chlorophenol	<0.066		5.0	0.066	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,4-Dichlorophenol	0.17	J	0.50	0.056	ug/L		05/08/18 14:14	05/09/18 19:47	1
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,4-Dimethylphenol	<0.30		1.0	0.30	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,4-Dinitrophenol	<0.60		5.0	0.60	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,4-Dinitrotoluene	<0.034		5.0	0.034	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,6-Dinitrotoluene	<0.091		5.0	0.091	ug/L		05/08/18 14:14	05/09/18 19:47	1
2-Methylnaphthalene	<0.052		0.50	0.052	ug/L		05/08/18 14:14	05/09/18 19:47	1
2-Methylphenol	<0.14		1.0	0.14	ug/L		05/08/18 14:14	05/09/18 19:47	1
Methylphenol, 3 & 4	<0.094		1.0	0.094	ug/L		05/08/18 14:14	05/09/18 19:47	1
2-Nitroaniline	<0.095		5.0	0.095	ug/L		05/08/18 14:14	05/09/18 19:47	1
3-Nitroaniline	<0.13	^c	5.0	0.13	ug/L		05/08/18 14:14	05/09/18 19:47	1
4-Nitroaniline	<0.025	^c	5.0	0.025	ug/L		05/08/18 14:14	05/09/18 19:47	1
2-Nitrophenol	<0.062		5.0	0.062	ug/L		05/08/18 14:14	05/09/18 19:47	1
4-Nitrophenol	<0.39		5.0	0.39	ug/L		05/08/18 14:14	05/09/18 19:47	1
bis(chloroisopropyl) ether	<0.086		5.0	0.086	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,3,4,6-Tetrachlorophenol	<0.39		5.0	0.39	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,4,5-Trichlorophenol	0.17	J	5.0	0.065	ug/L		05/08/18 14:14	05/09/18 19:47	1
2,4,6-Trichlorophenol	<0.072		5.0	0.072	ug/L		05/08/18 14:14	05/09/18 19:47	1
4-Chloro-3-methylphenol	<0.053		5.0	0.053	ug/L		05/08/18 14:14	05/09/18 19:47	1
4-Chlorophenyl phenyl ether	<0.046		5.0	0.046	ug/L		05/08/18 14:14	05/09/18 19:47	1
4,6-Dinitro-2-methylphenol	<0.74		5.0	0.74	ug/L		05/08/18 14:14	05/09/18 19:47	1
Acenaphthene	<0.036		0.50	0.036	ug/L		05/08/18 14:14	05/09/18 19:47	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-18D-050318

Lab Sample ID: 480-135500-14

Date Collected: 05/03/18 09:29

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	<0.056		0.30	0.056	ug/L		05/08/18 14:14	05/09/18 19:47	1
Anthracene	<0.034		0.50	0.034	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzo[a]anthracene	<0.034		0.30	0.034	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzo[b]fluoranthene	<0.063		0.30	0.063	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzo[k]fluoranthene	<0.070		0.30	0.070	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzoic acid	<5.0	*	5.0	5.0	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzo[g,h,i]perylene	<0.058		0.50	0.058	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzo[a]pyrene	<0.13		0.18	0.13	ug/L		05/08/18 14:14	05/09/18 19:47	1
Bis(2-chloroethoxy)methane	<0.064		5.0	0.064	ug/L		05/08/18 14:14	05/09/18 19:47	1
Bis(2-chloroethyl)ether	<0.072		5.0	0.072	ug/L		05/08/18 14:14	05/09/18 19:47	1
Bis(2-ethylhexyl) phthalate	0.67	J	5.0	0.42	ug/L		05/08/18 14:14	05/09/18 19:47	1
4-Bromophenyl phenyl ether	<0.091		5.0	0.091	ug/L		05/08/18 14:14	05/09/18 19:47	1
Butyl benzyl phthalate	<0.16		3.0	0.16	ug/L		05/08/18 14:14	05/09/18 19:47	1
4-Chloroaniline	<0.13		5.0	0.13	ug/L		05/08/18 14:14	05/09/18 19:47	1
Chrysene	<0.074		0.50	0.074	ug/L		05/08/18 14:14	05/09/18 19:47	1
Dibenz(a,h)anthracene	<0.070		0.50	0.070	ug/L		05/08/18 14:14	05/09/18 19:47	1
Dibenzofuran	<0.060		5.0	0.060	ug/L		05/08/18 14:14	05/09/18 19:47	1
Di-n-butyl phthalate	<0.35		2.0	0.35	ug/L		05/08/18 14:14	05/09/18 19:47	1
Di-n-octyl phthalate	<0.20		5.0	0.20	ug/L		05/08/18 14:14	05/09/18 19:47	1
Diethyl phthalate	<0.064		0.50	0.064	ug/L		05/08/18 14:14	05/09/18 19:47	1
Dimethyl phthalate	<0.057		0.50	0.057	ug/L		05/08/18 14:14	05/09/18 19:47	1
Fluoranthene	<0.080		0.50	0.080	ug/L		05/08/18 14:14	05/09/18 19:47	1
Fluorene	<0.058		0.50	0.058	ug/L		05/08/18 14:14	05/09/18 19:47	1
Hexachlorobenzene	<0.22		0.50	0.22	ug/L		05/08/18 14:14	05/09/18 19:47	1
Hexachlorobutadiene	<0.10	^c	1.0	0.10	ug/L		05/08/18 14:14	05/09/18 19:47	1
Hexachlorocyclopentadiene	<0.091		1.0	0.091	ug/L		05/08/18 14:14	05/09/18 19:47	1
Hexachloroethane	<0.088		5.0	0.088	ug/L		05/08/18 14:14	05/09/18 19:47	1
Indeno[1,2,3-cd]pyrene	<0.11		0.50	0.11	ug/L		05/08/18 14:14	05/09/18 19:47	1
Isophorone	<0.051		0.50	0.051	ug/L		05/08/18 14:14	05/09/18 19:47	1
Naphthalene	<0.064		1.0	0.064	ug/L		05/08/18 14:14	05/09/18 19:47	1
Nitrobenzene	<0.065		0.50	0.065	ug/L		05/08/18 14:14	05/09/18 19:47	1
N-Nitrosodiphenylamine	<0.070		5.0	0.070	ug/L		05/08/18 14:14	05/09/18 19:47	1
N-Nitrosodi-n-propylamine	<0.060		5.0	0.060	ug/L		05/08/18 14:14	05/09/18 19:47	1
Pentachlorophenol	<0.34	^c	1.0	0.34	ug/L		05/08/18 14:14	05/09/18 19:47	1
Phenanthrene	<0.062		0.20	0.062	ug/L		05/08/18 14:14	05/09/18 19:47	1
Phenol	<0.10		1.0	0.10	ug/L		05/08/18 14:14	05/09/18 19:47	1
Pyrene	<0.076		0.50	0.076	ug/L		05/08/18 14:14	05/09/18 19:47	1
Benzyl alcohol	<0.19	^c	5.0	0.19	ug/L		05/08/18 14:14	05/09/18 19:47	1
3,3'-Dichlorobenzidine	<0.22		5.0	0.22	ug/L		05/08/18 14:14	05/09/18 19:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		24 - 146	05/08/18 14:14	05/09/18 19:47	1
2-Fluorobiphenyl	83		37 - 120	05/08/18 14:14	05/09/18 19:47	1
2-Fluorophenol (Surr)	43		10 - 120	05/08/18 14:14	05/09/18 19:47	1
Nitrobenzene-d5 (Surr)	64		26 - 120	05/08/18 14:14	05/09/18 19:47	1
Phenol-d5 (Surr)	29		11 - 120	05/08/18 14:14	05/09/18 19:47	1
p-Terphenyl-d14	109		64 - 127	05/08/18 14:14	05/09/18 19:47	1
2-Fluorobiphenyl	83		37 - 120	05/08/18 14:14	05/09/18 19:47	1
2-Fluorophenol (Surr)	43		10 - 120	05/08/18 14:14	05/09/18 19:47	1
2,4,6-Tribromophenol (Surr)	96		24 - 146	05/08/18 14:14	05/09/18 19:47	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-18D-050318

Lab Sample ID: 480-135500-14

Date Collected: 05/03/18 09:29

Matrix: Water

Date Received: 05/05/18 09:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	64		26 - 120	05/08/18 14:14	05/09/18 19:47	1
Phenol-d5 (Surr)	29		11 - 120	05/08/18 14:14	05/09/18 19:47	1

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.29	H	1.9	0.29	ug/L		05/11/18 15:25	05/12/18 01:40	1
1,2-Dichlorobenzene	<0.28	H	1.9	0.28	ug/L		05/11/18 15:25	05/12/18 01:40	1
1,3-Dichlorobenzene	<0.24	H	1.9	0.24	ug/L		05/11/18 15:25	05/12/18 01:40	1
1,4-Dichlorobenzene	<0.26	H	1.9	0.26	ug/L		05/11/18 15:25	05/12/18 01:40	1
1-Methylnaphthalene	<0.48	H	1.9	0.48	ug/L		05/11/18 15:25	05/12/18 01:40	1
bis(chloroisopropyl) ether	<0.29	H ^c	1.9	0.29	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,3,4,6-Tetrachlorophenol	<1.4	H	4.8	1.4	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,4,5-Trichlorophenol	<2.2	H	9.6	2.2	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,4,6-Trichlorophenol	<1.1	H	4.8	1.1	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,4-Dichlorophenol	<2.2	H	9.6	2.2	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,4-Dinitrophenol	<7.1	H ^c	19	7.1	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,4-Dinitrotoluene	<0.29	H	0.96	0.29	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,6-Dinitrotoluene	<0.12	H	0.96	0.12	ug/L		05/11/18 15:25	05/12/18 01:40	1
2-Chloronaphthalene	<0.33	H	1.9	0.33	ug/L		05/11/18 15:25	05/12/18 01:40	1
2-Chlorophenol	<0.77	H	4.8	0.77	ug/L		05/11/18 15:25	05/12/18 01:40	1
2-Methylnaphthalene	<0.12	H	1.9	0.12	ug/L		05/11/18 15:25	05/12/18 01:40	1
2-Methylphenol	<0.30	H	1.9	0.30	ug/L		05/11/18 15:25	05/12/18 01:40	1
2-Nitroaniline	<1.0	H	4.8	1.0	ug/L		05/11/18 15:25	05/12/18 01:40	1
2-Nitrophenol	<2.1	H	9.6	2.1	ug/L		05/11/18 15:25	05/12/18 01:40	1
3-Nitroaniline	<2.2	H	9.6	2.2	ug/L		05/11/18 15:25	05/12/18 01:40	1
4,6-Dinitro-2-methylphenol	<4.7	H	19	4.7	ug/L		05/11/18 15:25	05/12/18 01:40	1
4-Bromophenyl phenyl ether	<0.87	H	4.8	0.87	ug/L		05/11/18 15:25	05/12/18 01:40	1
4-Chloro-3-methylphenol	<2.1	H	9.6	2.1	ug/L		05/11/18 15:25	05/12/18 01:40	1
4-Chloroaniline	<2.0	H	9.6	2.0	ug/L		05/11/18 15:25	05/12/18 01:40	1
4-Chlorophenyl phenyl ether	<0.78	H	4.8	0.78	ug/L		05/11/18 15:25	05/12/18 01:40	1
4-Nitroaniline	<3.8	H	9.6	3.8	ug/L		05/11/18 15:25	05/12/18 01:40	1
4-Nitrophenol	<2.2	H ^c	19	2.2	ug/L		05/11/18 15:25	05/12/18 01:40	1
Acenaphthene	<0.35	H	0.96	0.35	ug/L		05/11/18 15:25	05/12/18 01:40	1
Acenaphthylene	<0.31	H	0.96	0.31	ug/L		05/11/18 15:25	05/12/18 01:40	1
Anthracene	<0.31	H	0.96	0.31	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzo[a]pyrene	<0.054	H	0.19	0.054	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzo[b]fluoranthene	<0.056	H	0.19	0.056	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzo[g,h,i]perylene	<0.40	H	0.96	0.40	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzo[k]fluoranthene	<0.071	H	0.19	0.071	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzoic acid	<4.4	H	19	4.4	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzyl alcohol	<2.9	H	19	2.9	ug/L		05/11/18 15:25	05/12/18 01:40	1
Bis(2-chloroethoxy)methane	<0.29	H	1.9	0.29	ug/L		05/11/18 15:25	05/12/18 01:40	1
Bis(2-chloroethyl)ether	<0.34	H	1.9	0.34	ug/L		05/11/18 15:25	05/12/18 01:40	1
Bis(2-ethylhexyl) phthalate	<2.3	H	9.6	2.3	ug/L		05/11/18 15:25	05/12/18 01:40	1
Butyl benzyl phthalate	<0.26	H	1.9	0.26	ug/L		05/11/18 15:25	05/12/18 01:40	1
Chrysene	<0.13	H *	0.48	0.13	ug/L		05/11/18 15:25	05/12/18 01:40	1
Dibenz(a,h)anthracene	<0.061	H	0.29	0.061	ug/L		05/11/18 15:25	05/12/18 01:40	1
Dibenzofuran	<0.34	H	1.9	0.34	ug/L		05/11/18 15:25	05/12/18 01:40	1
Diethyl phthalate	<0.42	H	1.9	0.42	ug/L		05/11/18 15:25	05/12/18 01:40	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-18D-050318

Lab Sample ID: 480-135500-14

Date Collected: 05/03/18 09:29

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	<0.36	H	1.9	0.36	ug/L		05/11/18 15:25	05/12/18 01:40	1
Di-n-butyl phthalate	1.6	J H	4.8	0.77	ug/L		05/11/18 15:25	05/12/18 01:40	1
Di-n-octyl phthalate	<2.4	H	9.6	2.4	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,3,5,6-Tetrachlorophenol	<2.4	H	4.8	2.4	ug/L		05/11/18 15:25	05/12/18 01:40	1
Fluoranthene	<0.31	H	0.96	0.31	ug/L		05/11/18 15:25	05/12/18 01:40	1
Fluorene	<0.36	H	0.96	0.36	ug/L		05/11/18 15:25	05/12/18 01:40	1
Hexachlorobenzene	<0.13	H	0.48	0.13	ug/L		05/11/18 15:25	05/12/18 01:40	1
Hexachlorobutadiene	<1.1	H	4.8	1.1	ug/L		05/11/18 15:25	05/12/18 01:40	1
Hexachlorocyclopentadiene	<3.3	H ^c	19	3.3	ug/L		05/11/18 15:25	05/12/18 01:40	1
Hexachloroethane	<0.93	H	4.8	0.93	ug/L		05/11/18 15:25	05/12/18 01:40	1
Indeno[1,2,3-cd]pyrene	<0.081	H	0.19	0.081	ug/L		05/11/18 15:25	05/12/18 01:40	1
Isophorone	<0.28	H *	1.9	0.28	ug/L		05/11/18 15:25	05/12/18 01:40	1
Naphthalene	<0.29	H	0.96	0.29	ug/L		05/11/18 15:25	05/12/18 01:40	1
Nitrobenzene	<0.43	H	0.96	0.43	ug/L		05/11/18 15:25	05/12/18 01:40	1
N-Nitrosodi-n-propylamine	<0.13	H	0.48	0.13	ug/L		05/11/18 15:25	05/12/18 01:40	1
N-Nitrosodiphenylamine	<0.33	H	1.9	0.33	ug/L		05/11/18 15:25	05/12/18 01:40	1
Phenol	<0.35	H	4.8	0.35	ug/L		05/11/18 15:25	05/12/18 01:40	1
Pyrene	<0.46	H	0.96	0.46	ug/L		05/11/18 15:25	05/12/18 01:40	1
2,4-Dimethylphenol	<3.2	H	9.6	3.2	ug/L		05/11/18 15:25	05/12/18 01:40	1
Benzo[a]anthracene	<0.042	H	0.19	0.042	ug/L		05/11/18 15:25	05/12/18 01:40	1
Phenanthrene	<0.34	H	0.96	0.34	ug/L		05/11/18 15:25	05/12/18 01:40	1
3,3'-Dichlorobenzidine	<0.90	H	4.8	0.90	ug/L		05/11/18 15:25	05/12/18 01:40	1
3 & 4 Methylphenol	<0.42	H	1.9	0.42	ug/L		05/11/18 15:25	05/12/18 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		40 - 145	05/11/18 15:25	05/12/18 01:40	1
2-Fluorobiphenyl	80	^c	34 - 110	05/11/18 15:25	05/12/18 01:40	1
2-Fluorophenol (Surr)	48		27 - 110	05/11/18 15:25	05/12/18 01:40	1
Nitrobenzene-d5 (Surr)	71		36 - 120	05/11/18 15:25	05/12/18 01:40	1
Phenol-d5 (Surr)	26		20 - 100	05/11/18 15:25	05/12/18 01:40	1
Terphenyl-d14 (Surr)	108		40 - 145	05/11/18 15:25	05/12/18 01:40	1

Client Sample ID: SUPE-W-TB-01-050218

Lab Sample ID: 480-135500-15

Date Collected: 05/02/18 00:00

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/11/18 08:26	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/11/18 08:26	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/11/18 08:26	1
Benzene	<0.41		1.0	0.41	ug/L			05/11/18 08:26	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/11/18 08:26	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/11/18 08:26	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/11/18 08:26	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/11/18 08:26	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/11/18 08:26	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/11/18 08:26	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/11/18 08:26	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/11/18 08:26	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-TB-01-050218

Lab Sample ID: 480-135500-15

Date Collected: 05/02/18 00:00

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	<0.73		1.0	0.73	ug/L			05/11/18 08:26	1
Toluene	<0.51		1.0	0.51	ug/L			05/11/18 08:26	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/11/18 08:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120					05/11/18 08:26	1
4-Bromofluorobenzene (Surr)	88		73 - 120					05/11/18 08:26	1
Dibromofluoromethane (Surr)	94		75 - 123					05/11/18 08:26	1
Toluene-d8 (Surr)	93		80 - 120					05/11/18 08:26	1



Surrogate Summary

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

TestAmerica Job ID: 480-135500-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (77-120)	BFB (73-120)	DBFM (75-123)	TOL (80-120)
480-135500-1	SUPE-W-06A-050218	88	94	96	83
480-135500-2	SUPE-EB-01-050218	94	95	98	85
480-135500-3	SUPE-W-06C-050318	100	103	102	101
480-135500-3 MS	SUPE-W-06C-050318	99	102	103	100
480-135500-3 MSD	SUPE-W-06C-050318	96	103	98	98
480-135500-4	SUPE-W-12A-050318	98	101	101	100
480-135500-5	SUPE-W-12CR-050318	98	102	100	97
480-135500-6	SUPE-EB-02-050318	98	102	99	98
480-135500-7	SUPE-W-30A-050318	103	99	105	97
480-135500-8	SUPE-W-30C-050318	91	95	100	86
480-135500-9	SUPE-W-99-050318	102	105	102	99
480-135500-10	SUPE-W-28C-050318	98	104	100	99
480-135500-11	SUPE-W-10AR2-050318	98	101	101	98
480-135500-12	SUPE-W-04AR2-050318	97	98	99	96
480-135500-13	SUPE-TB-02-050318	100	107	103	99
480-135500-15	SUPE-W-TB-01-050218	93	88	94	93
LCS 480-413737/5	Lab Control Sample	94	108	105	97
LCS 480-413745/5	Lab Control Sample	86	95	87	97
LCS 480-413988/5	Lab Control Sample	92	105	97	103
MB 480-413737/8	Method Blank	95	97	104	88
MB 480-413745/7	Method Blank	91	93	89	94
MB 480-413988/7	Method Blank	96	100	99	99

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-135500-1	SUPE-W-06A-050218	109	82 ^c	66	83	36	100
480-135500-2	SUPE-EB-01-050218	101	73 ^c	68	76	38	99
480-135500-3	SUPE-W-06C-050318	110	80 ^c	66	75	36	98
480-135500-3 MS	SUPE-W-06C-050318	118	81	71	87	44	87
480-135500-3 MSD	SUPE-W-06C-050318	108	70	63	75	38	74
480-135500-4	SUPE-W-12A-050318	98	76 ^c	49	74	27	82
480-135500-5	SUPE-W-12CR-050318	83	57 ^c	43	55	21	67
480-135500-6	SUPE-EB-02-050318	96	103	71	109	38	110
480-135500-7	SUPE-W-30A-050318	103	98	75	109	45	82
480-135500-8	SUPE-W-30C-050318	101	102	63	111	33	106
480-135500-9	SUPE-W-99-050318	119	121 X	84	123 X	28	122
480-135500-10	SUPE-W-28C-050318	107	110	70	118	32	115
480-135500-11	SUPE-W-10AR2-050318	101	100	68	112	40	100
480-135500-12	SUPE-W-04AR2-050318	110	113 X	72	124 X	45	111

TestAmerica Buffalo

Surrogate Summary

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

TestAmerica Job ID: 480-135500-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-145)	FBP (34-110)	2FP (27-110)	NBZ (36-120)	PHL (20-100)	TPHL (40-145)
480-135500-14	SUPE-W-18D-050318	100	80 ^c	48	71	26	108
LCS 500-431418/2-A	Lab Control Sample	114	76	76	87	50	92
LCS 500-431815/2-A	Lab Control Sample	135	95	92	104	62	114
MB 500-431418/1-A	Method Blank	100	77	74	80	46	103
MB 500-431815/1-A	Method Blank	110	94	77	89	46	131

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)							
		TBP (24-146)	TBP (24-146)	FBP (37-120)	FBP (37-120)	2FP (10-120)	2FP (10-120)	NBZ (26-120)	NBZ (26-120)
480-135500-1	SUPE-W-06A-050218	90	90	87	87	47	47	69	69
480-135500-2	SUPE-EB-01-050218	83	83	80	80	44	44	62	62
480-135500-3	SUPE-W-06C-050318	92	92	93	93	51	51	74	74
480-135500-3 MS	SUPE-W-06C-050318	96	96	98	98	56	56	92	92
480-135500-3 MSD	SUPE-W-06C-050318	92	92	88	88	50	50	75	75
480-135500-4	SUPE-W-12A-050318	81	81	80	80	42	42	63	63
480-135500-5	SUPE-W-12CR-050318	94	94	83	83	46	46	65	65
480-135500-6	SUPE-EB-02-050318	81	81	91	91	51	51	75	75
480-135500-7	SUPE-W-30A-050318	83	83	74	74	42	42	59	59
480-135500-8	SUPE-W-30C-050318	91	91	91	91	45	45	67	67
480-135500-9	SUPE-W-99-050318	88	88	92	92	48	48	72	72
480-135500-10	SUPE-W-28C-050318	90	90	89	89	48	48	67	67
480-135500-11	SUPE-W-10AR2-050318	100	100	93	93	52	52	72	72
480-135500-12	SUPE-W-04AR2-050318	98	98	91	91	49	49	71	71
480-135500-14	SUPE-W-18D-050318	96	96	83	83	43	43	64	64
LCS 480-413163/2-A	Lab Control Sample	97	97	97	97	55	55	79	79
MB 480-413163/1-A	Method Blank	95	95	100	100	56	56	85	85

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		PHL (11-120)	PHL (11-120)	TPHd14 (64-127)
480-135500-1	SUPE-W-06A-050218	32	32	115
480-135500-2	SUPE-EB-01-050218	31	31	112
480-135500-3	SUPE-W-06C-050318	35	35	95
480-135500-3 MS	SUPE-W-06C-050318	37	37	95
480-135500-3 MSD	SUPE-W-06C-050318	34	34	90
480-135500-4	SUPE-W-12A-050318	28	28	75
480-135500-5	SUPE-W-12CR-050318	30	30	112
480-135500-6	SUPE-EB-02-050318	35	35	113
480-135500-7	SUPE-W-30A-050318	27	27	77

TestAmerica Buffalo

Surrogate Summary

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

TestAmerica Job ID: 480-135500-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		PHL (11-120)	PHL (11-120)	TPHd14 (64-127)
480-135500-8	SUPE-W-30C-050318	31	31	114
480-135500-9	SUPE-W-99-050318	31	31	115
480-135500-10	SUPE-W-28C-050318	31	31	114
480-135500-11	SUPE-W-10AR2-050318	33	33	114
480-135500-12	SUPE-W-04AR2-050318	33	33	116
480-135500-14	SUPE-W-18D-050318	29	29	109
LCS 480-413163/2-A	Lab Control Sample	37	37	111
MB 480-413163/1-A	Method Blank	36	36	118

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: MB 480-413737/8

Matrix: Water

Analysis Batch: 413737

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/10/18 21:10	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/10/18 21:10	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/10/18 21:10	1
Benzene	<0.41		1.0	0.41	ug/L			05/10/18 21:10	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/10/18 21:10	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/10/18 21:10	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/10/18 21:10	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/10/18 21:10	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/10/18 21:10	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/10/18 21:10	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/10/18 21:10	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/10/18 21:10	1
Styrene	<0.73		1.0	0.73	ug/L			05/10/18 21:10	1
Toluene	<0.51		1.0	0.51	ug/L			05/10/18 21:10	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/10/18 21:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		77 - 120		05/10/18 21:10	1
4-Bromofluorobenzene (Surr)	97		73 - 120		05/10/18 21:10	1
Dibromofluoromethane (Surr)	104		75 - 123		05/10/18 21:10	1
Toluene-d8 (Surr)	88		80 - 120		05/10/18 21:10	1

Lab Sample ID: LCS 480-413737/5

Matrix: Water

Analysis Batch: 413737

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	26.4		ug/L		106	73 - 126
1,2,4-Trimethylbenzene	25.0	23.6		ug/L		94	76 - 121
1,3,5-Trimethylbenzene	25.0	23.6		ug/L		94	77 - 121
Benzene	25.0	27.3		ug/L		109	71 - 124
Chloromethane	25.0	24.8		ug/L		99	68 - 124
Ethylbenzene	25.0	25.4		ug/L		102	77 - 123
Methyl tert-butyl ether	25.0	25.6		ug/L		102	77 - 120
m-Xylene & p-Xylene	25.0	26.6		ug/L		106	76 - 122
Naphthalene	25.0	23.5		ug/L		94	66 - 125
n-Butylbenzene	25.0	23.1		ug/L		92	71 - 128
N-Propylbenzene	25.0	22.8		ug/L		91	75 - 127
o-Xylene	25.0	25.9		ug/L		104	76 - 122
Styrene	25.0	26.2		ug/L		105	80 - 120
Toluene	25.0	26.2		ug/L		105	80 - 122
Xylenes, Total	50.0	52.5		ug/L		105	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	105		75 - 123

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 480-413737/5
Matrix: Water
Analysis Batch: 413737

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120

Lab Sample ID: MB 480-413745/7
Matrix: Water
Analysis Batch: 413745

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/10/18 23:03	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/10/18 23:03	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/10/18 23:03	1
Benzene	<0.41		1.0	0.41	ug/L			05/10/18 23:03	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/10/18 23:03	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/10/18 23:03	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/10/18 23:03	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/10/18 23:03	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/10/18 23:03	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/10/18 23:03	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/10/18 23:03	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/10/18 23:03	1
Styrene	<0.73		1.0	0.73	ug/L			05/10/18 23:03	1
Toluene	<0.51		1.0	0.51	ug/L			05/10/18 23:03	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/10/18 23:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		77 - 120		05/10/18 23:03	1
4-Bromofluorobenzene (Surr)	93		73 - 120		05/10/18 23:03	1
Dibromofluoromethane (Surr)	89		75 - 123		05/10/18 23:03	1
Toluene-d8 (Surr)	94		80 - 120		05/10/18 23:03	1

Lab Sample ID: LCS 480-413745/5
Matrix: Water
Analysis Batch: 413745

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	23.3		ug/L		93	73 - 126
1,2,4-Trimethylbenzene	25.0	26.0		ug/L		104	76 - 121
1,3,5-Trimethylbenzene	25.0	25.5		ug/L		102	77 - 121
Benzene	25.0	23.1		ug/L		92	71 - 124
Chloromethane	25.0	20.8		ug/L		83	68 - 124
Ethylbenzene	25.0	24.9		ug/L		100	77 - 123
Methyl tert-butyl ether	25.0	24.3		ug/L		97	77 - 120
m-Xylene & p-Xylene	25.0	25.1		ug/L		100	76 - 122
Naphthalene	25.0	26.3		ug/L		105	66 - 125
n-Butylbenzene	25.0	25.5		ug/L		102	71 - 128
N-Propylbenzene	25.0	25.5		ug/L		102	75 - 127
o-Xylene	25.0	25.1		ug/L		100	76 - 122
Styrene	25.0	25.9		ug/L		103	80 - 120
Toluene	25.0	25.4		ug/L		101	80 - 122

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QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 480-413745/5
Matrix: Water
Analysis Batch: 413745

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Xylenes, Total	50.0	50.2		ug/L		100	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		77 - 120
4-Bromofluorobenzene (Surr)	95		73 - 120
Dibromofluoromethane (Surr)	87		75 - 123
Toluene-d8 (Surr)	97		80 - 120

Lab Sample ID: MB 480-413988/7
Matrix: Water
Analysis Batch: 413988

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.82		1.0	0.82	ug/L			05/12/18 00:33	1
1,2,4-Trimethylbenzene	<0.75		1.0	0.75	ug/L			05/12/18 00:33	1
1,3,5-Trimethylbenzene	<0.77		1.0	0.77	ug/L			05/12/18 00:33	1
Benzene	<0.41		1.0	0.41	ug/L			05/12/18 00:33	1
Chloromethane	<0.35		1.0	0.35	ug/L			05/12/18 00:33	1
Ethylbenzene	<0.74		1.0	0.74	ug/L			05/12/18 00:33	1
Methyl tert-butyl ether	<0.16		1.0	0.16	ug/L			05/12/18 00:33	1
m-Xylene & p-Xylene	<0.66		2.0	0.66	ug/L			05/12/18 00:33	1
Naphthalene	<0.43		1.0	0.43	ug/L			05/12/18 00:33	1
n-Butylbenzene	<0.64		1.0	0.64	ug/L			05/12/18 00:33	1
N-Propylbenzene	<0.69		1.0	0.69	ug/L			05/12/18 00:33	1
o-Xylene	<0.76		1.0	0.76	ug/L			05/12/18 00:33	1
Styrene	<0.73		1.0	0.73	ug/L			05/12/18 00:33	1
Toluene	<0.51		1.0	0.51	ug/L			05/12/18 00:33	1
Xylenes, Total	<0.66		2.0	0.66	ug/L			05/12/18 00:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		77 - 120		05/12/18 00:33	1
4-Bromofluorobenzene (Surr)	100		73 - 120		05/12/18 00:33	1
Dibromofluoromethane (Surr)	99		75 - 123		05/12/18 00:33	1
Toluene-d8 (Surr)	99		80 - 120		05/12/18 00:33	1

Lab Sample ID: LCS 480-413988/5
Matrix: Water
Analysis Batch: 413988

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	24.1		ug/L		96	73 - 126
1,2,4-Trimethylbenzene	25.0	24.4		ug/L		98	76 - 121
1,3,5-Trimethylbenzene	25.0	24.8		ug/L		99	77 - 121
Benzene	25.0	23.8		ug/L		95	71 - 124
Chloromethane	25.0	18.9		ug/L		76	68 - 124
Ethylbenzene	25.0	23.6		ug/L		94	77 - 123
Methyl tert-butyl ether	25.0	23.0		ug/L		92	77 - 120
m-Xylene & p-Xylene	25.0	24.0		ug/L		96	76 - 122

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 480-413988/5
Matrix: Water
Analysis Batch: 413988

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	25.0	20.9		ug/L		83	66 - 125
n-Butylbenzene	25.0	23.2		ug/L		93	71 - 128
N-Propylbenzene	25.0	24.5		ug/L		98	75 - 127
o-Xylene	25.0	23.9		ug/L		96	76 - 122
Styrene	25.0	23.8		ug/L		95	80 - 120
Toluene	25.0	24.1		ug/L		97	80 - 122
Xylenes, Total	50.0	47.9		ug/L		96	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		77 - 120
4-Bromofluorobenzene (Surr)	105		73 - 120
Dibromofluoromethane (Surr)	97		75 - 123
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: 480-135500-3 MS
Matrix: Water
Analysis Batch: 413988

Client Sample ID: SUPE-W-06C-050318
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	<0.82		25.0	30.0		ug/L		120	73 - 126
1,2,4-Trimethylbenzene	<0.75		25.0	27.9		ug/L		112	76 - 121
1,3,5-Trimethylbenzene	<0.77		25.0	29.1		ug/L		116	77 - 121
Benzene	<0.41		25.0	29.5		ug/L		118	71 - 124
Chloromethane	<0.35		25.0	26.9		ug/L		108	68 - 124
Ethylbenzene	<0.74		25.0	27.2		ug/L		109	77 - 123
Methyl tert-butyl ether	<0.16		25.0	26.6		ug/L		106	77 - 120
m-Xylene & p-Xylene	<0.66		25.0	28.2		ug/L		113	76 - 122
Naphthalene	<0.43		25.0	23.7		ug/L		95	66 - 125
n-Butylbenzene	<0.64		25.0	26.5		ug/L		106	71 - 128
N-Propylbenzene	<0.69		25.0	28.3		ug/L		113	75 - 127
o-Xylene	<0.76		25.0	26.8		ug/L		107	76 - 122
Styrene	<0.73		25.0	26.9		ug/L		108	80 - 120
Toluene	<0.51		25.0	27.7		ug/L		111	80 - 122
Xylenes, Total	<0.66		50.0	55.0		ug/L		110	76 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		77 - 120
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	103		75 - 123
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: 480-135500-3 MSD
Matrix: Water
Analysis Batch: 413988

Client Sample ID: SUPE-W-06C-050318
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	<0.82		25.0	29.1		ug/L		117	73 - 126	3	15
1,2,4-Trimethylbenzene	<0.75		25.0	28.0		ug/L		112	76 - 121	0	20

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QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: 480-135500-3 MSD

Client Sample ID: SUPE-W-06C-050318

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 413988

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	<0.77		25.0	28.6		ug/L		114	77 - 121	2	20
Benzene	<0.41		25.0	28.5		ug/L		114	71 - 124	3	13
Chloromethane	<0.35		25.0	22.7	F2	ug/L		91	68 - 124	17	15
Ethylbenzene	<0.74		25.0	26.9		ug/L		108	77 - 123	1	15
Methyl tert-butyl ether	<0.16		25.0	25.3		ug/L		101	77 - 120	5	37
m-Xylene & p-Xylene	<0.66		25.0	28.0		ug/L		112	76 - 122	1	16
Naphthalene	<0.43		25.0	23.0		ug/L		92	66 - 125	3	20
n-Butylbenzene	<0.64		25.0	26.5		ug/L		106	71 - 128	0	15
N-Propylbenzene	<0.69		25.0	27.8		ug/L		111	75 - 127	2	15
o-Xylene	<0.76		25.0	26.2		ug/L		105	76 - 122	2	16
Styrene	<0.73		25.0	26.3		ug/L		105	80 - 120	2	20
Toluene	<0.51		25.0	28.0		ug/L		112	80 - 122	1	15
Xylenes, Total	<0.66		50.0	54.2		ug/L		108	76 - 122	1	16

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	96		77 - 120
4-Bromofluorobenzene (Surr)	103		73 - 120
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	98		80 - 120

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

Lab Sample ID: MB 500-431418/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 431644

Prep Batch: 431418

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/10/18 18:49	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/10/18 18:49	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		05/09/18 14:20	05/10/18 18:49	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/10/18 18:49	1
1-Methylnaphthalene	<0.50		2.0	0.50	ug/L		05/09/18 14:20	05/10/18 18:49	1
bis(chloroisopropyl) ether	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,3,4,6-Tetrachlorophenol	<1.5		5.0	1.5	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,4,5-Trichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,4-Dinitrophenol	<7.4		20	7.4	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,4-Dinitrotoluene	<0.30		1.0	0.30	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,6-Dinitrotoluene	<0.12		1.0	0.12	ug/L		05/09/18 14:20	05/10/18 18:49	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/10/18 18:49	1
2-Chlorophenol	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/10/18 18:49	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/09/18 14:20	05/10/18 18:49	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		05/09/18 14:20	05/10/18 18:49	1
2-Nitroaniline	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/10/18 18:49	1
2-Nitrophenol	<2.1		10	2.1	ug/L		05/09/18 14:20	05/10/18 18:49	1
3-Nitroaniline	<2.3		10	2.3	ug/L		05/09/18 14:20	05/10/18 18:49	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		05/09/18 14:20	05/10/18 18:49	1

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QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: MB 500-431418/1-A
Matrix: Water
Analysis Batch: 431644

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431418

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	<0.91		5.0	0.91	ug/L		05/09/18 14:20	05/10/18 18:49	1
4-Chloro-3-methylphenol	<2.2		10	2.2	ug/L		05/09/18 14:20	05/10/18 18:49	1
4-Chloroaniline	<2.1		10	2.1	ug/L		05/09/18 14:20	05/10/18 18:49	1
4-Chlorophenyl phenyl ether	<0.81		5.0	0.81	ug/L		05/09/18 14:20	05/10/18 18:49	1
4-Nitroaniline	<3.9		10	3.9	ug/L		05/09/18 14:20	05/10/18 18:49	1
4-Nitrophenol	<2.3		20	2.3	ug/L		05/09/18 14:20	05/10/18 18:49	1
Acenaphthene	<0.36		1.0	0.36	ug/L		05/09/18 14:20	05/10/18 18:49	1
Acenaphthylene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/10/18 18:49	1
Anthracene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzo[g,h,i]perylene	<0.42		1.0	0.42	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzo[k]fluoranthene	<0.074		0.20	0.074	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzoic acid	<4.6		20	4.6	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzyl alcohol	<3.1		20	3.1	ug/L		05/09/18 14:20	05/10/18 18:49	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		05/09/18 14:20	05/10/18 18:49	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/10/18 18:49	1
Bis(2-ethylhexyl) phthalate	<2.4		10	2.4	ug/L		05/09/18 14:20	05/10/18 18:49	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		05/09/18 14:20	05/10/18 18:49	1
Chrysene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/10/18 18:49	1
Dibenz(a,h)anthracene	<0.064		0.30	0.064	ug/L		05/09/18 14:20	05/10/18 18:49	1
Dibenzofuran	<0.35		2.0	0.35	ug/L		05/09/18 14:20	05/10/18 18:49	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/10/18 18:49	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		05/09/18 14:20	05/10/18 18:49	1
Di-n-butyl phthalate	<0.80		5.0	0.80	ug/L		05/09/18 14:20	05/10/18 18:49	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,3,5,6-Tetrachlorophenol	<2.5		5.0	2.5	ug/L		05/09/18 14:20	05/10/18 18:49	1
Fluoranthene	<0.32		1.0	0.32	ug/L		05/09/18 14:20	05/10/18 18:49	1
Fluorene	<0.38		1.0	0.38	ug/L		05/09/18 14:20	05/10/18 18:49	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/10/18 18:49	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		05/09/18 14:20	05/10/18 18:49	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		05/09/18 14:20	05/10/18 18:49	1
Hexachloroethane	<0.97		5.0	0.97	ug/L		05/09/18 14:20	05/10/18 18:49	1
Indeno[1,2,3-cd]pyrene	<0.084		0.20	0.084	ug/L		05/09/18 14:20	05/10/18 18:49	1
Isophorone	<0.29		2.0	0.29	ug/L		05/09/18 14:20	05/10/18 18:49	1
Naphthalene	<0.30		1.0	0.30	ug/L		05/09/18 14:20	05/10/18 18:49	1
Nitrobenzene	<0.45		1.0	0.45	ug/L		05/09/18 14:20	05/10/18 18:49	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		05/09/18 14:20	05/10/18 18:49	1
N-Nitrosodiphenylamine	<0.34		2.0	0.34	ug/L		05/09/18 14:20	05/10/18 18:49	1
Phenol	<0.36		5.0	0.36	ug/L		05/09/18 14:20	05/10/18 18:49	1
Pyrene	<0.48		1.0	0.48	ug/L		05/09/18 14:20	05/10/18 18:49	1
2,4-Dimethylphenol	<3.3		10	3.3	ug/L		05/09/18 14:20	05/10/18 18:49	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		05/09/18 14:20	05/10/18 18:49	1
Phenanthrene	<0.35		1.0	0.35	ug/L		05/09/18 14:20	05/10/18 18:49	1
3,3'-Dichlorobenzidine	<0.94		5.0	0.94	ug/L		05/09/18 14:20	05/10/18 18:49	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		05/09/18 14:20	05/10/18 18:49	1

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QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: MB 500-431418/1-A
Matrix: Water
Analysis Batch: 431644

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431418

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	100		40 - 145	05/09/18 14:20	05/10/18 18:49	1
2-Fluorobiphenyl	77		34 - 110	05/09/18 14:20	05/10/18 18:49	1
2-Fluorophenol (Surr)	74		27 - 110	05/09/18 14:20	05/10/18 18:49	1
Nitrobenzene-d5 (Surr)	80		36 - 120	05/09/18 14:20	05/10/18 18:49	1
Phenol-d5 (Surr)	46		20 - 100	05/09/18 14:20	05/10/18 18:49	1
Terphenyl-d14 (Surr)	103		40 - 145	05/09/18 14:20	05/10/18 18:49	1

Lab Sample ID: LCS 500-431418/2-A
Matrix: Water
Analysis Batch: 431644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	40.0	24.3		ug/L		61	26 - 110
1,3-Dichlorobenzene	40.0	23.3		ug/L		58	22 - 110
1,4-Dichlorobenzene	40.0	23.5		ug/L		59	23 - 110
1-Methylnaphthalene	40.0	27.0		ug/L		67	38 - 110
bis(chloroisopropyl) ether	40.0	31.1		ug/L		78	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	35.6		ug/L		89	44 - 118
2,4,5-Trichlorophenol	40.0	32.8		ug/L		82	63 - 120
2,4,6-Trichlorophenol	40.0	31.6		ug/L		79	62 - 110
2,4-Dichlorophenol	40.0	30.9		ug/L		77	62 - 110
2,4-Dinitrophenol	80.0	55.9		ug/L		70	37 - 130
2,4-Dinitrotoluene	40.0	34.9		ug/L		87	63 - 122
2,6-Dinitrotoluene	40.0	37.1		ug/L		93	63 - 119
2-Chloronaphthalene	40.0	27.9		ug/L		70	39 - 110
2-Chlorophenol	40.0	28.8		ug/L		72	59 - 110
2-Methylnaphthalene	40.0	31.1		ug/L		78	34 - 110
2-Methylphenol	40.0	29.0		ug/L		73	53 - 110
2-Nitroaniline	40.0	35.0		ug/L		87	59 - 122
2-Nitrophenol	40.0	35.8		ug/L		90	58 - 110
3-Nitroaniline	40.0	27.6		ug/L		69	47 - 123
4,6-Dinitro-2-methylphenol	80.0	67.5		ug/L		84	50 - 117
4-Bromophenyl phenyl ether	40.0	32.0		ug/L		80	58 - 120
4-Chloro-3-methylphenol	40.0	31.5		ug/L		79	64 - 120
4-Chloroaniline	40.0	27.9		ug/L		70	35 - 128
4-Chlorophenyl phenyl ether	40.0	30.2		ug/L		75	47 - 112
4-Nitroaniline	40.0	23.5		ug/L		59	52 - 147
4-Nitrophenol	80.0	28.2		ug/L		35	20 - 110
Acenaphthene	40.0	27.8		ug/L		70	46 - 110
Acenaphthylene	40.0	29.0		ug/L		72	47 - 110
Anthracene	40.0	32.1		ug/L		80	67 - 110
Benzo[a]pyrene	40.0	35.9		ug/L		90	70 - 120
Benzo[b]fluoranthene	40.0	35.8		ug/L		89	69 - 123
Benzo[g,h,i]perylene	40.0	36.8		ug/L		92	70 - 120
Benzo[k]fluoranthene	40.0	34.9		ug/L		87	70 - 120
Benzoic acid	80.0	36.1		ug/L		45	10 - 100
Benzyl alcohol	40.0	32.3		ug/L		81	33 - 127

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QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 500-431418/2-A
Matrix: Water
Analysis Batch: 431644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethoxy)methane	40.0	30.2		ug/L		75	60 - 110
Bis(2-chloroethyl)ether	40.0	29.8		ug/L		75	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	34.4		ug/L		86	69 - 120
Butyl benzyl phthalate	40.0	34.7		ug/L		87	68 - 120
Chrysene	40.0	41.6		ug/L		104	68 - 120
Dibenz(a,h)anthracene	40.0	35.5		ug/L		89	70 - 127
Dibenzofuran	40.0	29.2		ug/L		73	51 - 110
Diethyl phthalate	40.0	32.0		ug/L		80	62 - 120
Dimethyl phthalate	40.0	38.7		ug/L		97	63 - 120
Di-n-butyl phthalate	40.0	33.1		ug/L		83	70 - 120
Di-n-octyl phthalate	40.0	35.8		ug/L		89	70 - 122
Fluoranthene	40.0	36.3		ug/L		91	68 - 120
Fluorene	40.0	29.2		ug/L		73	53 - 120
Hexachlorobenzene	40.0	36.9		ug/L		92	61 - 120
Hexachlorobutadiene	40.0	23.7		ug/L		59	20 - 100
Hexachlorocyclopentadiene	40.0	22.8		ug/L		57	10 - 100
Hexachloroethane	40.0	24.6		ug/L		61	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	36.4		ug/L		91	65 - 133
Isophorone	40.0	37.6		ug/L		94	57 - 110
Naphthalene	40.0	27.2		ug/L		68	36 - 110
Nitrobenzene	40.0	29.9		ug/L		75	53 - 110
N-Nitrosodi-n-propylamine	40.0	32.7		ug/L		82	58 - 110
N-Nitrosodiphenylamine	40.0	34.5		ug/L		86	66 - 110
Pentachlorophenol	80.0	66.6		ug/L		83	23 - 129
Phenol	40.0	18.4		ug/L		46	33 - 100
Pyrene	40.0	33.2		ug/L		83	70 - 110
2,4-Dimethylphenol	40.0	33.5		ug/L		84	51 - 110
Benzo[a]anthracene	40.0	36.3		ug/L		91	70 - 120
Phenanthrene	40.0	31.7		ug/L		79	65 - 120
3,3'-Dichlorobenzidine	40.0	39.9		ug/L		100	60 - 132
3 & 4 Methylphenol	40.0	25.7		ug/L		64	53 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	114		40 - 145
2-Fluorobiphenyl	76		34 - 110
2-Fluorophenol (Surr)	76		27 - 110
Nitrobenzene-d5 (Surr)	87		36 - 120
Phenol-d5 (Surr)	50		20 - 100
Terphenyl-d14 (Surr)	92		40 - 145

Lab Sample ID: 480-135500-3 MS
Matrix: Water
Analysis Batch: 431890

Client Sample ID: SUPE-W-06C-050318
Prep Type: Total/NA
Prep Batch: 431418

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	<0.30		39.1	26.7		ug/L		68	26 - 110
1,2-Dichlorobenzene	<0.29		39.1	25.7		ug/L		66	26 - 110
1,3-Dichlorobenzene	<0.25		39.1	23.9		ug/L		61	22 - 110

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: 480-135500-3 MS

Matrix: Water

Analysis Batch: 431890

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 431418

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	<0.27		39.1	24.1		ug/L		62	23 - 110
1-Methylnaphthalene	<0.50		39.1	28.1		ug/L		72	38 - 110
bis(chloroisopropyl) ether	<0.30	^c	39.1	29.9		ug/L		77	38 - 110
2,3,4,6-Tetrachlorophenol	<1.5		39.1	34.0		ug/L		87	44 - 118
2,4,5-Trichlorophenol	<2.3		39.1	31.6		ug/L		81	63 - 120
2,4,6-Trichlorophenol	<1.1		39.1	31.2		ug/L		80	62 - 110
2,4-Dichlorophenol	<2.3		39.1	30.3		ug/L		77	62 - 110
2,4-Dinitrophenol	<7.5	^c	78.1	44.1		ug/L		56	37 - 130
2,4-Dinitrotoluene	<0.30		39.1	34.6		ug/L		89	63 - 122
2,6-Dinitrotoluene	<0.12		39.1	36.8		ug/L		94	63 - 119
2-Chloronaphthalene	<0.34		39.1	28.6		ug/L		73	39 - 110
2-Chlorophenol	<0.80		39.1	28.0		ug/L		72	59 - 110
2-Methylnaphthalene	<0.13		39.1	31.8		ug/L		81	34 - 110
2-Methylphenol	<0.31		39.1	27.7		ug/L		71	53 - 110
2-Nitroaniline	<1.1		39.1	33.4		ug/L		86	59 - 122
2-Nitrophenol	<2.2		39.1	35.7		ug/L		91	58 - 110
3-Nitroaniline	<2.3		39.1	28.3		ug/L		72	47 - 123
4,6-Dinitro-2-methylphenol	<4.9		78.1	60.0		ug/L		77	50 - 117
4-Bromophenyl phenyl ether	<0.92		39.1	31.7		ug/L		81	58 - 120
4-Chloro-3-methylphenol	<2.2		39.1	30.5		ug/L		78	64 - 120
4-Chloroaniline	<2.1		39.1	28.6		ug/L		73	35 - 128
4-Chlorophenyl phenyl ether	<0.81		39.1	30.3		ug/L		77	47 - 112
4-Nitroaniline	<4.0		39.1	24.6		ug/L		63	52 - 147
4-Nitrophenol	<2.4	^c	78.1	25.2		ug/L		32	20 - 110
Acenaphthene	<0.36		39.1	28.0		ug/L		72	46 - 110
Acenaphthylene	<0.32		39.1	29.4		ug/L		75	47 - 110
Anthracene	<0.32		39.1	31.3		ug/L		80	67 - 110
Benzo[a]pyrene	<0.056		39.1	35.4		ug/L		91	70 - 120
Benzo[b]fluoranthene	<0.058		39.1	34.6		ug/L		89	69 - 123
Benzo[g,h,i]perylene	<0.42		39.1	36.9		ug/L		95	70 - 120
Benzo[k]fluoranthene	<0.074		39.1	36.3		ug/L		93	70 - 120
Benzoic acid	<4.6		78.1	26.2		ug/L		33	10 - 100
Benzyl alcohol	<3.1		39.1	29.4		ug/L		75	33 - 127
Bis(2-chloroethoxy)methane	<0.30		39.1	30.3		ug/L		77	60 - 110
Bis(2-chloroethyl)ether	<0.35		39.1	29.5		ug/L		75	49 - 110
Bis(2-ethylhexyl) phthalate	<2.4		39.1	33.2		ug/L		85	69 - 120
Butyl benzyl phthalate	<0.27		39.1	33.4		ug/L		86	68 - 120
Chrysene	<0.14		39.1	40.2		ug/L		103	68 - 120
Dibenz(a,h)anthracene	<0.064		39.1	36.1		ug/L		92	70 - 127
Dibenzofuran	<0.35		39.1	29.1		ug/L		74	51 - 110
Diethyl phthalate	<0.44		39.1	31.5		ug/L		81	62 - 120
Dimethyl phthalate	<0.38		39.1	38.6		ug/L		99	63 - 120
Di-n-butyl phthalate	<0.80		39.1	32.1		ug/L		82	70 - 120
Di-n-octyl phthalate	<2.5		39.1	35.2		ug/L		90	70 - 122
Fluoranthene	<0.32		39.1	35.8		ug/L		92	68 - 120
Fluorene	<0.38		39.1	29.3		ug/L		75	53 - 120
Hexachlorobenzene	<0.14		39.1	36.8		ug/L		94	61 - 120
Hexachlorobutadiene	<1.1		39.1	24.1		ug/L		62	20 - 100

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: 480-135500-3 MS

Matrix: Water

Analysis Batch: 431890

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 431418

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexachlorocyclopentadiene	<3.5	^c	39.1	20.0		ug/L		51	10 - 100
Hexachloroethane	<0.98		39.1	25.2		ug/L		65	20 - 100
Indeno[1,2,3-cd]pyrene	<0.084		39.1	36.2		ug/L		93	65 - 133
Isophorone	<0.29		39.1	37.7		ug/L		96	57 - 110
Naphthalene	<0.30		39.1	28.1		ug/L		72	36 - 110
Nitrobenzene	<0.45		39.1	29.3		ug/L		75	53 - 110
N-Nitrosodi-n-propylamine	<0.14		39.1	31.4		ug/L		80	58 - 110
N-Nitrosodiphenylamine	<0.34		39.1	33.1		ug/L		85	66 - 110
Pentachlorophenol	<5.6		78.1	61.0		ug/L		78	23 - 129
Phenol	<0.36		39.1	16.4		ug/L		42	33 - 100
Pyrene	<0.48		39.1	32.3		ug/L		83	70 - 110
2,4-Dimethylphenol	<3.4		39.1	32.3		ug/L		83	51 - 110
Benzo[a]anthracene	<0.044		39.1	35.4		ug/L		91	70 - 120
Phenanthrene	<0.35		39.1	31.0		ug/L		79	65 - 120
3,3'-Dichlorobenzidine	<0.95		39.1	37.3		ug/L		96	60 - 132
3 & 4 Methylphenol	<0.44		39.1	24.0		ug/L		61	53 - 110

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	118		40 - 145
2-Fluorobiphenyl	81		34 - 110
2-Fluorophenol (Surr)	71		27 - 110
Nitrobenzene-d5 (Surr)	87		36 - 120
Phenol-d5 (Surr)	44		20 - 100
Terphenyl-d14 (Surr)	87		40 - 145

Lab Sample ID: 480-135500-3 MSD

Matrix: Water

Analysis Batch: 431890

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 431418

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,2,4-Trichlorobenzene	<0.30		39.0	27.1		ug/L		70	26 - 110	2	20
1,2-Dichlorobenzene	<0.29		39.0	26.1		ug/L		67	26 - 110	2	20
1,3-Dichlorobenzene	<0.25		39.0	24.5		ug/L		63	22 - 110	2	20
1,4-Dichlorobenzene	<0.27		39.0	24.8		ug/L		64	23 - 110	3	20
1-Methylnaphthalene	<0.50		39.0	28.7		ug/L		74	38 - 110	2	20
bis(chloroisopropyl) ether	<0.30	^c	39.0	30.1		ug/L		77	38 - 110	0	20
2,3,4,6-Tetrachlorophenol	<1.5		39.0	35.9		ug/L		92	44 - 118	5	20
2,4,5-Trichlorophenol	<2.3		39.0	32.4		ug/L		83	63 - 120	2	20
2,4,6-Trichlorophenol	<1.1		39.0	32.2		ug/L		83	62 - 110	3	20
2,4-Dichlorophenol	<2.3		39.0	31.1		ug/L		80	62 - 110	3	20
2,4-Dinitrophenol	<7.5	^c	77.9	54.9	F2	ug/L		70	37 - 130	22	20
2,4-Dinitrotoluene	<0.30		39.0	34.6		ug/L		89	63 - 122	0	20
2,6-Dinitrotoluene	<0.12		39.0	37.0		ug/L		95	63 - 119	0	20
2-Chloronaphthalene	<0.34		39.0	29.2		ug/L		75	39 - 110	2	20
2-Chlorophenol	<0.80		39.0	28.2		ug/L		72	59 - 110	1	20
2-Methylnaphthalene	<0.13		39.0	32.2		ug/L		83	34 - 110	1	20
2-Methylphenol	<0.31		39.0	28.0		ug/L		72	53 - 110	1	20
2-Nitroaniline	<1.1		39.0	34.4		ug/L		88	59 - 122	3	20

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: 480-135500-3 MSD

Matrix: Water

Analysis Batch: 431890

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 431418

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
2-Nitrophenol	<2.2		39.0	35.7		ug/L		92	58 - 110	0	20
3-Nitroaniline	<2.3		39.0	27.3		ug/L		70	47 - 123	4	20
4,6-Dinitro-2-methylphenol	<4.9		77.9	66.8		ug/L		86	50 - 117	11	20
4-Bromophenyl phenyl ether	<0.92		39.0	32.4		ug/L		83	58 - 120	2	20
4-Chloro-3-methylphenol	<2.2		39.0	31.4		ug/L		81	64 - 120	3	20
4-Chloroaniline	<2.1		39.0	28.1		ug/L		72	35 - 128	2	20
4-Chlorophenyl phenyl ether	<0.81		39.0	31.1		ug/L		80	47 - 112	3	20
4-Nitroaniline	<4.0		39.0	22.7		ug/L		58	52 - 147	8	20
4-Nitrophenol	<2.4	^c	77.9	27.9		ug/L		36	20 - 110	10	20
Acenaphthene	<0.36		39.0	28.8		ug/L		74	46 - 110	3	20
Acenaphthylene	<0.32		39.0	30.0		ug/L		77	47 - 110	2	20
Anthracene	<0.32		39.0	31.8		ug/L		82	67 - 110	2	20
Benzo[a]pyrene	<0.056		39.0	35.7		ug/L		92	70 - 120	1	20
Benzo[b]fluoranthene	<0.058		39.0	34.5		ug/L		88	69 - 123	0	20
Benzo[g,h,i]perylene	<0.42		39.0	37.6		ug/L		96	70 - 120	2	20
Benzo[k]fluoranthene	<0.074		39.0	34.9		ug/L		90	70 - 120	4	20
Benzoic acid	<4.6		77.9	34.1	F2	ug/L		44	10 - 100	26	20
Benzyl alcohol	<3.1		39.0	28.7		ug/L		74	33 - 127	2	20
Bis(2-chloroethoxy)methane	<0.30		39.0	30.0		ug/L		77	60 - 110	1	20
Bis(2-chloroethyl)ether	<0.35		39.0	29.6		ug/L		76	49 - 110	0	20
Bis(2-ethylhexyl) phthalate	<2.4		39.0	34.3		ug/L		88	69 - 120	3	20
Butyl benzyl phthalate	<0.27		39.0	35.0		ug/L		90	68 - 120	5	20
Chrysene	<0.14		39.0	41.3		ug/L		106	68 - 120	3	20
Dibenz(a,h)anthracene	<0.064		39.0	35.7		ug/L		92	70 - 127	1	20
Dibenzofuran	<0.35		39.0	30.2		ug/L		77	51 - 110	4	20
Diethyl phthalate	<0.44		39.0	31.5		ug/L		81	62 - 120	0	20
Dimethyl phthalate	<0.38		39.0	39.0		ug/L		100	63 - 120	1	20
Di-n-butyl phthalate	<0.80		39.0	32.7		ug/L		84	70 - 120	2	20
Di-n-octyl phthalate	<2.5		39.0	36.3		ug/L		93	70 - 122	3	20
Fluoranthene	<0.32		39.0	36.0		ug/L		93	68 - 120	1	20
Fluorene	<0.38		39.0	30.0		ug/L		77	53 - 120	2	20
Hexachlorobenzene	<0.14		39.0	37.3		ug/L		96	61 - 120	1	20
Hexachlorobutadiene	<1.1		39.0	25.2		ug/L		65	20 - 100	4	20
Hexachlorocyclopentadiene	<3.5	^c	39.0	21.3		ug/L		55	10 - 100	6	20
Hexachloroethane	<0.98		39.0	26.0		ug/L		67	20 - 100	3	20
Indeno[1,2,3-cd]pyrene	<0.084		39.0	36.5		ug/L		94	65 - 133	1	20
Isophorone	<0.29		39.0	37.8		ug/L		97	57 - 110	0	20
Naphthalene	<0.30		39.0	28.7		ug/L		74	36 - 110	2	20
Nitrobenzene	<0.45		39.0	29.5		ug/L		76	53 - 110	1	20
N-Nitrosodi-n-propylamine	<0.14		39.0	31.6		ug/L		81	58 - 110	1	20
N-Nitrosodiphenylamine	<0.34		39.0	33.5		ug/L		86	66 - 110	1	20
Pentachlorophenol	<5.6		77.9	67.8		ug/L		87	23 - 129	11	20
Phenol	<0.36		39.0	13.7		ug/L		35	33 - 100	18	20
Pyrene	<0.48		39.0	33.1		ug/L		85	70 - 110	2	20
2,4-Dimethylphenol	<3.4		39.0	33.8		ug/L		87	51 - 110	4	20
Benzo[a]anthracene	<0.044		39.0	35.8		ug/L		92	70 - 120	1	20
Phenanthrene	<0.35		39.0	31.9		ug/L		82	65 - 120	3	20
3,3'-Dichlorobenzidine	<0.95		39.0	37.6		ug/L		97	60 - 132	1	20

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: 480-135500-3 MSD

Matrix: Water

Analysis Batch: 431890

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 431418

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
3 & 4 Methylphenol	<0.44		39.0	23.9		ug/L		61	53 - 110	1	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
2,4,6-Tribromophenol (Surr)	108		40 - 145
2-Fluorobiphenyl	70		34 - 110
2-Fluorophenol (Surr)	63		27 - 110
Nitrobenzene-d5 (Surr)	75		36 - 120
Phenol-d5 (Surr)	38		20 - 100
Terphenyl-d14 (Surr)	74		40 - 145

Lab Sample ID: MB 500-431815/1-A

Matrix: Water

Analysis Batch: 431890

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 431815

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		05/11/18 10:16	05/11/18 21:24	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		05/11/18 10:16	05/11/18 21:24	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		05/11/18 10:16	05/11/18 21:24	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		05/11/18 10:16	05/11/18 21:24	1
1-Methylnaphthalene	<0.50		2.0	0.50	ug/L		05/11/18 10:16	05/11/18 21:24	1
bis(chloroisopropyl) ether	<0.30		2.0	0.30	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,3,4,6-Tetrachlorophenol	<1.5		5.0	1.5	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,4,5-Trichlorophenol	<2.3		10	2.3	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,4-Dinitrophenol	<7.4		20	7.4	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,4-Dinitrotoluene	<0.30		1.0	0.30	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,6-Dinitrotoluene	<0.12		1.0	0.12	ug/L		05/11/18 10:16	05/11/18 21:24	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		05/11/18 10:16	05/11/18 21:24	1
2-Chlorophenol	<0.80		5.0	0.80	ug/L		05/11/18 10:16	05/11/18 21:24	1
2-Methylnaphthalene	<0.13		2.0	0.13	ug/L		05/11/18 10:16	05/11/18 21:24	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		05/11/18 10:16	05/11/18 21:24	1
2-Nitroaniline	<1.1		5.0	1.1	ug/L		05/11/18 10:16	05/11/18 21:24	1
2-Nitrophenol	<2.1		10	2.1	ug/L		05/11/18 10:16	05/11/18 21:24	1
3-Nitroaniline	<2.3		10	2.3	ug/L		05/11/18 10:16	05/11/18 21:24	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		05/11/18 10:16	05/11/18 21:24	1
4-Bromophenyl phenyl ether	<0.91		5.0	0.91	ug/L		05/11/18 10:16	05/11/18 21:24	1
4-Chloro-3-methylphenol	<2.2		10	2.2	ug/L		05/11/18 10:16	05/11/18 21:24	1
4-Chloroaniline	<2.1		10	2.1	ug/L		05/11/18 10:16	05/11/18 21:24	1
4-Chlorophenyl phenyl ether	<0.81		5.0	0.81	ug/L		05/11/18 10:16	05/11/18 21:24	1
4-Nitroaniline	<3.9		10	3.9	ug/L		05/11/18 10:16	05/11/18 21:24	1
4-Nitrophenol	<2.3		20	2.3	ug/L		05/11/18 10:16	05/11/18 21:24	1
Acenaphthene	<0.36		1.0	0.36	ug/L		05/11/18 10:16	05/11/18 21:24	1
Acenaphthylene	<0.32		1.0	0.32	ug/L		05/11/18 10:16	05/11/18 21:24	1
Anthracene	<0.32		1.0	0.32	ug/L		05/11/18 10:16	05/11/18 21:24	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		05/11/18 10:16	05/11/18 21:24	1
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		05/11/18 10:16	05/11/18 21:24	1
Benzo[g,h,i]perylene	<0.42		1.0	0.42	ug/L		05/11/18 10:16	05/11/18 21:24	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: MB 500-431815/1-A
Matrix: Water
Analysis Batch: 431890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431815

Analyte	MB	MB	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzo[k]fluoranthene	<0.074		0.20	0.074	ug/L		05/11/18 10:16	05/11/18 21:24	1
Benzoic acid	<4.6		20	4.6	ug/L		05/11/18 10:16	05/11/18 21:24	1
Benzyl alcohol	<3.1		20	3.1	ug/L		05/11/18 10:16	05/11/18 21:24	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		05/11/18 10:16	05/11/18 21:24	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		05/11/18 10:16	05/11/18 21:24	1
Bis(2-ethylhexyl) phthalate	<2.4		10	2.4	ug/L		05/11/18 10:16	05/11/18 21:24	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		05/11/18 10:16	05/11/18 21:24	1
Chrysene	<0.14		0.50	0.14	ug/L		05/11/18 10:16	05/11/18 21:24	1
Dibenz(a,h)anthracene	<0.064		0.30	0.064	ug/L		05/11/18 10:16	05/11/18 21:24	1
Dibenzofuran	<0.35		2.0	0.35	ug/L		05/11/18 10:16	05/11/18 21:24	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		05/11/18 10:16	05/11/18 21:24	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		05/11/18 10:16	05/11/18 21:24	1
Di-n-butyl phthalate	<0.80		5.0	0.80	ug/L		05/11/18 10:16	05/11/18 21:24	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,3,5,6-Tetrachlorophenol	<2.5		5.0	2.5	ug/L		05/11/18 10:16	05/11/18 21:24	1
Fluoranthene	<0.32		1.0	0.32	ug/L		05/11/18 10:16	05/11/18 21:24	1
Fluorene	<0.38		1.0	0.38	ug/L		05/11/18 10:16	05/11/18 21:24	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		05/11/18 10:16	05/11/18 21:24	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		05/11/18 10:16	05/11/18 21:24	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		05/11/18 10:16	05/11/18 21:24	1
Hexachloroethane	<0.97		5.0	0.97	ug/L		05/11/18 10:16	05/11/18 21:24	1
Indeno[1,2,3-cd]pyrene	<0.084		0.20	0.084	ug/L		05/11/18 10:16	05/11/18 21:24	1
Isophorone	<0.29		2.0	0.29	ug/L		05/11/18 10:16	05/11/18 21:24	1
Naphthalene	<0.30		1.0	0.30	ug/L		05/11/18 10:16	05/11/18 21:24	1
Nitrobenzene	<0.45		1.0	0.45	ug/L		05/11/18 10:16	05/11/18 21:24	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		05/11/18 10:16	05/11/18 21:24	1
N-Nitrosodiphenylamine	<0.34		2.0	0.34	ug/L		05/11/18 10:16	05/11/18 21:24	1
Phenol	<0.36		5.0	0.36	ug/L		05/11/18 10:16	05/11/18 21:24	1
Pyrene	<0.48		1.0	0.48	ug/L		05/11/18 10:16	05/11/18 21:24	1
2,4-Dimethylphenol	<3.3		10	3.3	ug/L		05/11/18 10:16	05/11/18 21:24	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		05/11/18 10:16	05/11/18 21:24	1
Phenanthrene	<0.35		1.0	0.35	ug/L		05/11/18 10:16	05/11/18 21:24	1
3,3'-Dichlorobenzidine	<0.94		5.0	0.94	ug/L		05/11/18 10:16	05/11/18 21:24	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		05/11/18 10:16	05/11/18 21:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	110		40 - 145	05/11/18 10:16	05/11/18 21:24	1
2-Fluorobiphenyl	94		34 - 110	05/11/18 10:16	05/11/18 21:24	1
2-Fluorophenol (Surr)	77		27 - 110	05/11/18 10:16	05/11/18 21:24	1
Nitrobenzene-d5 (Surr)	89		36 - 120	05/11/18 10:16	05/11/18 21:24	1
Phenol-d5 (Surr)	46		20 - 100	05/11/18 10:16	05/11/18 21:24	1
Terphenyl-d14 (Surr)	131		40 - 145	05/11/18 10:16	05/11/18 21:24	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 500-431815/2-A

Matrix: Water

Analysis Batch: 431890

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 431815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	40.0	32.4		ug/L		81	26 - 110
1,2-Dichlorobenzene	40.0	32.3		ug/L		81	26 - 110
1,3-Dichlorobenzene	40.0	30.6		ug/L		76	22 - 110
1,4-Dichlorobenzene	40.0	31.1		ug/L		78	23 - 110
1-Methylnaphthalene	40.0	34.3		ug/L		86	38 - 110
bis(chloroisopropyl) ether	40.0	35.7		ug/L		89	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	40.8		ug/L		102	44 - 118
2,4,5-Trichlorophenol	40.0	38.0		ug/L		95	63 - 120
2,4,6-Trichlorophenol	40.0	37.8		ug/L		95	62 - 110
2,4-Dichlorophenol	40.0	37.5		ug/L		94	62 - 110
2,4-Dinitrophenol	80.0	65.9		ug/L		82	37 - 130
2,4-Dinitrotoluene	40.0	41.6		ug/L		104	63 - 122
2,6-Dinitrotoluene	40.0	43.0		ug/L		107	63 - 119
2-Chloronaphthalene	40.0	34.4		ug/L		86	39 - 110
2-Chlorophenol	40.0	35.1		ug/L		88	59 - 110
2-Methylnaphthalene	40.0	37.7		ug/L		94	34 - 110
2-Methylphenol	40.0	35.7		ug/L		89	53 - 110
2-Nitroaniline	40.0	41.1		ug/L		103	59 - 122
2-Nitrophenol	40.0	43.5		ug/L		109	58 - 110
3-Nitroaniline	40.0	33.8		ug/L		85	47 - 123
4,6-Dinitro-2-methylphenol	80.0	79.6		ug/L		100	50 - 117
4-Bromophenyl phenyl ether	40.0	38.4		ug/L		96	58 - 120
4-Chloro-3-methylphenol	40.0	37.9		ug/L		95	64 - 120
4-Chloroaniline	40.0	35.7		ug/L		89	35 - 128
4-Chlorophenyl phenyl ether	40.0	36.9		ug/L		92	47 - 112
4-Nitroaniline	40.0	28.2		ug/L		70	52 - 147
4-Nitrophenol	80.0	32.4		ug/L		41	20 - 110
Acenaphthene	40.0	34.7		ug/L		87	46 - 110
Acenaphthylene	40.0	35.5		ug/L		89	47 - 110
Anthracene	40.0	38.6		ug/L		96	67 - 110
Benzo[a]pyrene	40.0	41.3		ug/L		103	70 - 120
Benzo[b]fluoranthene	40.0	40.7		ug/L		102	69 - 123
Benzo[g,h,i]perylene	40.0	42.5		ug/L		106	70 - 120
Benzo[k]fluoranthene	40.0	42.5		ug/L		106	70 - 120
Benzoic acid	80.0	45.7		ug/L		57	10 - 100
Benzyl alcohol	40.0	41.1		ug/L		103	33 - 127
Bis(2-chloroethoxy)methane	40.0	37.2		ug/L		93	60 - 110
Bis(2-chloroethyl)ether	40.0	37.2		ug/L		93	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	42.6		ug/L		106	69 - 120
Butyl benzyl phthalate	40.0	42.8		ug/L		107	68 - 120
Chrysene	40.0	51.6	*	ug/L		129	68 - 120
Dibenz(a,h)anthracene	40.0	40.5		ug/L		101	70 - 127
Dibenzofuran	40.0	35.8		ug/L		89	51 - 110
Diethyl phthalate	40.0	37.2		ug/L		93	62 - 120
Dimethyl phthalate	40.0	46.4		ug/L		116	63 - 120
Di-n-butyl phthalate	40.0	38.9		ug/L		97	70 - 120
Di-n-octyl phthalate	40.0	43.3		ug/L		108	70 - 122
Fluoranthene	40.0	41.9		ug/L		105	68 - 120

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 500-431815/2-A
Matrix: Water
Analysis Batch: 431890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	40.0	35.7		ug/L		89	53 - 120
Hexachlorobenzene	40.0	43.1		ug/L		108	61 - 120
Hexachlorobutadiene	40.0	31.5		ug/L		79	20 - 100
Hexachlorocyclopentadiene	40.0	28.0		ug/L		70	10 - 100
Hexachloroethane	40.0	33.5		ug/L		84	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	42.1		ug/L		105	65 - 133
Isophorone	40.0	46.8	*	ug/L		117	57 - 110
Naphthalene	40.0	34.7		ug/L		87	36 - 110
Nitrobenzene	40.0	35.4		ug/L		89	53 - 110
N-Nitrosodi-n-propylamine	40.0	38.9		ug/L		97	58 - 110
N-Nitrosodiphenylamine	40.0	41.7		ug/L		104	66 - 110
Pentachlorophenol	80.0	84.3		ug/L		105	23 - 129
Phenol	40.0	22.8		ug/L		57	33 - 100
Pyrene	40.0	41.5		ug/L		104	70 - 110
2,4-Dimethylphenol	40.0	40.3		ug/L		101	51 - 110
Benzo[a]anthracene	40.0	43.1		ug/L		108	70 - 120
Phenanthrene	40.0	38.2		ug/L		95	65 - 120
3,3'-Dichlorobenzidine	40.0	44.9		ug/L		112	60 - 132
3 & 4 Methylphenol	40.0	32.0		ug/L		80	53 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	135		40 - 145
2-Fluorobiphenyl	95		34 - 110
2-Fluorophenol (Surr)	92		27 - 110
Nitrobenzene-d5 (Surr)	104		36 - 120
Phenol-d5 (Surr)	62		20 - 100
Terphenyl-d14 (Surr)	114		40 - 145

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

Lab Sample ID: MB 480-413163/1-A
Matrix: Water
Analysis Batch: 413347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413163

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.057		0.50	0.057	ug/L		05/08/18 14:14	05/09/18 11:59	1
1,3-Dichlorobenzene	<0.082		0.50	0.082	ug/L		05/08/18 14:14	05/09/18 11:59	1
1,4-Dichlorobenzene	<0.068		0.50	0.068	ug/L		05/08/18 14:14	05/09/18 11:59	1
1-Methylnaphthalene	<0.12		0.50	0.12	ug/L		05/08/18 14:14	05/09/18 11:59	1
1,2,4-Trichlorobenzene	<0.092		0.50	0.092	ug/L		05/08/18 14:14	05/09/18 11:59	1
2-Chloronaphthalene	<0.066		0.50	0.066	ug/L		05/08/18 14:14	05/09/18 11:59	1
2-Chlorophenol	<0.066		5.0	0.066	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,4-Dichlorophenol	<0.056		0.50	0.056	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,4-Dimethylphenol	<0.30		1.0	0.30	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,4-Dinitrophenol	<0.60		5.0	0.60	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,4-Dinitrotoluene	<0.034		5.0	0.034	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,6-Dinitrotoluene	<0.091		5.0	0.091	ug/L		05/08/18 14:14	05/09/18 11:59	1
2-Methylnaphthalene	<0.052		0.50	0.052	ug/L		05/08/18 14:14	05/09/18 11:59	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: MB 480-413163/1-A
Matrix: Water
Analysis Batch: 413347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413163

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	<0.14		1.0	0.14	ug/L		05/08/18 14:14	05/09/18 11:59	1
Methylphenol, 3 & 4	<0.094		1.0	0.094	ug/L		05/08/18 14:14	05/09/18 11:59	1
2-Nitroaniline	<0.095		5.0	0.095	ug/L		05/08/18 14:14	05/09/18 11:59	1
3-Nitroaniline	<0.13		5.0	0.13	ug/L		05/08/18 14:14	05/09/18 11:59	1
4-Nitroaniline	<0.025		5.0	0.025	ug/L		05/08/18 14:14	05/09/18 11:59	1
2-Nitrophenol	<0.062		5.0	0.062	ug/L		05/08/18 14:14	05/09/18 11:59	1
4-Nitrophenol	<0.39		5.0	0.39	ug/L		05/08/18 14:14	05/09/18 11:59	1
bis(chloroisopropyl) ether	<0.086		5.0	0.086	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,3,4,6-Tetrachlorophenol	<0.39		5.0	0.39	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,4,5-Trichlorophenol	<0.065		5.0	0.065	ug/L		05/08/18 14:14	05/09/18 11:59	1
2,4,6-Trichlorophenol	<0.072		5.0	0.072	ug/L		05/08/18 14:14	05/09/18 11:59	1
4-Chloro-3-methylphenol	<0.053		5.0	0.053	ug/L		05/08/18 14:14	05/09/18 11:59	1
4-Chlorophenyl phenyl ether	<0.046		5.0	0.046	ug/L		05/08/18 14:14	05/09/18 11:59	1
4,6-Dinitro-2-methylphenol	<0.74		5.0	0.74	ug/L		05/08/18 14:14	05/09/18 11:59	1
Acenaphthene	<0.036		0.50	0.036	ug/L		05/08/18 14:14	05/09/18 11:59	1
Acenaphthylene	<0.056		0.30	0.056	ug/L		05/08/18 14:14	05/09/18 11:59	1
Anthracene	<0.034		0.50	0.034	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzo[a]anthracene	<0.034		0.30	0.034	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzo[b]fluoranthene	<0.063		0.30	0.063	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzo[k]fluoranthene	<0.070		0.30	0.070	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzoic acid	<5.0		5.0	5.0	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzo[g,h,i]perylene	<0.058		0.50	0.058	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzo[a]pyrene	<0.13		0.18	0.13	ug/L		05/08/18 14:14	05/09/18 11:59	1
Bis(2-chloroethoxy)methane	<0.064		5.0	0.064	ug/L		05/08/18 14:14	05/09/18 11:59	1
Bis(2-chloroethyl)ether	<0.072		5.0	0.072	ug/L		05/08/18 14:14	05/09/18 11:59	1
Bis(2-ethylhexyl) phthalate	<0.42		5.0	0.42	ug/L		05/08/18 14:14	05/09/18 11:59	1
4-Bromophenyl phenyl ether	<0.091		5.0	0.091	ug/L		05/08/18 14:14	05/09/18 11:59	1
Butyl benzyl phthalate	<0.16		3.0	0.16	ug/L		05/08/18 14:14	05/09/18 11:59	1
4-Chloroaniline	<0.13		5.0	0.13	ug/L		05/08/18 14:14	05/09/18 11:59	1
Chrysene	<0.074		0.50	0.074	ug/L		05/08/18 14:14	05/09/18 11:59	1
Dibenz(a,h)anthracene	<0.070		0.50	0.070	ug/L		05/08/18 14:14	05/09/18 11:59	1
Dibenzofuran	<0.060		5.0	0.060	ug/L		05/08/18 14:14	05/09/18 11:59	1
Di-n-butyl phthalate	<0.35		2.0	0.35	ug/L		05/08/18 14:14	05/09/18 11:59	1
Di-n-octyl phthalate	<0.20		5.0	0.20	ug/L		05/08/18 14:14	05/09/18 11:59	1
Diethyl phthalate	<0.064		0.50	0.064	ug/L		05/08/18 14:14	05/09/18 11:59	1
Dimethyl phthalate	<0.057		0.50	0.057	ug/L		05/08/18 14:14	05/09/18 11:59	1
Fluoranthene	<0.080		0.50	0.080	ug/L		05/08/18 14:14	05/09/18 11:59	1
Fluorene	<0.058		0.50	0.058	ug/L		05/08/18 14:14	05/09/18 11:59	1
Hexachlorobenzene	<0.22		0.50	0.22	ug/L		05/08/18 14:14	05/09/18 11:59	1
Hexachlorobutadiene	<0.10		1.0	0.10	ug/L		05/08/18 14:14	05/09/18 11:59	1
Hexachlorocyclopentadiene	<0.091		1.0	0.091	ug/L		05/08/18 14:14	05/09/18 11:59	1
Hexachloroethane	<0.088		5.0	0.088	ug/L		05/08/18 14:14	05/09/18 11:59	1
Indeno[1,2,3-cd]pyrene	<0.11		0.50	0.11	ug/L		05/08/18 14:14	05/09/18 11:59	1
Isophorone	<0.051		0.50	0.051	ug/L		05/08/18 14:14	05/09/18 11:59	1
Naphthalene	<0.064		1.0	0.064	ug/L		05/08/18 14:14	05/09/18 11:59	1
Nitrobenzene	<0.065		0.50	0.065	ug/L		05/08/18 14:14	05/09/18 11:59	1
N-Nitrosodiphenylamine	<0.070		5.0	0.070	ug/L		05/08/18 14:14	05/09/18 11:59	1
N-Nitrosodi-n-propylamine	<0.060		5.0	0.060	ug/L		05/08/18 14:14	05/09/18 11:59	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: MB 480-413163/1-A
Matrix: Water
Analysis Batch: 413347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413163

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<0.34		1.0	0.34	ug/L		05/08/18 14:14	05/09/18 11:59	1
Phenanthrene	<0.062		0.20	0.062	ug/L		05/08/18 14:14	05/09/18 11:59	1
Phenol	<0.10		1.0	0.10	ug/L		05/08/18 14:14	05/09/18 11:59	1
Pyrene	<0.076		0.50	0.076	ug/L		05/08/18 14:14	05/09/18 11:59	1
Benzyl alcohol	<0.19		5.0	0.19	ug/L		05/08/18 14:14	05/09/18 11:59	1
3,3'-Dichlorobenzidine	<0.22		5.0	0.22	ug/L		05/08/18 14:14	05/09/18 11:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14	118		64 - 127	05/08/18 14:14	05/09/18 11:59	1
2-Fluorobiphenyl	100		37 - 120	05/08/18 14:14	05/09/18 11:59	1
2-Fluorophenol (Surr)	56		10 - 120	05/08/18 14:14	05/09/18 11:59	1
2,4,6-Tribromophenol (Surr)	95		24 - 146	05/08/18 14:14	05/09/18 11:59	1
Nitrobenzene-d5 (Surr)	85		26 - 120	05/08/18 14:14	05/09/18 11:59	1
Phenol-d5 (Surr)	36		11 - 120	05/08/18 14:14	05/09/18 11:59	1

Lab Sample ID: LCS 480-413163/2-A
Matrix: Water
Analysis Batch: 413579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2-Dichlorobenzene	8.00	6.41		ug/L		80	47 - 120
1,3-Dichlorobenzene	8.00	6.27		ug/L		78	44 - 120
1,4-Dichlorobenzene	8.00	6.35		ug/L		79	45 - 120
1-Methylnaphthalene	8.00	7.31		ug/L		91	63 - 120
1,2,4-Trichlorobenzene	8.00	7.40		ug/L		93	50 - 120
2-Chloronaphthalene	8.00	7.34		ug/L		92	50 - 120
2-Chlorophenol	8.00	6.59		ug/L		82	63 - 120
2,4-Dichlorophenol	8.00	7.68		ug/L		96	57 - 120
2,4-Dimethylphenol	8.00	5.62		ug/L		70	41 - 120
2,4-Dinitrophenol	16.0	17.1		ug/L		107	32 - 137
2,4-Dinitrotoluene	8.00	8.49		ug/L		106	67 - 120
2,6-Dinitrotoluene	8.00	8.27		ug/L		103	63 - 135
2-Methylnaphthalene	8.00	7.26		ug/L		91	54 - 120
2-Methylphenol	8.00	5.94		ug/L		74	39 - 120
Methylphenol, 3 & 4	8.00	5.60		ug/L		70	37 - 120
2-Nitroaniline	8.00	6.96		ug/L		87	63 - 120
3-Nitroaniline	8.00	9.26		ug/L		116	63 - 150
4-Nitroaniline	8.00	7.79		ug/L		97	63 - 120
2-Nitrophenol	8.00	7.18		ug/L		90	63 - 120
4-Nitrophenol	16.0	8.63		ug/L		54	32 - 120
bis(chloroisopropyl) ether	8.00	5.83		ug/L		73	63 - 125
2,3,4,6-Tetrachlorophenol	8.00	8.65		ug/L		108	63 - 131
2,4,5-Trichlorophenol	8.00	8.97		ug/L		112	63 - 120
2,4,6-Trichlorophenol	8.00	8.19		ug/L		102	63 - 121
4-Chloro-3-methylphenol	8.00	7.64		ug/L		95	64 - 120
4-Chlorophenyl phenyl ether	8.00	8.53		ug/L		107	64 - 120
4,6-Dinitro-2-methylphenol	16.0	16.1		ug/L		100	32 - 138
Acenaphthene	8.00	7.56		ug/L		94	62 - 120

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: LCS 480-413163/2-A
Matrix: Water
Analysis Batch: 413579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	8.00	7.54		ug/L		94	57 - 120
Anthracene	8.00	7.93		ug/L		99	65 - 123
Benzo[a]anthracene	8.00	8.18		ug/L		102	77 - 123
Benzo[b]fluoranthene	8.00	8.04		ug/L		100	73 - 123
Benzo[k]fluoranthene	8.00	8.22		ug/L		103	68 - 120
Benzoic acid	64.0	6.32	*	ug/L		10	16 - 120
Benzo[g,h,i]perylene	8.00	8.49		ug/L		106	48 - 150
Benzo[a]pyrene	8.00	8.05		ug/L		101	72 - 120
Bis(2-chloroethoxy)methane	8.00	6.83		ug/L		85	63 - 120
Bis(2-chloroethyl)ether	8.00	6.69		ug/L		84	63 - 120
Bis(2-ethylhexyl) phthalate	8.00	7.70		ug/L		96	63 - 150
4-Bromophenyl phenyl ether	8.00	8.30		ug/L		104	65 - 128
Butyl benzyl phthalate	8.00	7.72		ug/L		96	75 - 127
4-Chloroaniline	8.00	5.91		ug/L		74	63 - 123
Chrysene	8.00	7.81		ug/L		98	75 - 120
Dibenz(a,h)anthracene	8.00	8.48		ug/L		106	54 - 147
Dibenzofuran	8.00	7.88		ug/L		99	63 - 120
Di-n-butyl phthalate	8.00	8.64		ug/L		108	80 - 123
Di-n-octyl phthalate	8.00	8.12		ug/L		101	76 - 135
Diethyl phthalate	8.00	8.57		ug/L		107	71 - 120
Dimethyl phthalate	8.00	8.45		ug/L		106	70 - 120
Fluoranthene	8.00	8.84		ug/L		110	74 - 133
Fluorene	8.00	8.10		ug/L		101	64 - 120
Hexachlorobenzene	8.00	7.69		ug/L		96	61 - 129
Hexachlorobutadiene	8.00	7.75		ug/L		97	45 - 120
Hexachlorocyclopentadiene	8.00	5.39		ug/L		67	21 - 120
Hexachloroethane	8.00	6.17		ug/L		77	63 - 120
Indeno[1,2,3-cd]pyrene	8.00	8.61		ug/L		108	55 - 150
Isophorone	8.00	7.21		ug/L		90	53 - 120
Naphthalene	8.00	6.73		ug/L		84	40 - 138
Nitrobenzene	8.00	6.73		ug/L		84	51 - 120
N-Nitrosodiphenylamine	8.00	7.58		ug/L		95	63 - 120
N-Nitrosodi-n-propylamine	8.00	6.68		ug/L		83	63 - 123
Pentachlorophenol	16.0	10.9		ug/L		68	10 - 131
Phenanthrene	8.00	7.85		ug/L		98	71 - 122
Phenol	8.00	3.04		ug/L		38	17 - 120
Pyrene	8.00	7.71		ug/L		96	65 - 126
Benzyl alcohol	8.00	6.14		ug/L		77	63 - 120
3,3'-Dichlorobenzidine	16.0	20.6		ug/L		129	32 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>p</i> -Terphenyl-d14	111		64 - 127
2-Fluorobiphenyl	97		37 - 120
2-Fluorophenol (Surr)	55		10 - 120
2,4,6-Tribromophenol (Surr)	97		24 - 146
Nitrobenzene-d5 (Surr)	79		26 - 120
Phenol-d5 (Surr)	37		11 - 120

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-1

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

Lab Sample ID: 480-135500-3 MS

Matrix: Water

Analysis Batch: 413347

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 413163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Pentachlorophenol	<0.34	^c	16.0	12.1		ug/L		76	10 - 131

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	96		24 - 146
2-Fluorobiphenyl	98		37 - 120
2-Fluorophenol (Surr)	56		10 - 120
Nitrobenzene-d5 (Surr)	92		26 - 120
Phenol-d5 (Surr)	37		11 - 120
p-Terphenyl-d14	95		64 - 127

Lab Sample ID: 480-135500-3 MSD

Matrix: Water

Analysis Batch: 413347

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 413163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Pentachlorophenol	<0.34	^c	16.0	11.6		ug/L		73	10 - 131	4	37

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	92		24 - 146
2-Fluorobiphenyl	88		37 - 120
2-Fluorophenol (Surr)	50		10 - 120
Nitrobenzene-d5 (Surr)	75		26 - 120
Phenol-d5 (Surr)	34		11 - 120
p-Terphenyl-d14	90		64 - 127

QC Association Summary

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

TestAmerica Job ID: 480-135500-1

GC/MS VOA

Analysis Batch: 413737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	8260C	
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	8260C	
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	8260C	
MB 480-413737/8	Method Blank	Total/NA	Water	8260C	
LCS 480-413737/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 413745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-15	SUPE-W-TB-01-050218	Total/NA	Water	8260C	
MB 480-413745/7	Method Blank	Total/NA	Water	8260C	
LCS 480-413745/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 413988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	8260C	
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	8260C	
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	8260C	
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	8260C	
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	8260C	
480-135500-9	SUPE-W-99-050318	Total/NA	Water	8260C	
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	8260C	
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	8260C	
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	8260C	
480-135500-13	SUPE-TB-02-050318	Total/NA	Water	8260C	
MB 480-413988/7	Method Blank	Total/NA	Water	8260C	
LCS 480-413988/5	Lab Control Sample	Total/NA	Water	8260C	
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	8260C	
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 413163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	3510C	
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	3510C	
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	3510C	
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	3510C	
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	3510C	
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	3510C	
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	3510C	
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	3510C	
480-135500-9	SUPE-W-99-050318	Total/NA	Water	3510C	
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	3510C	
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	3510C	
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	3510C	
480-135500-14	SUPE-W-18D-050318	Total/NA	Water	3510C	
MB 480-413163/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-413163/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	3510C	
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	3510C	

TestAmerica Buffalo

QC Association Summary

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

TestAmerica Job ID: 480-135500-1

GC/MS Semi VOA (Continued)

Analysis Batch: 413347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	8270D LL	413163
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	8270D LL	413163
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	8270D LL	413163
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	8270D LL	413163
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	8270D LL	413163
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	8270D LL	413163
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	8270D LL	413163
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	8270D LL	413163
480-135500-9	SUPE-W-99-050318	Total/NA	Water	8270D LL	413163
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	8270D LL	413163
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	8270D LL	413163
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	8270D LL	413163
480-135500-14	SUPE-W-18D-050318	Total/NA	Water	8270D LL	413163
MB 480-413163/1-A	Method Blank	Total/NA	Water	8270D LL	413163
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	8270D LL	413163
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	8270D LL	413163

Analysis Batch: 413579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-413163/2-A	Lab Control Sample	Total/NA	Water	8270D LL	413163

Prep Batch: 431418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	3510C	
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	3510C	
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	3510C	
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	3510C	
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	3510C	
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	3510C	
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	3510C	
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	3510C	
480-135500-9	SUPE-W-99-050318	Total/NA	Water	3510C	
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	3510C	
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	3510C	
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	3510C	
MB 500-431418/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-431418/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	3510C	
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	3510C	

Analysis Batch: 431644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	8270D	431418
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	8270D	431418
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	8270D	431418
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	8270D	431418
MB 500-431418/1-A	Method Blank	Total/NA	Water	8270D	431418
LCS 500-431418/2-A	Lab Control Sample	Total/NA	Water	8270D	431418

TestAmerica Buffalo

QC Association Summary

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

TestAmerica Job ID: 480-135500-1

GC/MS Semi VOA (Continued)

Prep Batch: 431815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-14	SUPE-W-18D-050318	Total/NA	Water	3510C	
MB 500-431815/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-431815/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 431890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	8270D	431418
480-135500-14	SUPE-W-18D-050318	Total/NA	Water	8270D	431815
MB 500-431815/1-A	Method Blank	Total/NA	Water	8270D	431815
LCS 500-431815/2-A	Lab Control Sample	Total/NA	Water	8270D	431815
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	8270D	431418
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	8270D	431418

Analysis Batch: 431968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	8270D	431418
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	8270D	431418
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	8270D	431418
480-135500-9	SUPE-W-99-050318	Total/NA	Water	8270D	431418
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	8270D	431418
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	8270D	431418
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	8270D	431418

Lab Chronicle

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

Date Collected: 05/02/18 15:44

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413737	05/11/18 01:39	S1V	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431644	05/10/18 22:55	WDS	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 14:25	RJS	TAL BUF

Client Sample ID: SUPE-EB-01-050218

Lab Sample ID: 480-135500-2

Date Collected: 05/02/18 17:15

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413737	05/11/18 02:03	S1V	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431644	05/10/18 23:19	WDS	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 14:54	RJS	TAL BUF

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

Date Collected: 05/03/18 09:25

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 01:48	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431890	05/12/18 02:06	GES	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 13:56	RJS	TAL BUF

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

Date Collected: 05/03/18 11:55

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 02:15	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431644	05/10/18 23:44	WDS	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 15:24	RJS	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-12CR-050318

Lab Sample ID: 480-135500-5

Date Collected: 05/03/18 14:07

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 02:42	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431644	05/11/18 00:08	WDS	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 15:53	RJS	TAL BUF

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

Date Collected: 05/03/18 14:42

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 03:09	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/12/18 21:44	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 16:22	RJS	TAL BUF

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Date Collected: 05/03/18 15:40

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 03:36	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/12/18 22:12	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 16:52	RJS	TAL BUF

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

Date Collected: 05/02/18 15:52

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413737	05/11/18 02:27	S1V	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/12/18 22:40	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 17:21	RJS	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Date Collected: 05/03/18 01:01

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 04:03	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/12/18 23:07	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 17:50	RJS	TAL BUF

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 04:30	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/12/18 23:35	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 18:19	RJS	TAL BUF

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Date Collected: 05/03/18 15:54

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 04:57	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/13/18 00:02	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 18:49	RJS	TAL BUF

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Date Collected: 05/03/18 13:28

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 05:24	AMM	TAL BUF
Total/NA	Prep	3510C			431418	05/09/18 14:20	DX	TAL CHI
Total/NA	Analysis	8270D		1	431968	05/13/18 00:30	AJD	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 19:18	RJS	TAL BUF

TestAmerica Buffalo

Lab Chronicle

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

TestAmerica Job ID: 480-135500-1

Client Sample ID: SUPE-TB-02-050318

Lab Sample ID: 480-135500-13

Date Collected: 05/03/18 00:00

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413988	05/12/18 01:21	AMM	TAL BUF

Client Sample ID: SUPE-W-18D-050318

Lab Sample ID: 480-135500-14

Date Collected: 05/03/18 09:29

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431815	05/11/18 15:25	DX	TAL CHI
Total/NA	Analysis	8270D		1	431890	05/12/18 01:40	GES	TAL CHI
Total/NA	Prep	3510C			413163	05/08/18 14:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	413347	05/09/18 19:47	RJS	TAL BUF

Client Sample ID: SUPE-W-TB-01-050218

Lab Sample ID: 480-135500-15

Date Collected: 05/02/18 00:00

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	413745	05/11/18 08:26	LCH	TAL BUF

Laboratory References:

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

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 480-135500-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998310390	08-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270D LL	3510C	Water	2-Chlorophenol
8270D LL	3510C	Water	2-Methylphenol
8270D LL	3510C	Water	2-Nitrophenol

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18

Laboratory: TestAmerica Pittsburgh

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-18
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-18
Florida	NELAP	4	E871008	06-30-18
Illinois	NELAP	5	200005	06-30-18
Kansas	NELAP	7	E-10350	01-31-19
Louisiana	NELAP	6	04041	06-30-18
Nevada	State Program	9	PA00164	07-31-18
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-18
New York	NELAP	2	11182	03-31-19
North Carolina (WW/SW)	State Program	4	434	12-31-18
Oregon	NELAP Secondary AB	10	PA-2151	01-28-19
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-18 *
Texas	NELAP	6	T104704528-15-2	03-31-19
US Fish & Wildlife	Federal		LE94312A-1	07-31-18
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-18 *
Virginia	NELAP	3	460189	09-14-18
West Virginia DEP	State Program	3	142	01-31-19
Wisconsin	State Program	5	998027800	08-31-18

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

Method Summary

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

TestAmerica Job ID: 480-135500-1

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

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



Sample Summary

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

TestAmerica Job ID: 480-135500-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-135500-1	SUPE-W-06A-050218	Water	05/02/18 15:44	05/05/18 09:00
480-135500-2	SUPE-EB-01-050218	Water	05/02/18 17:15	05/05/18 09:00
480-135500-3	SUPE-W-06C-050318	Water	05/03/18 09:25	05/05/18 09:00
480-135500-4	SUPE-W-12A-050318	Water	05/03/18 11:55	05/05/18 09:00
480-135500-5	SUPE-W-12CR-050318	Water	05/03/18 14:07	05/05/18 09:00
480-135500-6	SUPE-EB-02-050318	Water	05/03/18 14:42	05/05/18 09:00
480-135500-7	SUPE-W-30A-050318	Water	05/03/18 15:40	05/05/18 09:00
480-135500-8	SUPE-W-30C-050318	Water	05/02/18 15:52	05/05/18 09:00
480-135500-9	SUPE-W-99-050318	Water	05/03/18 01:01	05/05/18 09:00
480-135500-10	SUPE-W-28C-050318	Water	05/03/18 11:13	05/05/18 09:00
480-135500-11	SUPE-W-10AR2-050318	Water	05/03/18 15:54	05/05/18 09:00
480-135500-12	SUPE-W-04AR2-050318	Water	05/03/18 13:28	05/05/18 09:00
480-135500-13	SUPE-TB-02-050318	Water	05/03/18 00:00	05/05/18 09:00
480-135500-14	SUPE-W-18D-050318	Water	05/03/18 09:29	05/05/18 09:00
480-135500-15	SUPE-W-TB-01-050218	Water	05/02/18 00:00	05/05/18 09:00

Quantitation Limit Exceptions Summary

Client: Field & Technical Services LLC

TestAmerica Job ID: 480-135500-1

Project/Site: Superior, WI Semiannual Groundwater

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260C	Water	1,1,1-Trichloroethane	ug/L	1.0	2.7333
8260C	Water	1,2,4-Trimethylbenzene	ug/L	1.0	2.500
8260C	Water	1,3,5-Trimethylbenzene	ug/L	1.0	2.5667
8260C	Water	Benzene	ug/L	1.0	1.3667
8260C	Water	Chloromethane	ug/L	1.0	1.1667
8260C	Water	Ethylbenzene	ug/L	1.0	2.4667
8260C	Water	m-Xylene & p-Xylene	ug/L	2.0	2.200
8260C	Water	Naphthalene	ug/L	1.0	1.4333
8260C	Water	n-Butylbenzene	ug/L	1.0	2.1333
8260C	Water	N-Propylbenzene	ug/L	1.0	2.300
8260C	Water	o-Xylene	ug/L	1.0	2.5333
8260C	Water	Styrene	ug/L	1.0	2.4333
8260C	Water	Toluene	ug/L	1.0	1.700
8260C	Water	Xylenes, Total	ug/L	2.0	2.200
8270D LL	Water	Benzo[a]pyrene	ug/L	0.18	0.433
8270D LL	Water	Hexachlorobenzene	ug/L	0.50	0.7333
8270D LL	Water	Pentachlorophenol	ug/L	1.0	1.1357
8270D LL	Water	Phenanthrene	ug/L	0.20	0.2066



CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#

***500**



480-135500 COC

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TABUF
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

Company: Field & Technical Services
 Address: 20C Third Avenue
 Carnegie, PA 15106
 (412) 279-3363

Client: Betzer East, Inc.
 Contact: (724) 858-5953
 btresk.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Reservative Ions		Notes
				Reservative Ions	Total Bottle Count	
05/02/2018	GW	SUP-E-W-311C-050218	8270C_SVOC (less naphtha)	3	3	

Temp 2.7 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
Printed Name: Elen Tresek	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:	
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/02/2018 1821	Date/Time: 05/02/2018 0900	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500784

500784

Project Name: Superior 2018 1SA Sampling
Project Number: OM-0553-18
Labo atory: TAKNOX
Shipm ent Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (724) 856-5953
 btre.sk.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Reservative Ione	Total Bottle Count	Notes
05/02/2018	1552	GW	SUP-E-W-31C-050218	8290_Dioxins/Furans	2	2	

Temp 2.7#ICE

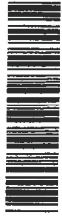
Relinquished by: Signature: <i>[Signature]</i> Printed Name: Ben Tresek Firm: FTS Date/Time: 05/02/2018 1821	Received by: Signature: <i>[Signature]</i> Printed Name: Vukob Firm: TA Date/Time: 05/05/18 0900	Relinquished by: Signature: Printed Name: Firm:	Received by: Signature: Printed Name: Firm: Date/Time:
Urgency Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard			





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500677



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0556-18
 Laboratory: TABUF
 Shipment Method FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
 Contact: (412) 680-4312
 brick.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
				None	naphtha		
05/03/2018	0101	GW SUPE-W-99-050318	3	0	3		
05/03/2018	0929	GW SUPE-W-18D-050318	3	3	0		
05/03/2018	1113	GW SUPE-W-28C-050318	3	0	3		
05/03/2018	1554	GW SUPE-W-10AR2-050318	3	0	3		
5/3/2018	1828	GW SUPE-W-04AR2-050318	3	0	3		

313
Temp 31.6#ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Brendan Rick</i>	Signature: <i>Wankow</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Brendan Rick	Printed Name: <i>Wankow</i>	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/03/2018 1753	Date/Time: 05/05/18 0900	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500679



Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TAKNOX
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (412) 680-4312
 brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes
					None	8290_Dioxins/Furans		
05/09/2018	0101	GW	SUPE-W-99-050318	2	2	0		
05/03/2018	1113	GW	SUPE-W-28C-050318	2	2	0		
05/03/2018	1554	GW	SUPE-W-10AR2-050318	2	2	0		
5/3/19	1328	GW	SUPE-W-24AR2-050318	2	2	0		

313
Temp 316 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature: <i>Brendan Rick</i>	Signature: <i>Shankow</i>	Signature:	Signature:
Printed Name: Brendan Rick	Printed Name: <i>Shankow</i>	Printed Name:	Printed Name:
Firm: FTS	Firm: <i>TA</i>	Firm:	Firm:
Date/Time: 05/03/2018 1753	Date/Time: <i>5/5/18 09:00</i>	Date/Time:	Date/Time:

Turnaround Requirements
<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard





CHAIN OF CUSTODY-RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500678



Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TAPIT
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (412) 680-4312
 brick.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative	Total Bottle Count	Notes:
				8260B_VOA+naphtha		
				HCL		
05/03/2018	GW	SUPE-TB-02-050318	2		2	0
05/03/2018	GW	SUPE-W-99-050318	3		3	0
05/03/2018	GW	SUPE-W-28C-050318	3		3	0
05/03/2018	GW	SUPE-W-10AR2-050318	3		3	0
5/3/18	GW	SUPE-W-04AR2-050318	3		3	0

3.3
Temp 3.6 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Brendan Rick</i>	Signature: <i>Urozkow</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Brendan Rick	Printed Name: Urozkow	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/03/2018 1753	Date/Time: 05/05/18 0946	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500785

500785

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TAPIT
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beezer East, Inc.
 Contact: (724) 858-5953
 btrsk.2006@fts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Reservative ICL		Notes:
				Reservative ICL	Total Bottle Count	
05/02/2018	GW	SUP-E-TB-C1-050218	2	2		
05/02/2018	GW	SUP-E-W-31C-050218	3	3		

Temp 2.7#17CE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Elen Trask	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/02/2018 1821	Date/Time: <i>[Signature]</i>	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500672



Project Name: Superior 2018 1SA Sampling
Project Number: OM-0553-18
Company: Field & Technical Services
Client: Bezer East, Inc.
Labo atory: TAPIT
Address: 20C Third Avenue
Contact: (412) 680-4312
Ship ment Method: FEDEX
Program: Superior 2018 1SA Sampling_001
Carnegie, PA 15106
brick.2003@f-ts.com
(412) 279-3363

Sample Date	Sample Time	Matrix	Identification	Analysis	Reservative ICL	Total Bottle Count	Notes
05/02/2018	1544	GW	SUP E-W-01A-050218	3	8260R_VOA+naphtha	3	
05/02/2018	1715	GW	SUP E-EB-1-050218	3		3	

2.9
Temp 2.7 #ICE

Relinquished by: Signature: <i>[Signature]</i> Printed Name: Brundan Rick Firm: FTS Date/Time: 05/02/2018 1819	Received by: Signature: <i>[Signature]</i> Printed Name: <i>[Signature]</i> Firm: TA Date/Time: 05/02/2018 0940	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:
Surround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard			





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500673



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TABUF
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beezer East, Inc.
 Contact (412) 680-4312
 brick.2003@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Reservative (none)	Total Bottle Count	Notes
05/02/2018	GW	SUP-E-W-01A-050218	8270C SVOC (less naphtha)		3	
05/02/2018	GW	SUP-E-EB-C1-050218			3	

2,9
Temp 2.7 #1 ICE

Relinquished by: Signature: <i>Brandon Rick</i> Printed Name: Brandon Rick Firm: FTS Date/Time: 05/02/2018 1819	Received by: Signature: <i>Yurkew</i> Printed Name: Yurkew Firm: TA Date/Time: 05/05/18 0956	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:	Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500671



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TAKNOX
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beezer East, Inc.
 Contact: (412) 680-4312
 brick.2003@fts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8290 Dioxins/Furans	Reservative	Total Bottle Count	Notes:
05/02/2018	1544	GW	SUP-E-W-06A-050218	2	2			
05/02/2018	1715	GW	SUP-E-EB-C1-050218	2	2			

29
Temp 2.7#1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Brandon Rick</i>	Signature: <i>Max Kow</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Brandon Rick	Printed Name: Max Kow	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/02/2018 1819	Date/Time: 05/05/18 0900	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF # 500791

500791

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0556-18
 Laboratory: TAPIT
 Shipment Method FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
 Contact: (724) 858-5953
 btrask.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative	Total Bottle Count	Notes:
			8260B_VOA+naphtha	HCL		
05/03/2018	GW	SUPE-W-06C-050318	3		3	
05/03/2018	GW	SUPE-W-06C-MS/MSD-050318	6		6	
05/03/2018	GW	SUPE-W-12A-050318	3		3	
05/03/2018	GW	SUPE-W-12R-050318	3		3	
05/03/2018	GW	SUPE-EB-02-050318	3		3	
05/03/2018	GW	SUPE-W-30A-050318	3		3	

3.2
Temp 3.0#1 Ice

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Ben Trask	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/03/2018 1759	Date/Time: 05/03/18 0900	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500790

500790

Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TABUF
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (724) 858-5953
 btrask.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative		Notes:
				None	naphtha)	
			Total Bottle Count			
05/03/2018	GW	SUPE-W-06C-MS/MSD-050318	6	6		
05/03/2018	GW	SUPE-W-06C-050318	3	3		
05/03/2018	GW	SUPE-W-12A-050318	3	3		
05/03/2018	GW	SUPE-W-12CR-050318	3	3		
05/03/2018	GW	SUPE-EB-02-050318	3	3		
05/03/2018	GW	SUPE-W-30A-050318	3	3		

3.8
Temp 3.0#1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature:	Signature:	Signature:	Signature:
Printed Name: Een Trask	Printed Name: V. Kolob	Printed Name:	Printed Name:
Firm: FTS	Firm: TA	Firm:	Firm:
Date/Time: 05/03/2018 1759	Date/Time: 05/05/18 0900	Date/Time:	Date/Time:
		Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard	





**CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS
REQUEST FORM**

REF.# 500789

500789

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0556-18
 Laboratory: TAKNOX
 Shipment Method FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
 Contact: (724) 858-5953
 btrask.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative	8290_Dioxins/Furans													Notes:	
						Total Bottle Count														
05/03/2018	0925	GW	SUPE-W-06C-MS/MSD-050318	4	None	4														
05/03/2018	0925	GW	SUPE-W-06C-050318	2		2														
05/03/2018	1155	GW	SUPE-W-12A-050318	2		2														
05/03/2018	1407	GW	SUPE-W-12CR-050318	2		2														
05/03/2018	1442	GW	SUPE-EB-02-050318	2		2														
05/03/2018	1540	GW	SUPE-W-30A-050318	2		2														

3.2
Temp 3.0 #1 JCF

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
Printed Name: Ben Trask	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:	
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/03/2018 1759	Date/Time: 05/05/18 0800	Date/Time:	Date/Time:	



Chain of Custody Record

Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 5815 Middlebrook Pike, Knoxville State, Zip: TN, 37921 Phone: 865-291-3000(Tel) 865-584-4315(Fax) Email: Project Name: Superior, WI Semiannual Groundwater Site:		Lab P/N: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com State of Origin: Wisconsin Carrier Tracking No(s): State of Origin: Wisconsin Accreditions Required (See note): State Program - Wisconsin		COC No: 480-42040-1 Page: Page 1 of 2 Job #: 480-135500-1	
Due Date Requested: 5/23/2018 TAT Requested (days): PO #: WO #: Project #: 18015916 SOW#:		Analysis Requested M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: 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 Other:	
Sample Date Sample Time Sample Type (C=Comp, G=Grab) Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=Air)		Field Filtered Sample (Yes or No) Performance MS/MSD (Yes or No) 8290A/8290_P_Sep 17 Isomers + Totals		Total Number of Containers Special Instructions/Note:	
Sample Identification - Client ID (Lab ID) SUPE-W-06A-050218 (480-135500-1) SUPE-EB-01-050218 (480-135500-2) SUPE-W-6C-050318 (480-135500-3) SUPE-W-6C-050318 (480-135500-3MS) SUPE-W-6C-050318 (480-135500-3MSD) SUPE-W-12A-050318 (480-135500-4) SUPE-W-12CR-050318 (480-135500-5) SUPE-EB-02-050318 (480-135500-6) SUPE-W-30A-050318 (480-135500-7)		Preservation Code Water Water Water Water Water Water Water Water Water Water		CUSTOMY SEALS INTACT RETURNED AT RT 24, 17, 2.1c CT 24, 17, 2.1c HAD 3.2 5-9-18 300PMS FENX # 4271607168137M P0	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date: 5/21/18 1600
 Relinquished by: [Signature] Company: [Signature]
 Relinquished by: Date/Time: 5-9-18 09:45 Company: JAKOX
 Relinquished by: Date/Time: Company: Company:

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ Months
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Cooler Temperature(s): °C and Other Remarks:

Chain of Custody Record

Client Information (Sub Contract Lab)		Lab P#:	Bortot, Veronica	Carrier Tracking No(s):	COC No: 480-42040.2
Client Contact		E-Mail:	veronica.bortot@testamericainc.com	State of Origin:	Wisconsin
Shipping/Receiving		Accreditations Required (See note): State Program - Wisconsin		Page:	Page 2 of 2
Company:		TestAmerica Laboratories, Inc.		Job #:	480-135500-1
Address:		5815 Middlebrook Pike,		Analysis Requested	
City:		Knoxville		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)	
State, Zip:		TN, 37921		Preservation Codes: 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 Other:	
Phone:		865-291-3000(Tel) 865-584-4315(Fax)		Total Number of Containers	
Email:				2	
Project Name:		Superior, WI Semiannual Groundwater		2	
Site:				2	
Project #:		18015916		2	
SSOW#:				2	
Due Date Requested:		5/23/2018		2	
TAT Requested (days):				2	
PO #:				2	
WO #:				2	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
5/2/18		15:52 Central		Water	
5/3/18		01:01 Central		Water	
5/3/18		11:13 Central		Water	
5/3/18		15:54 Central		Water	
5/3/18		13:28 Central		Water	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Type (C=Comp, G=grab)	
SUPE-W-30C-050318 (480-135500-8)		5/2/18		Water	
SUPE-W-99-050318 (480-135500-9)		5/3/18		Water	
SUPE-W-28C-050318 (480-135500-10)		5/3/18		Water	
SUPE-W-10AR2-050318 (480-135500-11)		5/3/18		Water	
SUPE-W-04AR2-050318 (480-135500-12)		5/3/18		Water	
Special Instructions/Note:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
				8290A/8290_P_Sep 17 Isomers + Totals	
Possible Hazard Identification		Matrix (H=Water, S=solid, O=water, A=Air)		Special Instructions/Note:	
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2			
Empty Kit Relinquished by:		Date:		Time:	
Relinquished by:		5/2/18 16:00		Company: TA NY	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

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:



TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
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>SL46</u> Correction factor: <u>0.01 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	Labeling Verified by: _____ Date: _____
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	pH test strip lot number: _____
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	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
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	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?	/		/	<input type="checkbox"/> Headspace (VOA only)	Date: _____ Time: _____
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, lab will adjust	
20. For rad samples was sample activity info. Provided?	/		/	<input type="checkbox"/> Project missing info	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: [Signature] Date: 5-9-18





Client Information (Sub Contract Lab)				Sampler: Bortot, Veronica		Lab PM: Bortot, Veronica		Carrier Tracking No(s):		COC No: 480-42039.1	
Client Contact: Shipping/Receiving				Phone:		E-Mail: veronica.bortot@testamericainc.com		State of Origin: Wisconsin		Page: Page 1 of 2	
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Wisconsin						Job #: 480-135500-1	
Address: 2417 Bond Street, City: University Park State, Zip: IL, 60484 Phone: 708-534-5200(Tel) 708-534-5211(Fax) Email:				Due Date Requested: 5/22/2018 TAT Requested (days):		Analysis Requested		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:			
Project Name: Superior, WI Semiannual Groundwater Site:				PO #: WO #: Project #: 18015916 SSOW#:							
Sample Identification - Client ID (Lab ID)				Sample Date		Sample Time		Sample Type (C=comp, G=grab)		MATRIX (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	
										Field Filtered Sample (Yes or No)	
										Perform MS/MSD (Yes or No)	
										8270D/3510C (MOD) Semivolatiles, project list with n	
										Total Number of containers	
										Special Instructions/Note:	
SUPE-W-06A-050218 (480-135500-1)				5/2/18		15:44 Central		Water		X	
SUPE-EB-01-050218 (480-135500-2)				5/2/18		17:15 Central		Water		X	
SUPE-W-6C-050318 (480-135500-3)				5/3/18		09:25 Central		Water		X	
SUPE-W-6C-050318 (480-135500-3MS)				5/3/18		09:25 Central		MS Water		X	
SUPE-W-6C-050318 (480-135500-3MSD)				5/3/18		09:25 Central		MSD Water		X	
SUPE-W-12A-050318 (480-135500-4)				5/3/18		11:55 Central		Water		X	
SUPE-W-12CR-050318 (480-135500-5)				5/3/18		14:07 Central		Water		X	
SUPE-EB-02-050318 (480-135500-6)				5/3/18		14:42 Central		Water		X	
SUPE-W-30A-050318 (480-135500-7)				5/3/18		15:40 Central		Water		X	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Unconfirmed				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:			

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time: 5/2/18 1600		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Relinquished by:		Date/Time:		Company:		Date/Time: 05/09/18 0930	
Relinquished by:		Date/Time:		Company:		Date/Time:	

Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: (1.8 → 3.3) (0.8 → 2.3) (3.7)

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving		Phone:	Bortot, Veronica		480-42039.2
Company: TestAmerica Laboratories, Inc.		E-Mail:	veronica.bortot@testamericainc.com	State of Origin: Wisconsin	Page: Page 2 of 2
Address: 2417 Bond Street, City: University Park State, Zip: IL, 60484 Phone: 708-534-5200(Tel) 708-534-5211(Fax) Email:		Due Date Requested: 5/22/2018	Accreditations Required (See note): State Program - Wisconsin		Job #: 480-135500-1
Project Name: Superior, WI Semiannual Groundwater Site:		TAT Requested (days):	Analysis Requested		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
Project #: 18015916 SSOW#:		PO #:	Field Filtered Sample (Yes or No)		Total Number of Containers
Sample Identification - Client ID (Lab ID)		WO #:	Perform MS/MSD (Yes or No)		
Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8270D/9510C (MOD) Semivolatiles, project list with n	Special Instructions/Note:
Preservation Code:					
SUPE-W-30C-050318 (480-135500-8)	5/2/18	15:52 Central	Water	X	2
SUPE-W-99-050318 (480-135500-9)	5/3/18	01:01 Central	Water	X	2
SUPE-W-28C-050318 (480-135500-10)	5/3/18	11:13 Central	Water	X	2
SUPE-W-10AR2-050318 (480-135500-11)	5/3/18	15:54 Central	Water	X	2
SUPE-W-04AR2-050318 (480-135500-12)	5/3/18	13:28 Central	Water	X	2
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.					
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
Unconfirmed			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2	Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
				05/09/18 0930	TA
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:			



Client Information (Sub Contract Lab)		Sampler:		Lab PM: Bortot, Veronica		Carrier Tracking No(s):		COC No: 480-42143.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: veronica.bortot@testamericainc.com		State of Origin: Wisconsin		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin		Job #: 480-135500-1		Preservation Codes:			
Address: 2417 Bond Street, City: University Park State, Zip: IL, 60484 Phone: 708-534-5200(Tel) 708-534-5211(Fax) Email:		Due Date Requested: 5/22/2018 TAT Requested (days):		PO #:		WO #:		Project #: 18015916 SSOW#:	
Project Name: Superior, WI Semiannual Groundwater Site:		Analysis Requested		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, AS=Air)	
SUPE-W-18D-050318 (480-135500-14)		5/3/18		09:29 Central		Water		X	
Preservation Code:		X		X		X		X	
Special Instructions/Note:								2	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:		
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: -0.2 → 1.3					



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-135500-1

Login Number: 135500

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wallace, Cameron

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: 480-135500-1

Login Number: 135500

List Number: 2

Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

List Creation: 05/09/18 10:41 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	
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.	True	

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-135500-1

Login Number: 135500

List Number: 4

Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

List Creation: 05/11/18 12:36 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	
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	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-135500-2

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:

6/11/2018 8:57:40 AM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

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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.

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Definitions/Glossary

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

TestAmerica Job ID: 480-135500-2

Qualifiers

Dioxin

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
F2	MS/MSD RPD exceeds control limits

Glossary

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

Case Narrative

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

TestAmerica Job ID: 480-135500-2

Job ID: 480-135500-2

Laboratory: TestAmerica Buffalo

Narrative

**Job Narrative
480-135500-2**

Comments

No additional comments.

Receipt

The samples were received on 5/5/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 2.7° C, 2.9° C, 3.0° C, 3.2° C, 3.3° C and 3.6° C.

Dioxin

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

Organic Prep

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

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Detection Summary

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	6.6	J	48	0.45	pg/L	1		8290A	Total/NA
Total HpCDD	29	J	48	0.45	pg/L	1		8290A	Total/NA
OCDD	55	J	97	0.10	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-EB-01-050218

Lab Sample ID: 480-135500-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
OCDD	3.8	J	100	0.054	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	1.9	J	48	0.63	pg/L	1		8290A	Total/NA
OCDD	8.5	J	96	0.18	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	30	J	48	1.4	pg/L	1		8290A	Total/NA
Total HpCDD	60		48	1.4	pg/L	1		8290A	Total/NA
OCDD	270		96	0.48	pg/L	1		8290A	Total/NA
Total PeCDF	9.2	J	48	0.58	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.6	J	48	0.61	pg/L	1		8290A	Total/NA
Total HxCDF	22	J	48	0.64	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	8.2	J	48	0.22	pg/L	1		8290A	Total/NA
Total HpCDF	28	J	48	0.26	pg/L	1		8290A	Total/NA
OCDF	26	J	96	1.5	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-12CR-050318

Lab Sample ID: 480-135500-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
OCDD	31	J	100	0.23	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

No Detections.

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDD	11	J	53	0.27	pg/L	1		8290A	Total/NA
Total HxCDD	38	J	53	0.25	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	220		53	1.9	pg/L	1		8290A	Total/NA
Total HpCDD	520		53	1.9	pg/L	1		8290A	Total/NA
OCDD	2800		110	0.72	pg/L	1		8290A	Total/NA
Total TCDF	11		11	1.0	pg/L	1		8290A	Total/NA
Total PeCDF	47	J	53	0.83	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	10	J	53	1.4	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	11	J	53	1.4	pg/L	1		8290A	Total/NA
Total HxCDF	200		53	1.5	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	82		53	1.1	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-30A-050318 (Continued)

Lab Sample ID: 480-135500-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8,9-HpCDF	9.5	J	53	1.3	pg/L	1		8290A	Total/NA
Total HpCDF	310		53	1.2	pg/L	1		8290A	Total/NA
OCDF	240		110	1.7	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	9.2	J	48	0.23	pg/L	1		8290A	Total/NA
Total HpCDD	25	J	48	0.23	pg/L	1		8290A	Total/NA
OCDD	190		95	0.72	pg/L	1		8290A	Total/NA
Total HpCDF	5.5	J	48	0.14	pg/L	1		8290A	Total/NA
OCDF	18	J	95	2.1	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	2.7	J	49	0.52	pg/L	1		8290A	Total/NA
Total HpCDD	11	J	49	0.52	pg/L	1		8290A	Total/NA
OCDD	41	J	99	0.17	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	1.9	J	48	0.18	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	7.9	J	48	0.43	pg/L	1		8290A	Total/NA
Total HpCDD	28	J	48	0.43	pg/L	1		8290A	Total/NA
OCDD	80	J	96	0.73	pg/L	1		8290A	Total/NA
Total HxCDF	0.91	J	48	0.13	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	5.8	J	48	0.21	pg/L	1		8290A	Total/NA
Total HpCDF	11	J	48	0.26	pg/L	1		8290A	Total/NA
OCDF	13	J	96	2.0	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	11	J	48	0.74	pg/L	1		8290A	Total/NA
Total HpCDD	44	J	48	0.74	pg/L	1		8290A	Total/NA
OCDD	110		95	0.21	pg/L	1		8290A	Total/NA
Total HxCDF	1.7	J	48	0.076	pg/L	1		8290A	Total/NA
Total HpCDF	7.3	J	48	0.039	pg/L	1		8290A	Total/NA
OCDF	8.9	J	95	1.0	pg/L	1		8290A	Total/NA

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	0.63	J	50	0.10	pg/L	1		8290A	Total/NA
Total PeCDD	0.63	J	50	0.10	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDD	2.0	J	50	0.11	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDD	4.9	J	50	0.13	pg/L	1		8290A	Total/NA
1,2,3,7,8,9-HxCDD	3.2	J	50	0.11	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-04AR2-050318 (Continued)

Lab Sample ID: 480-135500-12

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	34	J	50	0.12	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDD	160		50	0.41	pg/L	1		8290A	Total/NA
Total HpCDD	390		50	0.41	pg/L	1		8290A	Total/NA
OCDD	1300		99	0.20	pg/L	1		8290A	Total/NA
Total TCDF	1.9	J	9.9	0.14	pg/L	1		8290A	Total/NA
Total PeCDF	6.9	J	50	0.17	pg/L	1		8290A	Total/NA
1,2,3,4,7,8-HxCDF	3.2	J	50	0.33	pg/L	1		8290A	Total/NA
1,2,3,6,7,8-HxCDF	2.7	J	50	0.32	pg/L	1		8290A	Total/NA
2,3,4,6,7,8-HxCDF	1.0	J	50	0.30	pg/L	1		8290A	Total/NA
Total HxCDF	61		50	0.32	pg/L	1		8290A	Total/NA
1,2,3,4,6,7,8-HpCDF	37	J	50	0.17	pg/L	1		8290A	Total/NA
1,2,3,4,7,8,9-HpCDF	2.3	J	50	0.21	pg/L	1		8290A	Total/NA
Total HpCDF	140		50	0.19	pg/L	1		8290A	Total/NA
OCDF	100		99	0.37	pg/L	1		8290A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo



Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-06A-050218

Lab Sample ID: 480-135500-1

Date Collected: 05/02/18 15:44

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.1		9.7	3.1	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total TCDD	<3.1		9.7	3.1	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,7,8-PeCDD	<0.72		48	0.72	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total PeCDD	<0.72		48	0.72	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,4,7,8-HxCDD	<0.27		48	0.27	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,6,7,8-HxCDD	<0.31		48	0.31	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,7,8,9-HxCDD	<0.27		48	0.27	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total HxCDD	<0.31		48	0.31	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,4,6,7,8-HpCDD	6.6	J	48	0.45	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total HpCDD	29	J	48	0.45	pg/L		05/11/18 07:00	06/07/18 02:27	1
OCDD	55	J	97	0.10	pg/L		05/11/18 07:00	06/07/18 02:27	1
2,3,7,8-TCDF	<1.3		9.7	1.3	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total TCDF	<1.3		9.7	1.3	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,7,8-PeCDF	<0.23		48	0.23	pg/L		05/11/18 07:00	06/07/18 02:27	1
2,3,4,7,8-PeCDF	<0.20		48	0.20	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total PeCDF	<0.23		48	0.23	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,4,7,8-HxCDF	<0.074		48	0.074	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,6,7,8-HxCDF	<0.074		48	0.074	pg/L		05/11/18 07:00	06/07/18 02:27	1
2,3,4,6,7,8-HxCDF	<0.077		48	0.077	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,7,8,9-HxCDF	<0.085		48	0.085	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total HxCDF	<0.085		48	0.085	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,4,6,7,8-HpCDF	<0.30		48	0.30	pg/L		05/11/18 07:00	06/07/18 02:27	1
1,2,3,4,7,8,9-HpCDF	<0.40		48	0.40	pg/L		05/11/18 07:00	06/07/18 02:27	1
Total HpCDF	<0.40		48	0.40	pg/L		05/11/18 07:00	06/07/18 02:27	1
OCDF	<1.0		97	1.0	pg/L		05/11/18 07:00	06/07/18 02:27	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	75		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,7,8-PeCDD	76		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-OCDD	63		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-2,3,7,8-TCDF	72		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,7,8-PeCDF	69		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-2,3,4,7,8-PeCDF	67		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,4,7,8-HxCDF	67		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,6,7,8-HxCDF	74		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-2,3,4,6,7,8-HxCDF	74		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,7,8,9-HxCDF	82		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,4,6,7,8-HpCDF	62		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-1,2,3,4,7,8,9-HpCDF	67		40 - 135				05/11/18 07:00	06/07/18 02:27	1
13C-OCDF	73		40 - 135				05/11/18 07:00	06/07/18 02:27	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-EB-01-050218

Lab Sample ID: 480-135500-2

Date Collected: 05/02/18 17:15

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.4		10	3.4	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total TCDD	<3.4		10	3.4	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,7,8-PeCDD	<0.63		52	0.63	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total PeCDD	<0.63		52	0.63	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,4,7,8-HxCDD	<0.095		52	0.095	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,6,7,8-HxCDD	<0.096		52	0.096	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,7,8,9-HxCDD	<0.089		52	0.089	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total HxCDD	<0.096		52	0.096	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,4,6,7,8-HpCDD	<0.36		52	0.36	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total HpCDD	<0.36		52	0.36	pg/L		05/11/18 07:00	06/07/18 03:27	1
OCDD	3.8	J	100	0.054	pg/L		05/11/18 07:00	06/07/18 03:27	1
2,3,7,8-TCDF	<1.3		10	1.3	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total TCDF	<1.3		10	1.3	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,7,8-PeCDF	<0.36		52	0.36	pg/L		05/11/18 07:00	06/07/18 03:27	1
2,3,4,7,8-PeCDF	<0.33		52	0.33	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total PeCDF	<0.36		52	0.36	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,4,7,8-HxCDF	<0.15		52	0.15	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,6,7,8-HxCDF	<0.15		52	0.15	pg/L		05/11/18 07:00	06/07/18 03:27	1
2,3,4,6,7,8-HxCDF	<0.14		52	0.14	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,7,8,9-HxCDF	<0.18		52	0.18	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total HxCDF	<0.18		52	0.18	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,4,6,7,8-HpCDF	<0.12		52	0.12	pg/L		05/11/18 07:00	06/07/18 03:27	1
1,2,3,4,7,8,9-HpCDF	<0.15		52	0.15	pg/L		05/11/18 07:00	06/07/18 03:27	1
Total HpCDF	<0.15		52	0.15	pg/L		05/11/18 07:00	06/07/18 03:27	1
OCDF	<1.6		100	1.6	pg/L		05/11/18 07:00	06/07/18 03:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,7,8-PeCDD	67		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,4,7,8-HxCDD	67		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,6,7,8-HxCDD	68		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-OCDD	65		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-2,3,7,8-TCDF	65		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,7,8-PeCDF	59		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-2,3,4,7,8-PeCDF	58		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,4,7,8-HxCDF	60		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,6,7,8-HxCDF	61		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-2,3,4,6,7,8-HxCDF	66		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,7,8,9-HxCDF	69		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,4,6,7,8-HpCDF	60		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-1,2,3,4,7,8,9-HpCDF	67		40 - 135	05/11/18 07:00	06/07/18 03:27	1
13C-OCDF	69		40 - 135	05/11/18 07:00	06/07/18 03:27	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-06C-050318

Lab Sample ID: 480-135500-3

Date Collected: 05/03/18 09:25

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.2		9.6	3.2	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total TCDD	<3.2		9.6	3.2	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,7,8-PeCDD	<0.63		48	0.63	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total PeCDD	1.9	J	48	0.63	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,4,7,8-HxCDD	<0.12		48	0.12	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,6,7,8-HxCDD	<0.14		48	0.14	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,7,8,9-HxCDD	<0.12		48	0.12	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total HxCDD	<0.14		48	0.14	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,4,6,7,8-HpCDD	<0.46		48	0.46	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total HpCDD	<0.46		48	0.46	pg/L		05/11/18 07:00	06/07/18 04:27	1
OCDD	8.5	J	96	0.18	pg/L		05/11/18 07:00	06/07/18 04:27	1
2,3,7,8-TCDF	<0.82		9.6	0.82	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total TCDF	<0.82		9.6	0.82	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,7,8-PeCDF	<0.045		48	0.045	pg/L		05/11/18 07:00	06/07/18 04:27	1
2,3,4,7,8-PeCDF	<0.039		48	0.039	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total PeCDF	<0.045		48	0.045	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,4,7,8-HxCDF	<0.23		48	0.23	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,6,7,8-HxCDF	<0.24		48	0.24	pg/L		05/11/18 07:00	06/07/18 04:27	1
2,3,4,6,7,8-HxCDF	<0.22		48	0.22	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,7,8,9-HxCDF	<0.26		48	0.26	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total HxCDF	<0.26		48	0.26	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,4,6,7,8-HpCDF	<0.041		48	0.041	pg/L		05/11/18 07:00	06/07/18 04:27	1
1,2,3,4,7,8,9-HpCDF	<0.051		48	0.051	pg/L		05/11/18 07:00	06/07/18 04:27	1
Total HpCDF	<0.051		48	0.051	pg/L		05/11/18 07:00	06/07/18 04:27	1
OCDF	<1.7		96	1.7	pg/L		05/11/18 07:00	06/07/18 04:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,7,8-PeCDD	67		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,4,7,8-HxCDD	71		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,6,7,8-HxCDD	75		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-OCDD	73		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-2,3,7,8-TCDF	66		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,7,8-PeCDF	62		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-2,3,4,7,8-PeCDF	61		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,6,7,8-HxCDF	68		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-2,3,4,6,7,8-HxCDF	70		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,7,8,9-HxCDF	79		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-1,2,3,4,7,8,9-HpCDF	68		40 - 135	05/11/18 07:00	06/07/18 04:27	1
13C-OCDF	74		40 - 135	05/11/18 07:00	06/07/18 04:27	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-12A-050318

Lab Sample ID: 480-135500-4

Date Collected: 05/03/18 11:55

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<2.9		9.6	2.9	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total TCDD	<2.9		9.6	2.9	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,7,8-PeCDD	<1.1		48	1.1	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total PeCDD	<1.1		48	1.1	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,4,7,8-HxCDD	<0.55		48	0.55	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,6,7,8-HxCDD	<0.54		48	0.54	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,7,8,9-HxCDD	<0.51		48	0.51	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total HxCDD	<0.55		48	0.55	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,4,6,7,8-HpCDD	30	J	48	1.4	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total HpCDD	60		48	1.4	pg/L		05/11/18 07:00	06/07/18 12:33	1
OCDD	270		96	0.48	pg/L		05/11/18 07:00	06/07/18 12:33	1
2,3,7,8-TCDF	<1.1		9.6	1.1	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total TCDF	<1.1		9.6	1.1	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,7,8-PeCDF	<0.59		48	0.59	pg/L		05/11/18 07:00	06/07/18 12:33	1
2,3,4,7,8-PeCDF	<0.56		48	0.56	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total PeCDF	9.2	J	48	0.58	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,4,7,8-HxCDF	<0.61		48	0.61	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,6,7,8-HxCDF	2.6	J	48	0.61	pg/L		05/11/18 07:00	06/07/18 12:33	1
2,3,4,6,7,8-HxCDF	<0.58		48	0.58	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,7,8,9-HxCDF	<0.75		48	0.75	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total HxCDF	22	J	48	0.64	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,4,6,7,8-HpCDF	8.2	J	48	0.22	pg/L		05/11/18 07:00	06/07/18 12:33	1
1,2,3,4,7,8,9-HpCDF	<0.30		48	0.30	pg/L		05/11/18 07:00	06/07/18 12:33	1
Total HpCDF	28	J	48	0.26	pg/L		05/11/18 07:00	06/07/18 12:33	1
OCDF	26	J	96	1.5	pg/L		05/11/18 07:00	06/07/18 12:33	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C-2,3,7,8-TCDD	82		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,7,8-PeCDD	84		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,6,7,8-HxCDD	85		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,4,6,7,8-HpCDD	85		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-OCDD	77		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-2,3,7,8-TCDF	75		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,7,8-PeCDF	73		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-2,3,4,7,8-PeCDF	70		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,4,7,8-HxCDF	65		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,6,7,8-HxCDF	72		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-2,3,4,6,7,8-HxCDF	76		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,7,8,9-HxCDF	86		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-1,2,3,4,7,8,9-HpCDF	77		40 - 135				05/11/18 07:00	06/07/18 12:33	1
13C-OCDF	82		40 - 135				05/11/18 07:00	06/07/18 12:33	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-12CR-050318

Lab Sample ID: 480-135500-5

Date Collected: 05/03/18 14:07

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.1		10	3.1	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total TCDD	<3.1		10	3.1	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,7,8-PeCDD	<0.48		50	0.48	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total PeCDD	<0.48		50	0.48	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,4,7,8-HxCDD	<0.064		50	0.064	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,6,7,8-HxCDD	<0.071		50	0.071	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,7,8,9-HxCDD	<0.063		50	0.063	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total HxCDD	<0.071		50	0.071	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,4,6,7,8-HpCDD	<0.69		50	0.69	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total HpCDD	<0.69		50	0.69	pg/L		05/11/18 07:00	06/07/18 13:33	1
OCDD	31	J	100	0.23	pg/L		05/11/18 07:00	06/07/18 13:33	1
2,3,7,8-TCDF	<1.4		10	1.4	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total TCDF	<1.4		10	1.4	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,7,8-PeCDF	<0.61		50	0.61	pg/L		05/11/18 07:00	06/07/18 13:33	1
2,3,4,7,8-PeCDF	<0.53		50	0.53	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total PeCDF	<0.61		50	0.61	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,4,7,8-HxCDF	<0.22		50	0.22	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,6,7,8-HxCDF	<0.22		50	0.22	pg/L		05/11/18 07:00	06/07/18 13:33	1
2,3,4,6,7,8-HxCDF	<0.21		50	0.21	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,7,8,9-HxCDF	<0.30		50	0.30	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total HxCDF	<0.30		50	0.30	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,4,6,7,8-HpCDF	<0.019		50	0.019	pg/L		05/11/18 07:00	06/07/18 13:33	1
1,2,3,4,7,8,9-HpCDF	<0.026		50	0.026	pg/L		05/11/18 07:00	06/07/18 13:33	1
Total HpCDF	<0.026		50	0.026	pg/L		05/11/18 07:00	06/07/18 13:33	1
OCDF	<2.0		100	2.0	pg/L		05/11/18 07:00	06/07/18 13:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	74		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,7,8-PeCDD	76		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-OCDD	64		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-2,3,7,8-TCDF	69		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,7,8-PeCDF	67		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-2,3,4,7,8-PeCDF	68		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,4,7,8-HxCDF	66		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-2,3,4,6,7,8-HxCDF	76		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,7,8,9-HxCDF	79		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,4,6,7,8-HpCDF	62		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-1,2,3,4,7,8,9-HpCDF	65		40 - 135	05/11/18 07:00	06/07/18 13:33	1
13C-OCDF	69		40 - 135	05/11/18 07:00	06/07/18 13:33	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-EB-02-050318

Lab Sample ID: 480-135500-6

Date Collected: 05/03/18 14:42

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<4.1		10	4.1	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total TCDD	<4.1		10	4.1	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,7,8-PeCDD	<1.1		52	1.1	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total PeCDD	<1.1		52	1.1	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,4,7,8-HxCDD	<0.61		52	0.61	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,6,7,8-HxCDD	<0.70		52	0.70	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,7,8,9-HxCDD	<0.61		52	0.61	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total HxCDD	<0.70		52	0.70	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,4,6,7,8-HpCDD	<0.27		52	0.27	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total HpCDD	<0.27		52	0.27	pg/L		05/11/18 07:00	06/07/18 14:33	1
OCDD	<0.032		100	0.032	pg/L		05/11/18 07:00	06/07/18 14:33	1
2,3,7,8-TCDF	<1.4		10	1.4	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total TCDF	<1.4		10	1.4	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,7,8-PeCDF	<0.90		52	0.90	pg/L		05/11/18 07:00	06/07/18 14:33	1
2,3,4,7,8-PeCDF	<0.82		52	0.82	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total PeCDF	<0.90		52	0.90	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,4,7,8-HxCDF	<0.11		52	0.11	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,6,7,8-HxCDF	<0.11		52	0.11	pg/L		05/11/18 07:00	06/07/18 14:33	1
2,3,4,6,7,8-HxCDF	<0.10		52	0.10	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,7,8,9-HxCDF	<0.13		52	0.13	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total HxCDF	<0.13		52	0.13	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,4,6,7,8-HpCDF	<0.024		52	0.024	pg/L		05/11/18 07:00	06/07/18 14:33	1
1,2,3,4,7,8,9-HpCDF	<0.028		52	0.028	pg/L		05/11/18 07:00	06/07/18 14:33	1
Total HpCDF	<0.028		52	0.028	pg/L		05/11/18 07:00	06/07/18 14:33	1
OCDF	<1.4		100	1.4	pg/L		05/11/18 07:00	06/07/18 14:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,7,8-PeCDD	68		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,4,7,8-HxCDD	66		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-OCDD	72		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-2,3,7,8-TCDF	65		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,7,8-PeCDF	62		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-2,3,4,7,8-PeCDF	61		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,4,7,8-HxCDF	57		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,6,7,8-HxCDF	64		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-2,3,4,6,7,8-HxCDF	71		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,7,8,9-HxCDF	73		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,4,6,7,8-HpCDF	63		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135	05/11/18 07:00	06/07/18 14:33	1
13C-OCDF	82		40 - 135	05/11/18 07:00	06/07/18 14:33	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Date Collected: 05/03/18 15:40

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<2.3		11	2.3	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total TCDD	<2.3		11	2.3	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,7,8-PeCDD	<0.61		53	0.61	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total PeCDD	<0.61		53	0.61	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,4,7,8-HxCDD	<0.25		53	0.25	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,6,7,8-HxCDD	11	J	53	0.27	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,7,8,9-HxCDD	<0.24		53	0.24	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total HxCDD	38	J	53	0.25	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,4,6,7,8-HpCDD	220		53	1.9	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total HpCDD	520		53	1.9	pg/L		05/11/18 07:00	06/07/18 15:34	1
OCDD	2800		110	0.72	pg/L		05/11/18 07:00	06/07/18 15:34	1
2,3,7,8-TCDF	<1.0		11	1.0	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total TCDF	11		11	1.0	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,7,8-PeCDF	<0.78		53	0.78	pg/L		05/11/18 07:00	06/07/18 15:34	1
2,3,4,7,8-PeCDF	<0.88		53	0.88	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total PeCDF	47	J	53	0.83	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,4,7,8-HxCDF	10	J	53	1.4	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,6,7,8-HxCDF	11	J	53	1.4	pg/L		05/11/18 07:00	06/07/18 15:34	1
2,3,4,6,7,8-HxCDF	<1.4		53	1.4	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,7,8,9-HxCDF	<1.7		53	1.7	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total HxCDF	200		53	1.5	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,4,6,7,8-HpCDF	82		53	1.1	pg/L		05/11/18 07:00	06/07/18 15:34	1
1,2,3,4,7,8,9-HpCDF	9.5	J	53	1.3	pg/L		05/11/18 07:00	06/07/18 15:34	1
Total HpCDF	310		53	1.2	pg/L		05/11/18 07:00	06/07/18 15:34	1
OCDF	240		110	1.7	pg/L		05/11/18 07:00	06/07/18 15:34	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	81		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,7,8-PeCDD	78		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,6,7,8-HxCDD	81		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,4,6,7,8-HpCDD	73		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-OCDD	74		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-2,3,7,8-TCDF	72		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,7,8-PeCDF	74		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-2,3,4,7,8-PeCDF	70		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,4,7,8-HxCDF	71		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,6,7,8-HxCDF	75		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-2,3,4,6,7,8-HxCDF	77		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,7,8,9-HxCDF	82		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135	05/11/18 07:00	06/07/18 15:34	1
13C-OCDF	79		40 - 135	05/11/18 07:00	06/07/18 15:34	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

Date Collected: 05/02/18 15:52

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.5		9.5	3.5	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total TCDD	<3.5		9.5	3.5	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,7,8-PeCDD	<1.3		48	1.3	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total PeCDD	<1.3		48	1.3	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,4,7,8-HxCDD	<0.12		48	0.12	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,6,7,8-HxCDD	<0.14		48	0.14	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,7,8,9-HxCDD	<0.12		48	0.12	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total HxCDD	<0.14		48	0.14	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,4,6,7,8-HpCDD	9.2	J	48	0.23	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total HpCDD	25	J	48	0.23	pg/L		05/11/18 07:00	06/07/18 16:35	1
OCDD	190		95	0.72	pg/L		05/11/18 07:00	06/07/18 16:35	1
2,3,7,8-TCDF	<1.1		9.5	1.1	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total TCDF	<1.1		9.5	1.1	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,7,8-PeCDF	<0.53		48	0.53	pg/L		05/11/18 07:00	06/07/18 16:35	1
2,3,4,7,8-PeCDF	<0.48		48	0.48	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total PeCDF	<0.53		48	0.53	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,4,7,8-HxCDF	<0.20		48	0.20	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,6,7,8-HxCDF	<0.20		48	0.20	pg/L		05/11/18 07:00	06/07/18 16:35	1
2,3,4,6,7,8-HxCDF	<0.20		48	0.20	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,7,8,9-HxCDF	<0.25		48	0.25	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total HxCDF	<0.25		48	0.25	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,4,6,7,8-HpCDF	<0.12		48	0.12	pg/L		05/11/18 07:00	06/07/18 16:35	1
1,2,3,4,7,8,9-HpCDF	<0.15		48	0.15	pg/L		05/11/18 07:00	06/07/18 16:35	1
Total HpCDF	5.5	J	48	0.14	pg/L		05/11/18 07:00	06/07/18 16:35	1
OCDF	18	J	95	2.1	pg/L		05/11/18 07:00	06/07/18 16:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	76		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,7,8-PeCDD	76		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,6,7,8-HxCDD	79		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-OCDD	62		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-2,3,7,8-TCDF	72		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,7,8-PeCDF	69		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-2,3,4,7,8-PeCDF	65		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,4,7,8-HxCDF	67		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,6,7,8-HxCDF	74		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-2,3,4,6,7,8-HxCDF	75		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,7,8,9-HxCDF	79		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,4,6,7,8-HpCDF	63		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-1,2,3,4,7,8,9-HpCDF	66		40 - 135	05/11/18 07:00	06/07/18 16:35	1
13C-OCDF	64		40 - 135	05/11/18 07:00	06/07/18 16:35	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Date Collected: 05/03/18 01:01

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.0		9.9	3.0	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total TCDD	<3.0		9.9	3.0	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,7,8-PeCDD	<0.89		49	0.89	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total PeCDD	<0.89		49	0.89	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,4,7,8-HxCDD	<0.23		49	0.23	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,6,7,8-HxCDD	<0.25		49	0.25	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,7,8,9-HxCDD	<0.22		49	0.22	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total HxCDD	<0.25		49	0.25	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,4,6,7,8-HpCDD	2.7	J	49	0.52	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total HpCDD	11	J	49	0.52	pg/L		05/11/18 07:00	06/07/18 17:35	1
OCDD	41	J	99	0.17	pg/L		05/11/18 07:00	06/07/18 17:35	1
2,3,7,8-TCDF	<0.76		9.9	0.76	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total TCDF	<0.76		9.9	0.76	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,7,8-PeCDF	<0.43		49	0.43	pg/L		05/11/18 07:00	06/07/18 17:35	1
2,3,4,7,8-PeCDF	<0.38		49	0.38	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total PeCDF	<0.43		49	0.43	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,4,7,8-HxCDF	<0.020		49	0.020	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,6,7,8-HxCDF	<0.022		49	0.022	pg/L		05/11/18 07:00	06/07/18 17:35	1
2,3,4,6,7,8-HxCDF	<0.021		49	0.021	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,7,8,9-HxCDF	<0.025		49	0.025	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total HxCDF	<0.025		49	0.025	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,4,6,7,8-HpCDF	<0.068		49	0.068	pg/L		05/11/18 07:00	06/07/18 17:35	1
1,2,3,4,7,8,9-HpCDF	<0.078		49	0.078	pg/L		05/11/18 07:00	06/07/18 17:35	1
Total HpCDF	<0.078		49	0.078	pg/L		05/11/18 07:00	06/07/18 17:35	1
OCDF	<2.2		99	2.2	pg/L		05/11/18 07:00	06/07/18 17:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	77		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,7,8-PeCDD	78		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,4,7,8-HxCDD	73		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,6,7,8-HxCDD	83		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,4,6,7,8-HpCDD	78		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-OCDD	72		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-2,3,7,8-TCDF	72		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,7,8-PeCDF	71		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-2,3,4,7,8-PeCDF	71		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,4,7,8-HxCDF	66		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-2,3,4,6,7,8-HxCDF	76		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,7,8,9-HxCDF	86		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-1,2,3,4,7,8,9-HpCDF	74		40 - 135	05/11/18 07:00	06/07/18 17:35	1
13C-OCDF	78		40 - 135	05/11/18 07:00	06/07/18 17:35	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<2.5		9.6	2.5	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total TCDD	<2.5		9.6	2.5	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,7,8-PeCDD	<0.87		48	0.87	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total PeCDD	<0.87		48	0.87	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,4,7,8-HxCDD	<0.18		48	0.18	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,6,7,8-HxCDD	<0.19		48	0.19	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,7,8,9-HxCDD	<0.17		48	0.17	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total HxCDD	1.9	J	48	0.18	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,4,6,7,8-HpCDD	7.9	J	48	0.43	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total HpCDD	28	J	48	0.43	pg/L		05/11/18 07:00	06/08/18 03:14	1
OCDD	80	J	96	0.73	pg/L		05/11/18 07:00	06/08/18 03:14	1
2,3,7,8-TCDF	<0.93		9.6	0.93	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total TCDF	<0.93		9.6	0.93	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,7,8-PeCDF	<0.39		48	0.39	pg/L		05/11/18 07:00	06/08/18 03:14	1
2,3,4,7,8-PeCDF	<0.41		48	0.41	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total PeCDF	<0.41		48	0.41	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,4,7,8-HxCDF	<0.13		48	0.13	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,6,7,8-HxCDF	<0.14		48	0.14	pg/L		05/11/18 07:00	06/08/18 03:14	1
2,3,4,6,7,8-HxCDF	<0.13		48	0.13	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,7,8,9-HxCDF	<0.15		48	0.15	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total HxCDF	0.91	J	48	0.13	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,4,6,7,8-HpCDF	5.8	J	48	0.21	pg/L		05/11/18 07:00	06/08/18 03:14	1
1,2,3,4,7,8,9-HpCDF	<0.31		48	0.31	pg/L		05/11/18 07:00	06/08/18 03:14	1
Total HpCDF	11	J	48	0.26	pg/L		05/11/18 07:00	06/08/18 03:14	1
OCDF	13	J	96	2.0	pg/L		05/11/18 07:00	06/08/18 03:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	77		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,7,8-PeCDD	74		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,4,7,8-HxCDD	80		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,6,7,8-HxCDD	84		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-OCDD	69		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-2,3,7,8-TCDF	72		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,7,8-PeCDF	70		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-2,3,4,7,8-PeCDF	69		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,4,7,8-HxCDF	70		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,6,7,8-HxCDF	73		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-2,3,4,6,7,8-HxCDF	76		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,7,8,9-HxCDF	82		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,4,6,7,8-HpCDF	70		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-1,2,3,4,7,8,9-HpCDF	73		40 - 135	05/11/18 07:00	06/08/18 03:14	1
13C-OCDF	75		40 - 135	05/11/18 07:00	06/08/18 03:14	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Date Collected: 05/03/18 15:54

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<2.1		9.5	2.1	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total TCDD	<2.1		9.5	2.1	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,7,8-PeCDD	<0.55		48	0.55	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total PeCDD	<0.55		48	0.55	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,4,7,8-HxCDD	<0.21		48	0.21	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,6,7,8-HxCDD	<0.25		48	0.25	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,7,8,9-HxCDD	<0.21		48	0.21	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total HxCDD	<0.25		48	0.25	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,4,6,7,8-HpCDD	11	J	48	0.74	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total HpCDD	44	J	48	0.74	pg/L		05/11/18 07:00	06/08/18 04:14	1
OCDD	110		95	0.21	pg/L		05/11/18 07:00	06/08/18 04:14	1
2,3,7,8-TCDF	<0.79		9.5	0.79	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total TCDF	<0.79		9.5	0.79	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,7,8-PeCDF	<0.20		48	0.20	pg/L		05/11/18 07:00	06/08/18 04:14	1
2,3,4,7,8-PeCDF	<0.21		48	0.21	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total PeCDF	<0.21		48	0.21	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,4,7,8-HxCDF	<0.077		48	0.077	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,6,7,8-HxCDF	<0.075		48	0.075	pg/L		05/11/18 07:00	06/08/18 04:14	1
2,3,4,6,7,8-HxCDF	<0.068		48	0.068	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,7,8,9-HxCDF	<0.084		48	0.084	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total HxCDF	1.7	J	48	0.076	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,4,6,7,8-HpCDF	<0.033		48	0.033	pg/L		05/11/18 07:00	06/08/18 04:14	1
1,2,3,4,7,8,9-HpCDF	<0.045		48	0.045	pg/L		05/11/18 07:00	06/08/18 04:14	1
Total HpCDF	7.3	J	48	0.039	pg/L		05/11/18 07:00	06/08/18 04:14	1
OCDF	8.9	J	95	1.0	pg/L		05/11/18 07:00	06/08/18 04:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,7,8-PeCDD	84		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,4,7,8-HxCDD	81		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,6,7,8-HxCDD	81		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-OCDD	63		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-2,3,7,8-TCDF	78		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,7,8-PeCDF	76		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-2,3,4,7,8-PeCDF	70		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,4,7,8-HxCDF	69		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,6,7,8-HxCDF	74		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-2,3,4,6,7,8-HxCDF	81		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,7,8,9-HxCDF	87		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,4,6,7,8-HpCDF	67		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-1,2,3,4,7,8,9-HpCDF	72		40 - 135	05/11/18 07:00	06/08/18 04:14	1
13C-OCDF	66		40 - 135	05/11/18 07:00	06/08/18 04:14	1

Client Sample Results

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Date Collected: 05/03/18 13:28

Matrix: Water

Date Received: 05/05/18 09:00

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<0.51		9.9	0.51	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total TCDD	<0.51		9.9	0.51	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,7,8-PeCDD	0.63	J	50	0.10	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total PeCDD	0.63	J	50	0.10	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,4,7,8-HxCDD	2.0	J	50	0.11	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,6,7,8-HxCDD	4.9	J	50	0.13	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,7,8,9-HxCDD	3.2	J	50	0.11	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total HxCDD	34	J	50	0.12	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,4,6,7,8-HpCDD	160		50	0.41	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total HpCDD	390		50	0.41	pg/L		05/11/18 07:00	06/08/18 05:15	1
OCDD	1300		99	0.20	pg/L		05/11/18 07:00	06/08/18 05:15	1
2,3,7,8-TCDF	<0.14		9.9	0.14	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total TCDF	1.9	J	9.9	0.14	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,7,8-PeCDF	<0.17		50	0.17	pg/L		05/11/18 07:00	06/08/18 05:15	1
2,3,4,7,8-PeCDF	<0.17		50	0.17	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total PeCDF	6.9	J	50	0.17	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,4,7,8-HxCDF	3.2	J	50	0.33	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,6,7,8-HxCDF	2.7	J	50	0.32	pg/L		05/11/18 07:00	06/08/18 05:15	1
2,3,4,6,7,8-HxCDF	1.0	J	50	0.30	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,7,8,9-HxCDF	<0.36		50	0.36	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total HxCDF	61		50	0.32	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,4,6,7,8-HpCDF	37	J	50	0.17	pg/L		05/11/18 07:00	06/08/18 05:15	1
1,2,3,4,7,8,9-HpCDF	2.3	J	50	0.21	pg/L		05/11/18 07:00	06/08/18 05:15	1
Total HpCDF	140		50	0.19	pg/L		05/11/18 07:00	06/08/18 05:15	1
OCDF	100		99	0.37	pg/L		05/11/18 07:00	06/08/18 05:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	82		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,7,8-PeCDD	85		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,4,7,8-HxCDD	73		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,6,7,8-HxCDD	71		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-OCDD	90		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-2,3,7,8-TCDF	77		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,7,8-PeCDF	79		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-2,3,4,7,8-PeCDF	74		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,6,7,8-HxCDF	64		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-2,3,4,6,7,8-HxCDF	70		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,7,8,9-HxCDF	77		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,4,6,7,8-HpCDF	61		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-1,2,3,4,7,8,9-HpCDF	75		40 - 135	05/11/18 07:00	06/08/18 05:15	1
13C-OCDF	96		40 - 135	05/11/18 07:00	06/08/18 05:15	1

Isotope Dilution Summary

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

TestAmerica Job ID: 480-135500-2

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD (40-135)	PeCDD (40-135)	HxCDD (40-135)	HxDD (40-135)	HpCDD (40-135)	OCDD (40-135)	TCDF (40-135)	PeCDF (40-135)
480-135500-1	SUPE-W-06A-050218	75	76	78	76	72	63	72	69
480-135500-2	SUPE-EB-01-050218	66	67	67	68	70	65	65	59
480-135500-3	SUPE-W-06C-050318	68	67	71	75	72	73	66	62
480-135500-3 MS	SUPE-W-06C-050318	75	74	71	74	74	69	69	69
480-135500-3 MSD	SUPE-W-06C-050318	64	65	66	69	70	72	63	60
480-135500-4	SUPE-W-12A-050318	82	84	76	85	85	77	75	73
480-135500-5	SUPE-W-12CR-050318	74	76	76	79	70	64	69	67
480-135500-6	SUPE-EB-02-050318	69	68	66	74	75	72	65	62
480-135500-7	SUPE-W-30A-050318	81	78	78	81	73	74	72	74
480-135500-8	SUPE-W-30C-050318	76	76	78	79	70	62	72	69
480-135500-9	SUPE-W-99-050318	77	78	73	83	78	72	72	71
480-135500-10	SUPE-W-28C-050318	77	74	80	84	76	69	72	70
480-135500-11	SUPE-W-10AR2-050318	83	84	81	81	74	63	78	76
480-135500-12	SUPE-W-04AR2-050318	82	85	73	71	77	90	77	79
LCS 140-20259/16-A	Lab Control Sample	71	77	71	73	79	81	66	69
MB 140-20259/15-A	Method Blank	70	69	71	71	75	69	65	61

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PeCF (40-135)	HxCDF (40-135)	HxDF (40-135)	13CHxCF (40-135)	HxCF (40-135)	HpCDF (40-135)	HpCDF2 (40-135)	13C-OCDF (40-135)
480-135500-1	SUPE-W-06A-050218	67	67	74	74	82	62	67	73
480-135500-2	SUPE-EB-01-050218	58	60	61	66	69	60	67	69
480-135500-3	SUPE-W-06C-050318	61	62	68	70	79	65	68	74
480-135500-3 MS	SUPE-W-06C-050318	69	62	67	69	78	64	68	78
480-135500-3 MSD	SUPE-W-06C-050318	58	53	54	64	70	56	66	80
480-135500-4	SUPE-W-12A-050318	70	65	72	76	86	70	77	82
480-135500-5	SUPE-W-12CR-050318	68	66	73	76	79	62	65	69
480-135500-6	SUPE-EB-02-050318	61	57	64	71	73	63	72	82
480-135500-7	SUPE-W-30A-050318	70	71	75	77	82	67	72	79
480-135500-8	SUPE-W-30C-050318	65	67	74	75	79	63	66	64
480-135500-9	SUPE-W-99-050318	71	66	73	76	86	65	74	78
480-135500-10	SUPE-W-28C-050318	69	70	73	76	82	70	73	75
480-135500-11	SUPE-W-10AR2-050318	70	69	74	81	87	67	72	66
480-135500-12	SUPE-W-04AR2-050318	74	62	64	70	77	61	75	96
LCS 140-20259/16-A	Lab Control Sample	66	58	60	69	73	61	74	87
MB 140-20259/15-A	Method Blank	62	59	64	67	73	60	66	74

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

Isotope Dilution Summary

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

TestAmerica Job ID: 480-135500-2

HxCDF = 13C-1,2,3,7,8,9-HxCDF
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
13C-OCDF = 13C-OCDF

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QC Sample Results

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

TestAmerica Job ID: 480-135500-2

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

Lab Sample ID: MB 140-20259/15-A
Matrix: Water
Analysis Batch: 20955

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20259

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.7		10	3.7	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total TCDD	<3.7		10	3.7	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,7,8-PeCDD	<1.4		50	1.4	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total PeCDD	<1.4		50	1.4	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,4,7,8-HxCDD	<0.45		50	0.45	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,6,7,8-HxCDD	<0.54		50	0.54	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,7,8,9-HxCDD	<0.45		50	0.45	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total HxCDD	<0.54		50	0.54	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,4,6,7,8-HpCDD	<0.36		50	0.36	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total HpCDD	<0.36		50	0.36	pg/L		05/11/18 07:00	06/07/18 01:27	1
OCDD	<0.070		100	0.070	pg/L		05/11/18 07:00	06/07/18 01:27	1
2,3,7,8-TCDF	<1.5		10	1.5	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total TCDF	<1.5		10	1.5	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,7,8-PeCDF	<1.8		50	1.8	pg/L		05/11/18 07:00	06/07/18 01:27	1
2,3,4,7,8-PeCDF	<1.5		50	1.5	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total PeCDF	<1.8		50	1.8	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,4,7,8-HxCDF	<0.75		50	0.75	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,6,7,8-HxCDF	<0.74		50	0.74	pg/L		05/11/18 07:00	06/07/18 01:27	1
2,3,4,6,7,8-HxCDF	<0.73		50	0.73	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,7,8,9-HxCDF	<0.85		50	0.85	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total HxCDF	<0.85		50	0.85	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,4,6,7,8-HpCDF	<0.11		50	0.11	pg/L		05/11/18 07:00	06/07/18 01:27	1
1,2,3,4,7,8,9-HpCDF	<0.16		50	0.16	pg/L		05/11/18 07:00	06/07/18 01:27	1
Total HpCDF	<0.16		50	0.16	pg/L		05/11/18 07:00	06/07/18 01:27	1
OCDF	<1.9		100	1.9	pg/L		05/11/18 07:00	06/07/18 01:27	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	70		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,7,8-PeCDD	69		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,4,7,8-HxCDD	71		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,6,7,8-HxCDD	71		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,4,6,7,8-HpCDD	75		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-OCDD	69		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-2,3,7,8-TCDF	65		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,7,8-PeCDF	61		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-2,3,4,7,8-PeCDF	62		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,4,7,8-HxCDF	59		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,6,7,8-HxCDF	64		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-2,3,4,6,7,8-HxCDF	67		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,7,8,9-HxCDF	73		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,4,6,7,8-HpCDF	60		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-1,2,3,4,7,8,9-HpCDF	66		40 - 135	05/11/18 07:00	06/07/18 01:27	1
13C-OCDF	74		40 - 135	05/11/18 07:00	06/07/18 01:27	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-2

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

Lab Sample ID: LCS 140-20259/16-A
Matrix: Water
Analysis Batch: 20955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20259

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	193		pg/L		96	77 - 127
1,2,3,7,8-PeCDD	1000	921		pg/L		92	78 - 128
1,2,3,4,7,8-HxCDD	1000	940		pg/L		94	73 - 123
1,2,3,6,7,8-HxCDD	1000	896		pg/L		90	72 - 127
1,2,3,7,8,9-HxCDD	1000	1010		pg/L		101	76 - 126
1,2,3,4,6,7,8-HpCDD	1000	891		pg/L		89	73 - 123
OCDD	2000	1760		pg/L		88	75 - 125
2,3,7,8-TCDF	200	189		pg/L		94	74 - 124
1,2,3,7,8-PeCDF	1000	872		pg/L		87	74 - 124
2,3,4,7,8-PeCDF	1000	963		pg/L		96	74 - 124
1,2,3,4,7,8-HxCDF	1000	890		pg/L		89	75 - 125
1,2,3,6,7,8-HxCDF	1000	896		pg/L		90	75 - 125
2,3,4,6,7,8-HxCDF	1000	928		pg/L		93	76 - 126
1,2,3,7,8,9-HxCDF	1000	910		pg/L		91	76 - 126
1,2,3,4,6,7,8-HpCDF	1000	973		pg/L		97	71 - 121
1,2,3,4,7,8,9-HpCDF	1000	909		pg/L		91	73 - 123
OCDF	2000	1670		pg/L		83	68 - 132

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	71		40 - 135
13C-1,2,3,7,8-PeCDD	77		40 - 135
13C-1,2,3,4,7,8-HxCDD	71		40 - 135
13C-1,2,3,6,7,8-HxCDD	73		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	79		40 - 135
13C-OCDD	81		40 - 135
13C-2,3,7,8-TCDF	66		40 - 135
13C-1,2,3,7,8-PeCDF	69		40 - 135
13C-2,3,4,7,8-PeCDF	66		40 - 135
13C-1,2,3,4,7,8-HxCDF	58		40 - 135
13C-1,2,3,6,7,8-HxCDF	60		40 - 135
13C-2,3,4,6,7,8-HxCDF	69		40 - 135
13C-1,2,3,7,8,9-HxCDF	73		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	61		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	74		40 - 135
13C-OCDF	87		40 - 135

Lab Sample ID: 480-135500-3 MS
Matrix: Water
Analysis Batch: 20955

Client Sample ID: SUPE-W-06C-050318
Prep Type: Total/NA
Prep Batch: 20259

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	<3.2		197	197		pg/L		100	77 - 127
1,2,3,7,8-PeCDD	<0.63		983	1040		pg/L		105	78 - 128
1,2,3,4,7,8-HxCDD	<0.12		983	973		pg/L		99	73 - 123
1,2,3,6,7,8-HxCDD	<0.14		983	933		pg/L		95	72 - 127
1,2,3,7,8,9-HxCDD	<0.12		983	1030		pg/L		105	76 - 126
1,2,3,4,6,7,8-HpCDD	<0.46		983	865		pg/L		88	73 - 123
OCDD	8.5	J	1970	1760		pg/L		89	75 - 125

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-2

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

Lab Sample ID: 480-135500-3 MS

Matrix: Water

Analysis Batch: 20955

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 20259

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDF	<0.82		197	212		pg/L		108	74 - 124
1,2,3,7,8-PeCDF	<0.045		983	920		pg/L		94	74 - 124
2,3,4,7,8-PeCDF	<0.039		983	927		pg/L		94	74 - 124
1,2,3,4,7,8-HxCDF	<0.23		983	989		pg/L		101	75 - 125
1,2,3,6,7,8-HxCDF	<0.24		983	964		pg/L		98	75 - 125
2,3,4,6,7,8-HxCDF	<0.22		983	964		pg/L		98	76 - 126
1,2,3,7,8,9-HxCDF	<0.26		983	890		pg/L		91	76 - 126
1,2,3,4,6,7,8-HpCDF	<0.041		983	956		pg/L		97	71 - 121
1,2,3,4,7,8,9-HpCDF	<0.051		983	929		pg/L		95	73 - 123
OCDF	<1.7		1970	1500		pg/L		77	49 - 134

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDD	75		40 - 135
13C-1,2,3,7,8-PeCDD	74		40 - 135
13C-1,2,3,4,7,8-HxCDD	71		40 - 135
13C-1,2,3,6,7,8-HxCDD	74		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135
13C-OCDD	69		40 - 135
13C-2,3,7,8-TCDF	69		40 - 135
13C-1,2,3,7,8-PeCDF	69		40 - 135
13C-2,3,4,7,8-PeCDF	69		40 - 135
13C-1,2,3,4,7,8-HxCDF	62		40 - 135
13C-1,2,3,6,7,8-HxCDF	67		40 - 135
13C-2,3,4,6,7,8-HxCDF	69		40 - 135
13C-1,2,3,7,8,9-HxCDF	78		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	68		40 - 135
13C-OCDF	78		40 - 135

Lab Sample ID: 480-135500-3 MSD

Matrix: Water

Analysis Batch: 20955

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 20259

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	<3.2		191	162	F2	pg/L		85	77 - 127	19	15
1,2,3,7,8-PeCDD	<0.63		954	981		pg/L		103	78 - 128	5	15
1,2,3,4,7,8-HxCDD	<0.12		954	968		pg/L		102	73 - 123	1	15
1,2,3,6,7,8-HxCDD	<0.14		954	952		pg/L		100	72 - 127	2	15
1,2,3,7,8,9-HxCDD	<0.12		954	965		pg/L		101	76 - 126	6	15
1,2,3,4,6,7,8-HpCDD	<0.46		954	890		pg/L		93	73 - 123	3	15
OCDD	8.5	J	1910	1770		pg/L		92	75 - 125	0	15
2,3,7,8-TCDF	<0.82		191	199		pg/L		104	74 - 124	6	15
1,2,3,7,8-PeCDF	<0.045		954	885		pg/L		93	74 - 124	4	15
2,3,4,7,8-PeCDF	<0.039		954	932		pg/L		98	74 - 124	1	15
1,2,3,4,7,8-HxCDF	<0.23		954	981		pg/L		103	75 - 125	1	15
1,2,3,6,7,8-HxCDF	<0.24		954	988		pg/L		104	75 - 125	3	15
2,3,4,6,7,8-HxCDF	<0.22		954	925		pg/L		97	76 - 126	4	15
1,2,3,7,8,9-HxCDF	<0.26		954	890		pg/L		93	76 - 126	0	15

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-135500-2

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

Lab Sample ID: 480-135500-3 MSD

Matrix: Water

Analysis Batch: 20955

Client Sample ID: SUPE-W-06C-050318

Prep Type: Total/NA

Prep Batch: 20259

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,2,3,4,6,7,8-HpCDF	<0.041		954	1010		pg/L		106	71 - 121	5	15
1,2,3,4,7,8,9-HpCDF	<0.051		954	905		pg/L		95	73 - 123	3	15
OCDF	<1.7		1910	1580		pg/L		83	49 - 134	5	15
		MSD	MSD								
Isotope Dilution	%Recovery	Qualifier	Limits								
13C-2,3,7,8-TCDD	64		40 - 135								
13C-1,2,3,7,8-PeCDD	65		40 - 135								
13C-1,2,3,4,7,8-HxCDD	66		40 - 135								
13C-1,2,3,6,7,8-HxCDD	69		40 - 135								
13C-1,2,3,4,6,7,8-HpCDD	70		40 - 135								
13C-OCDD	72		40 - 135								
13C-2,3,7,8-TCDF	63		40 - 135								
13C-1,2,3,7,8-PeCDF	60		40 - 135								
13C-2,3,4,7,8-PeCDF	58		40 - 135								
13C-1,2,3,4,7,8-HxCDF	53		40 - 135								
13C-1,2,3,6,7,8-HxCDF	54		40 - 135								
13C-2,3,4,6,7,8-HxCDF	64		40 - 135								
13C-1,2,3,7,8,9-HxCDF	70		40 - 135								
13C-1,2,3,4,6,7,8-HpCDF	56		40 - 135								
13C-1,2,3,4,7,8,9-HpCDF	66		40 - 135								
13C-OCDF	80		40 - 135								

QC Association Summary

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

TestAmerica Job ID: 480-135500-2

Specialty Organics

Prep Batch: 20259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	8290	
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	8290	
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	8290	
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	8290	
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	8290	
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	8290	
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	8290	
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	8290	
480-135500-9	SUPE-W-99-050318	Total/NA	Water	8290	
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	8290	
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	8290	
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	8290	
MB 140-20259/15-A	Method Blank	Total/NA	Water	8290	
LCS 140-20259/16-A	Lab Control Sample	Total/NA	Water	8290	
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	8290	
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	8290	

Analysis Batch: 20955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-1	SUPE-W-06A-050218	Total/NA	Water	8290A	20259
480-135500-2	SUPE-EB-01-050218	Total/NA	Water	8290A	20259
480-135500-3	SUPE-W-06C-050318	Total/NA	Water	8290A	20259
MB 140-20259/15-A	Method Blank	Total/NA	Water	8290A	20259
LCS 140-20259/16-A	Lab Control Sample	Total/NA	Water	8290A	20259
480-135500-3 MS	SUPE-W-06C-050318	Total/NA	Water	8290A	20259
480-135500-3 MSD	SUPE-W-06C-050318	Total/NA	Water	8290A	20259

Analysis Batch: 20998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-4	SUPE-W-12A-050318	Total/NA	Water	8290A	20259
480-135500-5	SUPE-W-12CR-050318	Total/NA	Water	8290A	20259
480-135500-6	SUPE-EB-02-050318	Total/NA	Water	8290A	20259
480-135500-7	SUPE-W-30A-050318	Total/NA	Water	8290A	20259
480-135500-8	SUPE-W-30C-050318	Total/NA	Water	8290A	20259
480-135500-9	SUPE-W-99-050318	Total/NA	Water	8290A	20259

Analysis Batch: 21023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-135500-10	SUPE-W-28C-050318	Total/NA	Water	8290A	20259
480-135500-11	SUPE-W-10AR2-050318	Total/NA	Water	8290A	20259
480-135500-12	SUPE-W-04AR2-050318	Total/NA	Water	8290A	20259

Lab Chronicle

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-06A-050218

Date Collected: 05/02/18 15:44

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20955	06/07/18 02:27	LKM	TAL KNX

Client Sample ID: SUPE-EB-01-050218

Date Collected: 05/02/18 17:15

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20955	06/07/18 03:27	LKM	TAL KNX

Client Sample ID: SUPE-W-06C-050318

Date Collected: 05/03/18 09:25

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20955	06/07/18 04:27	LKM	TAL KNX

Client Sample ID: SUPE-W-12A-050318

Date Collected: 05/03/18 11:55

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20998	06/07/18 12:33	KBL	TAL KNX

Client Sample ID: SUPE-W-12CR-050318

Date Collected: 05/03/18 14:07

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20998	06/07/18 13:33	KBL	TAL KNX

Client Sample ID: SUPE-EB-02-050318

Date Collected: 05/03/18 14:42

Date Received: 05/05/18 09:00

Lab Sample ID: 480-135500-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20998	06/07/18 14:33	KBL	TAL KNX

TestAmerica Buffalo

Lab Chronicle

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

TestAmerica Job ID: 480-135500-2

Client Sample ID: SUPE-W-30A-050318

Lab Sample ID: 480-135500-7

Date Collected: 05/03/18 15:40

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20998	06/07/18 15:34	KBL	TAL KNX

Client Sample ID: SUPE-W-30C-050318

Lab Sample ID: 480-135500-8

Date Collected: 05/02/18 15:52

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20998	06/07/18 16:35	KBL	TAL KNX

Client Sample ID: SUPE-W-99-050318

Lab Sample ID: 480-135500-9

Date Collected: 05/03/18 01:01

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	20998	06/07/18 17:35	KBL	TAL KNX

Client Sample ID: SUPE-W-28C-050318

Lab Sample ID: 480-135500-10

Date Collected: 05/03/18 11:13

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	21023	06/08/18 03:14	LKM	TAL KNX

Client Sample ID: SUPE-W-10AR2-050318

Lab Sample ID: 480-135500-11

Date Collected: 05/03/18 15:54

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	21023	06/08/18 04:14	LKM	TAL KNX

Client Sample ID: SUPE-W-04AR2-050318

Lab Sample ID: 480-135500-12

Date Collected: 05/03/18 13:28

Matrix: Water

Date Received: 05/05/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			20259	05/11/18 07:00	SSS	TAL KNX
Total/NA	Analysis	8290A		1	21023	06/08/18 05:15	LKM	TAL KNX

TestAmerica Buffalo

Lab Chronicle

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

TestAmerica Job ID: 480-135500-2

Laboratory References:

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

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Accreditation/Certification Summary

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

TestAmerica Job ID: 480-135500-2

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998310390	08-31-18

Laboratory: TestAmerica Knoxville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998044300	08-31-18

The following analytes are included in this report, but are not accredited/certified under this accreditation/certification:

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

Laboratory: TestAmerica Pittsburgh

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-18
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-18
Florida	NELAP	4	E871008	06-30-18
Illinois	NELAP	5	200005	06-30-18
Kansas	NELAP	7	E-10350	01-31-19
Louisiana	NELAP	6	04041	06-30-18
Nevada	State Program	9	PA00164	07-31-18
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-18
New York	NELAP	2	11182	03-31-19

Accreditation/Certification Summary

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

TestAmerica Job ID: 480-135500-2

Laboratory: TestAmerica Pittsburgh (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
North Carolina (WW/SW)	State Program	4	434	12-31-18
Oregon	NELAP Secondary AB	10	PA-2151	01-28-19
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-18 *
Texas	NELAP	6	T104704528-15-2	03-31-19
US Fish & Wildlife	Federal		LE94312A-1	07-31-18
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-18 *
Virginia	NELAP	3	460189	09-14-18
West Virginia DEP	State Program	3	142	01-31-19
Wisconsin	State Program	5	998027800	08-31-18

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

Method Summary

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

TestAmerica Job ID: 480-135500-2

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



Sample Summary

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

TestAmerica Job ID: 480-135500-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-135500-1	SUPE-W-06A-050218	Water	05/02/18 15:44	05/05/18 09:00
480-135500-2	SUPE-EB-01-050218	Water	05/02/18 17:15	05/05/18 09:00
480-135500-3	SUPE-W-06C-050318	Water	05/03/18 09:25	05/05/18 09:00
480-135500-4	SUPE-W-12A-050318	Water	05/03/18 11:55	05/05/18 09:00
480-135500-5	SUPE-W-12CR-050318	Water	05/03/18 14:07	05/05/18 09:00
480-135500-6	SUPE-EB-02-050318	Water	05/03/18 14:42	05/05/18 09:00
480-135500-7	SUPE-W-30A-050318	Water	05/03/18 15:40	05/05/18 09:00
480-135500-8	SUPE-W-30C-050318	Water	05/02/18 15:52	05/05/18 09:00
480-135500-9	SUPE-W-99-050318	Water	05/03/18 01:01	05/05/18 09:00
480-135500-10	SUPE-W-28C-050318	Water	05/03/18 11:13	05/05/18 09:00
480-135500-11	SUPE-W-10AR2-050318	Water	05/03/18 15:54	05/05/18 09:00
480-135500-12	SUPE-W-04AR2-050318	Water	05/03/18 13:28	05/05/18 09:00





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.#



*500

480-1355000 COC

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TABUF
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

Company: Field & Technical Services
 Address: 20C Third Avenue
 Carnegie, PA 15106
 (412) 279-3363

Client: Betzer East, Inc.
 Contact: (724) 858-5953
 btresk.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Reservative Ions	Total Bottle Count	Notes
05/02/2018	1552	GW	SUP-E-W-311C-050218	8270C_SVOC (less naphtha)		3	

Temp 2.7 #1 ICE

Relinquished by: Signature: <i>[Signature]</i> Printed Name: Elen Tesk Firm: FTS Date/Time: 05/02/2018 1821	Received by: Signature: <i>[Signature]</i> Printed Name: Elen Tesk Firm: TA Date/Time: 05/02/2018 0900	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:	Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500784

500784

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TAKNOX
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
 Contact: (724) 856-5953
 btre.sk.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Reservative Ione	Total Bottle Count	Notes
05/02/2018	1552	GW	SUP 2018-31C-050218		8290_Dioxins/Furans	2	

Temp 2.7#ICE

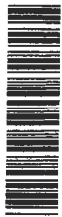
Relinquished by: Signature: <i>[Signature]</i> Printed Name: Ben Tresek Firm: FTS Date/Time: 05/02/2018 1821	Received by: Signature: <i>[Signature]</i> Printed Name: Vukob Firm: TA Date/Time: 05/18/2018 0900	Relinquished by: Signature: Printed Name: Firm:	Received by: Signature: Printed Name: Firm: Date/Time:
Tarnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard			





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500677



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0556-18
 Laboratory: TABUF
 Shipment Method FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
 Contact: (412) 680-4312
 brick.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
				None	naphtha		
05/03/2018	0101	SUPE-W-99-050318	3	0	3		
05/03/2018	0929	SUPE-W-18D-050318	3	3	0		
05/03/2018	1113	SUPE-W-28C-050318	3	0	3		
05/03/2018	1554	SUPE-W-10AR2-050318	3	0	3		
5/3/2018	1828	SUPE-W-04AR2-050318	3	0	3		

313
Temp 31.6#ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Brendan Rick</i>	Signature: <i>Wankow</i>	Signature:	Signature:	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
Printed Name: Brendan Rick	Printed Name: <i>Wankow</i>	Printed Name:	Printed Name:	
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/03/2018 1753	Date/Time: <i>05/05/18 0900</i>	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500679



Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TAKNOX
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (412) 680-4312
 brick.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes
					None	8290_Dioxins/Furans		
05/03/2018	0101	GW	SUPE-W-99-050318	2	2	0		
05/03/2018	1113	GW	SUPE-W-28C-050318	2	2	0		
05/03/2018	1554	GW	SUPE-W-10AR2-050318	2	2	0		
5/3/19	1328	GW	SUPE-W-24AR2-050318	2	2	0		

313
Temp 316 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature: <i>Brendan Rick</i>	Signature: <i>Shankow</i>	Signature:	Signature:
Printed Name: Brendan Rick	Printed Name: <i>Shankow</i>	Printed Name:	Printed Name:
Firm: FTS	Firm: <i>TR</i>	Firm:	Firm:
Date/Time: 05/03/2018 1753	Date/Time: <i>5/5/18 09:00</i>	Date/Time:	Date/Time:

Turnaround Requirements
<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard





CHAIN OF CUSTODY-RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500678



Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TAPIT
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (412) 680-4312
 brick.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative	Total Bottle Count	Notes:
				8260B_VOA+naphtha		
				HCL		
05/03/2018	GW	SUPE-TB-02-050318	2		2	0
05/03/2018	GW	SUPE-W-99-050318	3		3	0
05/03/2018	GW	SUPE-W-28C-050318	3		3	0
05/03/2018	GW	SUPE-W-10AR2-050318	3		3	0
5/3/18	GW	SUPE-W-04AR2-050318	3		3	0

3.3
Temp 3.6 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Brendan Rick</i>	Signature: <i>Urozkow</i>	Signature:	Signature:	<input type="checkbox"/> Rush
Printed Name: Brendan Rick	Printed Name: Urozkow	Printed Name:	Printed Name:	<input checked="" type="checkbox"/> Standard
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 05/03/2018 1753	Date/Time: 05/05/18 0946	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500785

500785

Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TAPIT
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beezer East, Inc.
 Contact: (724) 858-5953
 btrask.2006@fts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Reservative ICL	Notes:
05/02/2018	GW	SUP-2B-C1-050218	2	8260B_VOA+naphtha	
05/02/2018	GW	SUP-E-W-31C-050218	3		
Total Bottle Count					

Temp 2.7#17CE

Relinquished by: Signature: <i>[Signature]</i> Printed Name: Elen Trask Firm: FTS	Received by: Signature: <i>[Signature]</i> Printed Name: <i>[Signature]</i> Firm: TA	Relinquished by: Signature: Printed Name: Firm:	Received by: Signature: Printed Name: Firm:
Date/Time: 05/02/2018 1821		Date/Time:	
Rush: <input type="checkbox"/>		Standard: <input checked="" type="checkbox"/>	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500672



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TAPIT
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Bezer East, Inc.
 Contact: (412) 680-4312
 brick.2003@f-ts.com

Sample Date	Sample Time	Matrix	Identification	Analysis	Reservative ICL	Total Bottle Count	Notes
05/02/2018	1544	GW	SUP E-W-01A-050218		8260R_VOA+naphtha	3	
05/02/2018	1715	GW	SUP E-EB-1-050218			3	

2.9
Temp 2.7 #ICE

Relinquished by: Signature: <i>Brundan Rick</i> Printed Name: Brundan Rick Firm: FTS Date/Time: 05/02/2018 1819	Received by: Signature: <i>Chris Kow</i> Printed Name: Chris Kow Firm: TA Date/Time: 05/02/2018 0940	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:	Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500673



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TABUF
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beezer East, Inc.
 Contact (412) 680-4312
 brick.2003@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Reservative (none)	Total Bottle Count	Notes
05/02/2018	GW	SUP-E-W-01A-050218	8270C SVOC (less naphtha)		3	
05/02/2018	GW	SUP-E-EB-C1-050218			3	

2,9

Temp 2.7 #1 ICE

Relinquished by: Signature: <i>Brandon Rick</i> Printed Name: Brandon Rick Firm: FTS Date/Time: 05/02/2018 1819	Received by: Signature: <i>Yurkew</i> Printed Name: <i>Likolp</i> Firm: TA Date/Time: <i>05/05/18 09:50</i>	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:	Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500671



Project Name: Superior 2018 1SA Sampling
 Project Number: OM-0553-18
 Laboratory: TAKNOX
 Shipment Method: FEDEX
 Program: Superior 2018 1SA Sampling_001

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

Client: Beezer East, Inc.
 Contact: (412) 680-4312
 brick.2003@fts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8290 Dioxins/Furans	Reservative	Total Bottle Count	Notes:
05/02/2018	1544	GW	SUP-E-W-06A-050218	2	2			
05/02/2018	1715	GW	SUP-E-EB-C1-050218	2	2			

29
Temp 2.7#1 ICE

Relinquished by: Signature: <i>Brandon Rick</i> Printed Name: Brandon Rick Firm: FTS Date/Time: 05/02/2018 1819	Received by: Signature: <i>Max Kow</i> Printed Name: Max Kow Firm: TA Date/Time: 05/05/18 0900	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:	Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF # 500791

500791

<p>Project Name: Superior 2018 1SA Sampling Project Number: OM-0556-18 Laboratory: TAPIT Shipment Method FEDEX Program: Superior 2018 1SA Sampling_001</p>	<p>Company: Field & Technical Services Address: 200 Third Avenue Carnegie, PA 15106 (412) 279-3363</p>
<p>Client: Beazer East, Inc. Contact: (724) 858-5953 btrask.2006@f-ts.com</p>	

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative	Total Bottle Count	Notes:
				8260B_VOA+naphtha		
				HCL		
05/03/2018	GW	SUPE-W-06C-050318	3		3	
05/03/2018	GW	SUPE-W-06C-MS/MSD-050318	6		6	
05/03/2018	GW	SUPE-W-12A-050318	3		3	
05/03/2018	GW	SUPE-W-12R-050318	3		3	
05/03/2018	GW	SUPE-EB-02-050318	3		3	
05/03/2018	GW	SUPE-W-30A-050318	3		3	

3.2
Temp 3.0#1 Ice

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:
Printed Name: Ben Trask	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:
Firm: FTS	Firm: TA	Firm:	Firm:
Date/Time: 05/03/2018 1759	Date/Time: 05/03/18 0900	Date/Time:	Date/Time:
		Turnaround Requirements	
		<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500790

500790

Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TABUF
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (724) 858-5953
 btrask.2006@f-ts.com

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative		Notes:
				None	naphtha	
			Total Bottle Count			
05/03/2018	GW	SUPE-W-06C-MS/MSD-050318	6	6		
05/03/2018	GW	SUPE-W-06C-050318	3	3		
05/03/2018	GW	SUPE-W-12A-050318	3	3		
05/03/2018	GW	SUPE-W-12CR-050318	3	3		
05/03/2018	GW	SUPE-EB-02-050318	3	3		
05/03/2018	GW	SUPE-W-30A-050318	3	3		

3.8
Temp 3.0#1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature: <i>[Signature]</i> Printed Name: Een Trask Firm: FTS Date/Time: 05/03/2018 1759	Signature: <i>[Signature]</i> Printed Name: <i>[Signature]</i> Firm: TA Date/Time: 05/05/18 0900	Signature: Printed Name: Firm:	Signature: Printed Name: Firm:
Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard			





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500789

500789

Project Name: Superior 2018 1SA Sampling
Project Number: OM-0556-18
Laboratory: TAKNOX
Shipment Method: FEDEX
Program: Superior 2018 1SA Sampling_001

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

Client: Beazer East, Inc.
Contact: (724) 858-5953
 btrask.2006@f-ts.com

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count	Notes:
					8290_Dioxins/Furans	None		
05/03/2018	0925	GW	SUPE-W-06C-MS/MSD-050318	4			4	
05/03/2018	0925	GW	SUPE-W-06C-050318	2			2	
05/03/2018	1155	GW	SUPE-W-12A-050318	2			2	
05/03/2018	1407	GW	SUPE-W-12CR-050318	2			2	
05/03/2018	1442	GW	SUPE-EB-02-050318	2			2	
05/03/2018	1540	GW	SUPE-W-30A-050318	2			2	

3.2
Temp 3.0 #1 FCE

Relinquished by:	Received by:	Relinquished by:	Received by:
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:
Printed Name: Ben Trask	Printed Name: <i>[Name]</i>	Printed Name:	Printed Name:
Firm: FTS	Firm: TA	Firm:	Firm:
Date/Time: 05/03/2018 1759	Date/Time: 05/05/18 0800	Date/Time:	Date/Time:

Rush
 Standard



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-135500-2

Login Number: 135500

List Source: TestAmerica Buffalo

List Number: 1

Creator: Wallace, Cameron

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-142837-1

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:

10/24/2018 10:01:05 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com



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

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

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

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Definitions/Glossary

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

TestAmerica Job ID: 480-142837-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

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

Glossary

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

Case Narrative

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

TestAmerica Job ID: 480-142837-1

Job ID: 480-142837-1

Laboratory: TestAmerica Buffalo

Narrative

**Job Narrative
480-142837-1**

Comments

No additional comments.

Receipt

The samples were received on 10/3/2018 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.4° C, 2.6° C, 3.6° C and 4.4° C.

Receipt Exceptions

Sample SUPE-W4AR2-100218 was included in the shipment, however it was not listed on the COC .

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-438768 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SUPE-TB-01-100218, SUPE-W-28C-100218, SUPE-W-10AR2-100218, SUPE-W-30C-100218, SUPE-W-06A-100218 and SUPE-W-06C-100218.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-438802 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SUPE-W-12A-100218 and SUPE-W-12CR-100218.

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-438802 recovered outside control limits for the following analytes: Chloromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-438997 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: SUPE-W-4AR2-100218.

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-438997 recovered outside control limits for the following analyte: Chloromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following sample is impacted: SUPE-W-4AR2-100218.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-439047 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: SUPE-EB--01-100218.

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

GC/MS Semi VOA

Method(s) 8270D LL: The following sample was diluted due to the nature of the sample matrix: SUPE-W-10AR2-100218. Elevated reporting limits (RLs) are provided.

Method(s) 8270D LL: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SUPE-W-10AR2-100218. These results have been reported and qualified.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 500-453886 and analytical batch 500-454447 recovered outside control limits for the following analytes: 2,6-Dinitrotoluene and Benzo[a]pyrene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Case Narrative

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

TestAmerica Job ID: 480-142837-1

Job ID: 480-142837-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method(s) 8270D: The method blank for preparation batch 500-453886 contained Benzoic acid above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method(s) 8270D: The following samples contained one base surrogate outside acceptance limits: SUPE-W-28C-100218, SUPE-W-18D-100218, SUPE-W-30C-100218, SUPE-W-06A-100218, SUPE-W-06C-100218 and SUPE-W-12A-100218. The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Organic Prep

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

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Detection Summary

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-TB-01-100218

Lab Sample ID: 480-142837-1

No Detections.

Client Sample ID: SUPE-W-28C-100218

Lab Sample ID: 480-142837-2

No Detections.

Client Sample ID: SUPE-W-18D-100218

Lab Sample ID: 480-142837-3

No Detections.

Client Sample ID: SUPE-W-10AR2-100218

Lab Sample ID: 480-142837-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	6.4		1.0	0.75	ug/L			1	8260C	Total/NA
Benzene	16		1.0	0.41	ug/L			1	8260C	Total/NA
Ethylbenzene	30		1.0	0.74	ug/L			1	8260C	Total/NA
m-Xylene & p-Xylene	3.3		2.0	0.66	ug/L			1	8260C	Total/NA
Naphthalene	1.9		1.0	0.43	ug/L			1	8260C	Total/NA
o-Xylene	14		1.0	0.76	ug/L			1	8260C	Total/NA
Toluene	2.7		1.0	0.51	ug/L			1	8260C	Total/NA
Xylenes, Total	17		2.0	0.66	ug/L			1	8260C	Total/NA
1-Methylnaphthalene	14		2.0	0.50	ug/L			1	8270D	Total/NA
Acenaphthene	67		1.0	0.36	ug/L			1	8270D	Total/NA
Acenaphthylene	2.1		1.0	0.32	ug/L			1	8270D	Total/NA
Anthracene	0.72	J	1.0	0.32	ug/L			1	8270D	Total/NA
Dibenzofuran	5.2		2.0	0.35	ug/L			1	8270D	Total/NA
Fluoranthene	2.5		1.0	0.32	ug/L			1	8270D	Total/NA
Fluorene	11		1.0	0.38	ug/L			1	8270D	Total/NA
Phenol	0.47	J	5.0	0.36	ug/L			1	8270D	Total/NA
Pyrene	1.6		1.0	0.48	ug/L			1	8270D	Total/NA
Phenanthrene	0.45	J	1.0	0.35	ug/L			1	8270D	Total/NA

Client Sample ID: SUPE-W-30C-100218

Lab Sample ID: 480-142837-5

No Detections.

Client Sample ID: SUPE-W-06A-100218

Lab Sample ID: 480-142837-6

No Detections.

Client Sample ID: SUPE-W-06C-100218

Lab Sample ID: 480-142837-7

No Detections.

Client Sample ID: SUPE-EB--01-100218

Lab Sample ID: 480-142837-8

No Detections.

Client Sample ID: SUPE-W-12A-100218

Lab Sample ID: 480-142837-9

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12CR-100218

Lab Sample ID: 480-142837-10

No Detections.

Client Sample ID: SUPE-W-4AR2-100218

Lab Sample ID: 480-142837-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.45	J	1.0	0.33	ug/L	1		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

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Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-TB-01-100218

Lab Sample ID: 480-142837-1

Date Collected: 10/02/18 00:00

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 03:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 03:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 03:09	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 03:09	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 03:09	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 03:09	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 03:09	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 03:09	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 03:09	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 03:09	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 03:09	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 03:09	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 03:09	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 03:09	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 03:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120		10/11/18 03:09	1
4-Bromofluorobenzene (Surr)	93		73 - 120		10/11/18 03:09	1
Dibromofluoromethane (Surr)	101		75 - 123		10/11/18 03:09	1
Toluene-d8 (Surr)	101		80 - 120		10/11/18 03:09	1

Client Sample ID: SUPE-W-28C-100218

Lab Sample ID: 480-142837-2

Date Collected: 10/02/18 10:04

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 03:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 03:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 03:36	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 03:36	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 03:36	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 03:36	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 03:36	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 03:36	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 03:36	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 03:36	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 03:36	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 03:36	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 03:36	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 03:36	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 03:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		77 - 120		10/11/18 03:36	1
4-Bromofluorobenzene (Surr)	96		73 - 120		10/11/18 03:36	1
Dibromofluoromethane (Surr)	99		75 - 123		10/11/18 03:36	1
Toluene-d8 (Surr)	101		80 - 120		10/11/18 03:36	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-28C-100218

Lab Sample ID: 480-142837-2

Date Collected: 10/02/18 10:04

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 12:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	94		24 - 146				10/06/18 15:14	10/08/18 12:23	1
2-Fluorobiphenyl	104		37 - 120				10/06/18 15:14	10/08/18 12:23	1
2-Fluorophenol (Surr)	59		10 - 120				10/06/18 15:14	10/08/18 12:23	1
Nitrobenzene-d5 (Surr)	97		26 - 120				10/06/18 15:14	10/08/18 12:23	1
Phenol-d5 (Surr)	40		11 - 120				10/06/18 15:14	10/08/18 12:23	1
p-Terphenyl-d14	93		64 - 127				10/06/18 15:14	10/08/18 12:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 22:58	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/10/18 22:58	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/10/18 22:58	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/10/18 22:58	1
1-Methylnaphthalene	ND		2.0	0.51	ug/L		10/09/18 08:04	10/10/18 22:58	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,3,4,6-Tetrachlorophenol	ND	F1	5.1	1.5	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,4,5-Trichlorophenol	ND	F1	10	2.3	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,4,6-Trichlorophenol	ND	F1	5.1	1.1	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,4-Dichlorophenol	ND	F1	10	2.3	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,4-Dinitrotoluene	ND	F1	1.0	0.30	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,6-Dinitrotoluene	ND	F1 *	1.0	0.12	ug/L		10/09/18 08:04	10/10/18 22:58	1
3 & 4 Methylphenol	ND		2.0	0.45	ug/L		10/09/18 08:04	10/10/18 22:58	1
2-Chloronaphthalene	ND		2.0	0.35	ug/L		10/09/18 08:04	10/10/18 22:58	1
2-Chlorophenol	ND		5.1	0.81	ug/L		10/09/18 08:04	10/10/18 22:58	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/10/18 22:58	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/10/18 22:58	1
2-Nitroaniline	ND		5.1	1.1	ug/L		10/09/18 08:04	10/10/18 22:58	1
2-Nitrophenol	ND	F1	10	2.2	ug/L		10/09/18 08:04	10/10/18 22:58	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 22:58	1
4,6-Dinitro-2-methylphenol	ND	F1	20	5.0	ug/L		10/09/18 08:04	10/10/18 22:58	1
4-Bromophenyl phenyl ether	ND		5.1	0.92	ug/L		10/09/18 08:04	10/10/18 22:58	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/10/18 22:58	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/10/18 22:58	1
4-Chlorophenyl phenyl ether	ND	F1	5.1	0.82	ug/L		10/09/18 08:04	10/10/18 22:58	1
4-Nitroaniline	ND		10	4.0	ug/L		10/09/18 08:04	10/10/18 22:58	1
4-Nitrophenol	ND		20	2.4	ug/L		10/09/18 08:04	10/10/18 22:58	1
Acenaphthene	ND		1.0	0.37	ug/L		10/09/18 08:04	10/10/18 22:58	1
Acenaphthylene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/10/18 22:58	1
Anthracene	ND	F1	1.0	0.33	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzo[a]pyrene	ND	F1 *	0.20	0.057	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzo[b]fluoranthene	ND	F1	0.20	0.059	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzo[g,h,i]perylene	ND	F1	1.0	0.43	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzo[k]fluoranthene	ND	F1	0.20	0.075	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/10/18 22:58	1
Bis(2-chloroethoxy)methane	ND	F1	2.0	0.30	ug/L		10/09/18 08:04	10/10/18 22:58	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-28C-100218

Lab Sample ID: 480-142837-2

Date Collected: 10/02/18 10:04

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND	F1	2.0	0.36	ug/L		10/09/18 08:04	10/10/18 22:58	1
Bis(2-ethylhexyl) phthalate	ND	F1	10	2.5	ug/L		10/09/18 08:04	10/10/18 22:58	1
Butyl benzyl phthalate	ND	F1	2.0	0.27	ug/L		10/09/18 08:04	10/10/18 22:58	1
Chrysene	ND	F1	0.51	0.14	ug/L		10/09/18 08:04	10/10/18 22:58	1
Dibenz(a,h)anthracene	ND	F1	0.30	0.065	ug/L		10/09/18 08:04	10/10/18 22:58	1
Dibenzofuran	ND		2.0	0.36	ug/L		10/09/18 08:04	10/10/18 22:58	1
Diethyl phthalate	ND		2.0	0.45	ug/L		10/09/18 08:04	10/10/18 22:58	1
Dimethyl phthalate	ND	F1	2.0	0.39	ug/L		10/09/18 08:04	10/10/18 22:58	1
Di-n-butyl phthalate	ND	F1	5.1	0.81	ug/L		10/09/18 08:04	10/10/18 22:58	1
Di-n-octyl phthalate	ND	F1	10	2.5	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,3,5,6-Tetrachlorophenol	ND		5.1	2.5	ug/L		10/09/18 08:04	10/10/18 22:58	1
Fluoranthene	ND	F1	1.0	0.33	ug/L		10/09/18 08:04	10/10/18 22:58	1
Fluorene	ND		1.0	0.39	ug/L		10/09/18 08:04	10/10/18 22:58	1
Hexachlorobenzene	ND		0.51	0.14	ug/L		10/09/18 08:04	10/10/18 22:58	1
Hexachlorobutadiene	ND		5.1	1.1	ug/L		10/09/18 08:04	10/10/18 22:58	1
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		10/09/18 08:04	10/10/18 22:58	1
Hexachloroethane	ND		5.1	0.99	ug/L		10/09/18 08:04	10/10/18 22:58	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.085	ug/L		10/09/18 08:04	10/10/18 22:58	1
Isophorone	ND	F1	2.0	0.29	ug/L		10/09/18 08:04	10/10/18 22:58	1
Nitrobenzene	ND	F1	1.0	0.46	ug/L		10/09/18 08:04	10/10/18 22:58	1
N-Nitrosodi-n-propylamine	ND	F1	0.51	0.14	ug/L		10/09/18 08:04	10/10/18 22:58	1
N-Nitrosodiphenylamine	ND	F1	2.0	0.35	ug/L		10/09/18 08:04	10/10/18 22:58	1
Pentachlorophenol	ND		20	5.7	ug/L		10/09/18 08:04	10/10/18 22:58	1
Phenol	ND		5.1	0.37	ug/L		10/09/18 08:04	10/10/18 22:58	1
Pyrene	ND	F1	1.0	0.49	ug/L		10/09/18 08:04	10/10/18 22:58	1
2,4-Dimethylphenol	ND	F1	10	3.4	ug/L		10/09/18 08:04	10/10/18 22:58	1
Benzo[a]anthracene	ND	F1	0.20	0.045	ug/L		10/09/18 08:04	10/10/18 22:58	1
Phenanthrene	ND	F1	1.0	0.36	ug/L		10/09/18 08:04	10/10/18 22:58	1
3,3'-Dichlorobenzidine	ND		5.1	0.95	ug/L		10/09/18 08:04	10/10/18 22:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	115		40 - 145	10/09/18 08:04	10/10/18 22:58	1
2-Fluorobiphenyl	105		34 - 110	10/09/18 08:04	10/10/18 22:58	1
2-Fluorophenol (Surr)	59		27 - 110	10/09/18 08:04	10/10/18 22:58	1
Nitrobenzene-d5 (Surr)	98		36 - 120	10/09/18 08:04	10/10/18 22:58	1
Phenol-d5 (Surr)	35		20 - 100	10/09/18 08:04	10/10/18 22:58	1
Terphenyl-d14 (Surr)	127		40 - 145	10/09/18 08:04	10/10/18 22:58	1

Client Sample ID: SUPE-W-18D-100218

Lab Sample ID: 480-142837-3

Date Collected: 10/02/18 13:51

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/08/18 14:31	10/15/18 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		24 - 146	10/08/18 14:31	10/15/18 19:03	1
2-Fluorobiphenyl	67		37 - 120	10/08/18 14:31	10/15/18 19:03	1
2-Fluorophenol (Surr)	36		10 - 120	10/08/18 14:31	10/15/18 19:03	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-18D-100218

Lab Sample ID: 480-142837-3

Date Collected: 10/02/18 13:51

Matrix: Water

Date Received: 10/03/18 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	53		26 - 120	10/08/18 14:31	10/15/18 19:03	1
Phenol-d5 (Surr)	28		11 - 120	10/08/18 14:31	10/15/18 19:03	1
p-Terphenyl-d14	78		64 - 127	10/08/18 14:31	10/15/18 19:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/10/18 23:27	1
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:27	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/10/18 23:27	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/10/18 23:27	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/09/18 08:04	10/10/18 23:27	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,6-Dinitrotoluene	ND	*	1.0	0.12	ug/L		10/09/18 08:04	10/10/18 23:27	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/09/18 08:04	10/10/18 23:27	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/09/18 08:04	10/10/18 23:27	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/09/18 08:04	10/10/18 23:27	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/10/18 23:27	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/10/18 23:27	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/09/18 08:04	10/10/18 23:27	1
2-Nitrophenol	ND		10	2.1	ug/L		10/09/18 08:04	10/10/18 23:27	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 23:27	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/09/18 08:04	10/10/18 23:27	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/09/18 08:04	10/10/18 23:27	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/10/18 23:27	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/10/18 23:27	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/09/18 08:04	10/10/18 23:27	1
4-Nitroaniline	ND		10	3.9	ug/L		10/09/18 08:04	10/10/18 23:27	1
4-Nitrophenol	ND		20	2.4	ug/L		10/09/18 08:04	10/10/18 23:27	1
Acenaphthene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/10/18 23:27	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/10/18 23:27	1
Anthracene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzo[a]pyrene	ND	*	0.20	0.056	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/10/18 23:27	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:27	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/09/18 08:04	10/10/18 23:27	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/09/18 08:04	10/10/18 23:27	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/10/18 23:27	1
Chrysene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/10/18 23:27	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/09/18 08:04	10/10/18 23:27	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-18D-100218

Lab Sample ID: 480-142837-3

Date Collected: 10/02/18 13:51

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		2.0	0.35	ug/L		10/09/18 08:04	10/10/18 23:27	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/09/18 08:04	10/10/18 23:27	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/09/18 08:04	10/10/18 23:27	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/09/18 08:04	10/10/18 23:27	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/09/18 08:04	10/10/18 23:27	1
Fluoranthene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/10/18 23:27	1
Fluorene	ND		1.0	0.38	ug/L		10/09/18 08:04	10/10/18 23:27	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/10/18 23:27	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/09/18 08:04	10/10/18 23:27	1
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		10/09/18 08:04	10/10/18 23:27	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/09/18 08:04	10/10/18 23:27	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/09/18 08:04	10/10/18 23:27	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/10/18 23:27	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/09/18 08:04	10/10/18 23:27	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/09/18 08:04	10/10/18 23:27	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/09/18 08:04	10/10/18 23:27	1
Pentachlorophenol	ND		20	5.6	ug/L		10/09/18 08:04	10/10/18 23:27	1
Phenol	ND		5.0	0.36	ug/L		10/09/18 08:04	10/10/18 23:27	1
Pyrene	ND		1.0	0.48	ug/L		10/09/18 08:04	10/10/18 23:27	1
2,4-Dimethylphenol	ND		10	3.4	ug/L		10/09/18 08:04	10/10/18 23:27	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/09/18 08:04	10/10/18 23:27	1
Phenanthrene	ND		1.0	0.35	ug/L		10/09/18 08:04	10/10/18 23:27	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/09/18 08:04	10/10/18 23:27	1
Naphthalene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	127		40 - 145	10/09/18 08:04	10/10/18 23:27	1
2-Fluorobiphenyl	111	X	34 - 110	10/09/18 08:04	10/10/18 23:27	1
2-Fluorophenol (Surr)	58		27 - 110	10/09/18 08:04	10/10/18 23:27	1
Nitrobenzene-d5 (Surr)	100		36 - 120	10/09/18 08:04	10/10/18 23:27	1
Phenol-d5 (Surr)	33		20 - 100	10/09/18 08:04	10/10/18 23:27	1
Terphenyl-d14 (Surr)	122		40 - 145	10/09/18 08:04	10/10/18 23:27	1

Client Sample ID: SUPE-W-10AR2-100218

Lab Sample ID: 480-142837-4

Date Collected: 10/02/18 16:14

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 04:03	1
1,2,4-Trimethylbenzene	6.4		1.0	0.75	ug/L			10/11/18 04:03	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 04:03	1
Benzene	16		1.0	0.41	ug/L			10/11/18 04:03	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 04:03	1
Ethylbenzene	30		1.0	0.74	ug/L			10/11/18 04:03	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 04:03	1
m-Xylene & p-Xylene	3.3		2.0	0.66	ug/L			10/11/18 04:03	1
Naphthalene	1.9		1.0	0.43	ug/L			10/11/18 04:03	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 04:03	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-10AR2-100218

Lab Sample ID: 480-142837-4

Date Collected: 10/02/18 16:14

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 04:03	1
o-Xylene	14		1.0	0.76	ug/L			10/11/18 04:03	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 04:03	1
Toluene	2.7		1.0	0.51	ug/L			10/11/18 04:03	1
Xylenes, Total	17		2.0	0.66	ug/L			10/11/18 04:03	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120				10/11/18 04:03	1
4-Bromofluorobenzene (Surr)	97		73 - 120				10/11/18 04:03	1
Dibromofluoromethane (Surr)	98		75 - 123				10/11/18 04:03	1
Toluene-d8 (Surr)	103		80 - 120				10/11/18 04:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		5.0	1.7	ug/L		10/06/18 15:14	10/08/18 12:52	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
2,4,6-Tribromophenol (Surr)	91		24 - 146			10/06/18 15:14	10/08/18 12:52	5	
2-Fluorobiphenyl	88		37 - 120			10/06/18 15:14	10/08/18 12:52	5	
2-Fluorophenol (Surr)	44		10 - 120			10/06/18 15:14	10/08/18 12:52	5	
Nitrobenzene-d5 (Surr)	86		26 - 120			10/06/18 15:14	10/08/18 12:52	5	
Phenol-d5 (Surr)	36		11 - 120			10/06/18 15:14	10/08/18 12:52	5	
p-Terphenyl-d14	61	X	64 - 127			10/06/18 15:14	10/08/18 12:52	5	

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:56	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/10/18 23:56	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/10/18 23:56	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/10/18 23:56	1
1-Methylnaphthalene	14		2.0	0.50	ug/L		10/09/18 08:04	10/10/18 23:56	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,6-Dinitrotoluene	ND *		1.0	0.12	ug/L		10/09/18 08:04	10/10/18 23:56	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/09/18 08:04	10/10/18 23:56	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/09/18 08:04	10/10/18 23:56	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/09/18 08:04	10/10/18 23:56	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/10/18 23:56	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/10/18 23:56	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/09/18 08:04	10/10/18 23:56	1
2-Nitrophenol	ND		10	2.1	ug/L		10/09/18 08:04	10/10/18 23:56	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/10/18 23:56	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/09/18 08:04	10/10/18 23:56	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/09/18 08:04	10/10/18 23:56	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/10/18 23:56	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-10AR2-100218

Lab Sample ID: 480-142837-4

Date Collected: 10/02/18 16:14

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/10/18 23:56	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/09/18 08:04	10/10/18 23:56	1
4-Nitroaniline	ND		10	3.9	ug/L		10/09/18 08:04	10/10/18 23:56	1
4-Nitrophenol	ND		20	2.3	ug/L		10/09/18 08:04	10/10/18 23:56	1
Acenaphthene	67		1.0	0.36	ug/L		10/09/18 08:04	10/10/18 23:56	1
Acenaphthylene	2.1		1.0	0.32	ug/L		10/09/18 08:04	10/10/18 23:56	1
Anthracene	0.72 J		1.0	0.32	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzo[a]pyrene	ND	*	0.20	0.056	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/10/18 23:56	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/10/18 23:56	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/09/18 08:04	10/10/18 23:56	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/09/18 08:04	10/10/18 23:56	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/10/18 23:56	1
Chrysene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/10/18 23:56	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/09/18 08:04	10/10/18 23:56	1
Dibenzofuran	5.2		2.0	0.35	ug/L		10/09/18 08:04	10/10/18 23:56	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/09/18 08:04	10/10/18 23:56	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/09/18 08:04	10/10/18 23:56	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/09/18 08:04	10/10/18 23:56	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/09/18 08:04	10/10/18 23:56	1
Fluoranthene	2.5		1.0	0.32	ug/L		10/09/18 08:04	10/10/18 23:56	1
Fluorene	11		1.0	0.38	ug/L		10/09/18 08:04	10/10/18 23:56	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/10/18 23:56	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/09/18 08:04	10/10/18 23:56	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/09/18 08:04	10/10/18 23:56	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/09/18 08:04	10/10/18 23:56	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/09/18 08:04	10/10/18 23:56	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/10/18 23:56	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/09/18 08:04	10/10/18 23:56	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/09/18 08:04	10/10/18 23:56	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/09/18 08:04	10/10/18 23:56	1
Pentachlorophenol	ND		20	5.6	ug/L		10/09/18 08:04	10/10/18 23:56	1
Phenol	0.47 J		5.0	0.36	ug/L		10/09/18 08:04	10/10/18 23:56	1
Pyrene	1.6		1.0	0.48	ug/L		10/09/18 08:04	10/10/18 23:56	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/09/18 08:04	10/10/18 23:56	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/09/18 08:04	10/10/18 23:56	1
Phenanthrene	0.45 J		1.0	0.35	ug/L		10/09/18 08:04	10/10/18 23:56	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/09/18 08:04	10/10/18 23:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	128		40 - 145	10/09/18 08:04	10/10/18 23:56	1
2-Fluorobiphenyl	102		34 - 110	10/09/18 08:04	10/10/18 23:56	1
2-Fluorophenol (Surr)	49		27 - 110	10/09/18 08:04	10/10/18 23:56	1
Nitrobenzene-d5 (Surr)	88		36 - 120	10/09/18 08:04	10/10/18 23:56	1
Phenol-d5 (Surr)	42		20 - 100	10/09/18 08:04	10/10/18 23:56	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-10AR2-100218

Lab Sample ID: 480-142837-4

Date Collected: 10/02/18 16:14

Matrix: Water

Date Received: 10/03/18 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	108		40 - 145	10/09/18 08:04	10/10/18 23:56	1

Client Sample ID: SUPE-W-30C-100218

Lab Sample ID: 480-142837-5

Date Collected: 10/02/18 10:13

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 04:31	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 04:31	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 04:31	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 04:31	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 04:31	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 04:31	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 04:31	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 04:31	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 04:31	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 04:31	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 04:31	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 04:31	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 04:31	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 04:31	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 04:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		77 - 120		10/11/18 04:31	1
4-Bromofluorobenzene (Surr)	93		73 - 120		10/11/18 04:31	1
Dibromofluoromethane (Surr)	99		75 - 123		10/11/18 04:31	1
Toluene-d8 (Surr)	99		80 - 120		10/11/18 04:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 13:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	99		24 - 146	10/06/18 15:14	10/08/18 13:21	1
2-Fluorobiphenyl	96		37 - 120	10/06/18 15:14	10/08/18 13:21	1
2-Fluorophenol (Surr)	63		10 - 120	10/06/18 15:14	10/08/18 13:21	1
Nitrobenzene-d5 (Surr)	94		26 - 120	10/06/18 15:14	10/08/18 13:21	1
Phenol-d5 (Surr)	38		11 - 120	10/06/18 15:14	10/08/18 13:21	1
p-Terphenyl-d14	94		64 - 127	10/06/18 15:14	10/08/18 13:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 00:25	1
1,2-Dichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 00:25	1
1,3-Dichlorobenzene	ND		2.0	0.26	ug/L		10/09/18 08:04	10/11/18 00:25	1
1,4-Dichlorobenzene	ND		2.0	0.28	ug/L		10/09/18 08:04	10/11/18 00:25	1
1-Methylnaphthalene	ND		2.0	0.51	ug/L		10/09/18 08:04	10/11/18 00:25	1
bis(chloroisopropyl) ether	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 00:25	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-30C-100218

Lab Sample ID: 480-142837-5

Date Collected: 10/02/18 10:13

Matrix: Water

Date Received: 10/03/18 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		5.1	1.5	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,4,6-Trichlorophenol	ND		5.1	1.1	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,4-Dinitrophenol	ND		20	7.6	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,4-Dinitrotoluene	ND		1.0	0.31	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,6-Dinitrotoluene	ND	*	1.0	0.12	ug/L		10/09/18 08:04	10/11/18 00:25	1
3 & 4 Methylphenol	ND		2.0	0.45	ug/L		10/09/18 08:04	10/11/18 00:25	1
2-Chloronaphthalene	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 00:25	1
2-Chlorophenol	ND		5.1	0.82	ug/L		10/09/18 08:04	10/11/18 00:25	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/11/18 00:25	1
2-Methylphenol	ND		2.0	0.32	ug/L		10/09/18 08:04	10/11/18 00:25	1
2-Nitroaniline	ND		5.1	1.1	ug/L		10/09/18 08:04	10/11/18 00:25	1
2-Nitrophenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 00:25	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:25	1
4,6-Dinitro-2-methylphenol	ND		20	5.0	ug/L		10/09/18 08:04	10/11/18 00:25	1
4-Bromophenyl phenyl ether	ND		5.1	0.93	ug/L		10/09/18 08:04	10/11/18 00:25	1
4-Chloro-3-methylphenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:25	1
4-Chloroaniline	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 00:25	1
4-Chlorophenyl phenyl ether	ND		5.1	0.83	ug/L		10/09/18 08:04	10/11/18 00:25	1
4-Nitroaniline	ND		10	4.0	ug/L		10/09/18 08:04	10/11/18 00:25	1
4-Nitrophenol	ND		20	2.4	ug/L		10/09/18 08:04	10/11/18 00:25	1
Acenaphthene	ND		1.0	0.37	ug/L		10/09/18 08:04	10/11/18 00:25	1
Acenaphthylene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 00:25	1
Anthracene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzo[a]pyrene	ND	*	0.20	0.057	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzo[b]fluoranthene	ND		0.20	0.059	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzo[g,h,i]perylene	ND		1.0	0.43	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzo[k]fluoranthene	ND		0.20	0.076	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzoic acid	ND		20	4.7	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/11/18 00:25	1
Bis(2-chloroethoxy)methane	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 00:25	1
Bis(2-chloroethyl)ether	ND		2.0	0.36	ug/L		10/09/18 08:04	10/11/18 00:25	1
Bis(2-ethylhexyl) phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 00:25	1
Butyl benzyl phthalate	ND		2.0	0.28	ug/L		10/09/18 08:04	10/11/18 00:25	1
Chrysene	ND		0.51	0.14	ug/L		10/09/18 08:04	10/11/18 00:25	1
Dibenz(a,h)anthracene	ND		0.31	0.066	ug/L		10/09/18 08:04	10/11/18 00:25	1
Dibenzofuran	ND		2.0	0.36	ug/L		10/09/18 08:04	10/11/18 00:25	1
Diethyl phthalate	ND		2.0	0.45	ug/L		10/09/18 08:04	10/11/18 00:25	1
Dimethyl phthalate	ND		2.0	0.39	ug/L		10/09/18 08:04	10/11/18 00:25	1
Di-n-butyl phthalate	ND		5.1	0.82	ug/L		10/09/18 08:04	10/11/18 00:25	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,3,5,6-Tetrachlorophenol	ND		5.1	2.6	ug/L		10/09/18 08:04	10/11/18 00:25	1
Fluoranthene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 00:25	1
Fluorene	ND		1.0	0.39	ug/L		10/09/18 08:04	10/11/18 00:25	1
Hexachlorobenzene	ND		0.51	0.14	ug/L		10/09/18 08:04	10/11/18 00:25	1
Hexachlorobutadiene	ND		5.1	1.1	ug/L		10/09/18 08:04	10/11/18 00:25	1
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		10/09/18 08:04	10/11/18 00:25	1
Hexachloroethane	ND		5.1	0.99	ug/L		10/09/18 08:04	10/11/18 00:25	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-30C-100218

Lab Sample ID: 480-142837-5

Date Collected: 10/02/18 10:13

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.20	0.086	ug/L		10/09/18 08:04	10/11/18 00:25	1
Isophorone	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 00:25	1
Nitrobenzene	ND		1.0	0.46	ug/L		10/09/18 08:04	10/11/18 00:25	1
N-Nitrosodi-n-propylamine	ND		0.51	0.14	ug/L		10/09/18 08:04	10/11/18 00:25	1
N-Nitrosodiphenylamine	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 00:25	1
Pentachlorophenol	ND		20	5.7	ug/L		10/09/18 08:04	10/11/18 00:25	1
Phenol	ND		5.1	0.37	ug/L		10/09/18 08:04	10/11/18 00:25	1
Pyrene	ND		1.0	0.49	ug/L		10/09/18 08:04	10/11/18 00:25	1
2,4-Dimethylphenol	ND		10	3.4	ug/L		10/09/18 08:04	10/11/18 00:25	1
Benzo[a]anthracene	ND		0.20	0.045	ug/L		10/09/18 08:04	10/11/18 00:25	1
Phenanthrene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 00:25	1
3,3'-Dichlorobenzidine	ND		5.1	0.96	ug/L		10/09/18 08:04	10/11/18 00:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	130		40 - 145				10/09/18 08:04	10/11/18 00:25	1
2-Fluorobiphenyl	118	X	34 - 110				10/09/18 08:04	10/11/18 00:25	1
2-Fluorophenol (Surr)	63		27 - 110				10/09/18 08:04	10/11/18 00:25	1
Nitrobenzene-d5 (Surr)	110		36 - 120				10/09/18 08:04	10/11/18 00:25	1
Phenol-d5 (Surr)	38		20 - 100				10/09/18 08:04	10/11/18 00:25	1
Terphenyl-d14 (Surr)	131		40 - 145				10/09/18 08:04	10/11/18 00:25	1

Client Sample ID: SUPE-W-06A-100218

Lab Sample ID: 480-142837-6

Date Collected: 10/02/18 11:44

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 04:58	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 04:58	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 04:58	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 04:58	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 04:58	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 04:58	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 04:58	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 04:58	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 04:58	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 04:58	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 04:58	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 04:58	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 04:58	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 04:58	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 04:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120					10/11/18 04:58	1
4-Bromofluorobenzene (Surr)	93		73 - 120					10/11/18 04:58	1
Dibromofluoromethane (Surr)	99		75 - 123					10/11/18 04:58	1
Toluene-d8 (Surr)	101		80 - 120					10/11/18 04:58	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-06A-100218

Lab Sample ID: 480-142837-6

Date Collected: 10/02/18 11:44

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 13:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		24 - 146				10/06/18 15:14	10/08/18 13:49	1
2-Fluorobiphenyl	95		37 - 120				10/06/18 15:14	10/08/18 13:49	1
2-Fluorophenol (Surr)	59		10 - 120				10/06/18 15:14	10/08/18 13:49	1
Nitrobenzene-d5 (Surr)	88		26 - 120				10/06/18 15:14	10/08/18 13:49	1
Phenol-d5 (Surr)	36		11 - 120				10/06/18 15:14	10/08/18 13:49	1
p-Terphenyl-d14	82		64 - 127				10/06/18 15:14	10/08/18 13:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 00:54	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 00:54	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/11/18 00:54	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 00:54	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/09/18 08:04	10/11/18 00:54	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,6-Dinitrotoluene	ND *		1.0	0.12	ug/L		10/09/18 08:04	10/11/18 00:54	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 00:54	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 00:54	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 00:54	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/11/18 00:54	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 00:54	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 00:54	1
2-Nitrophenol	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 00:54	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 00:54	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/09/18 08:04	10/11/18 00:54	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/09/18 08:04	10/11/18 00:54	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 00:54	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 00:54	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/09/18 08:04	10/11/18 00:54	1
4-Nitroaniline	ND		10	3.9	ug/L		10/09/18 08:04	10/11/18 00:54	1
4-Nitrophenol	ND		20	2.3	ug/L		10/09/18 08:04	10/11/18 00:54	1
Acenaphthene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 00:54	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 00:54	1
Anthracene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzo[a]pyrene	ND *		0.20	0.056	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/11/18 00:54	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 00:54	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-06A-100218

Lab Sample ID: 480-142837-6

Date Collected: 10/02/18 11:44

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 00:54	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 00:54	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 00:54	1
Chrysene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 00:54	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/09/18 08:04	10/11/18 00:54	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 00:54	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 00:54	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/09/18 08:04	10/11/18 00:54	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 00:54	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/09/18 08:04	10/11/18 00:54	1
Fluoranthene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 00:54	1
Fluorene	ND		1.0	0.38	ug/L		10/09/18 08:04	10/11/18 00:54	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 00:54	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 00:54	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/09/18 08:04	10/11/18 00:54	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/09/18 08:04	10/11/18 00:54	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/09/18 08:04	10/11/18 00:54	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 00:54	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/09/18 08:04	10/11/18 00:54	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 00:54	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 00:54	1
Pentachlorophenol	ND		20	5.6	ug/L		10/09/18 08:04	10/11/18 00:54	1
Phenol	ND		5.0	0.36	ug/L		10/09/18 08:04	10/11/18 00:54	1
Pyrene	ND		1.0	0.48	ug/L		10/09/18 08:04	10/11/18 00:54	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/09/18 08:04	10/11/18 00:54	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/09/18 08:04	10/11/18 00:54	1
Phenanthrene	ND		1.0	0.35	ug/L		10/09/18 08:04	10/11/18 00:54	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/09/18 08:04	10/11/18 00:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	124		40 - 145	10/09/18 08:04	10/11/18 00:54	1
2-Fluorobiphenyl	113	X	34 - 110	10/09/18 08:04	10/11/18 00:54	1
2-Fluorophenol (Surr)	56		27 - 110	10/09/18 08:04	10/11/18 00:54	1
Nitrobenzene-d5 (Surr)	107		36 - 120	10/09/18 08:04	10/11/18 00:54	1
Phenol-d5 (Surr)	40		20 - 100	10/09/18 08:04	10/11/18 00:54	1
Terphenyl-d14 (Surr)	124		40 - 145	10/09/18 08:04	10/11/18 00:54	1

Client Sample ID: SUPE-W-06C-100218

Lab Sample ID: 480-142837-7

Date Collected: 10/02/18 12:57

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 05:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 05:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 05:26	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 05:26	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 05:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 05:26	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-06C-100218

Lab Sample ID: 480-142837-7

Date Collected: 10/02/18 12:57

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 05:26	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 05:26	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 05:26	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 05:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 05:26	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 05:26	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 05:26	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 05:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 05:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120		10/11/18 05:26	1
4-Bromofluorobenzene (Surr)	91		73 - 120		10/11/18 05:26	1
Dibromofluoromethane (Surr)	97		75 - 123		10/11/18 05:26	1
Toluene-d8 (Surr)	99		80 - 120		10/11/18 05:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		24 - 146	10/06/18 15:14	10/08/18 14:18	1
2-Fluorobiphenyl	96		37 - 120	10/06/18 15:14	10/08/18 14:18	1
2-Fluorophenol (Surr)	66		10 - 120	10/06/18 15:14	10/08/18 14:18	1
Nitrobenzene-d5 (Surr)	93		26 - 120	10/06/18 15:14	10/08/18 14:18	1
Phenol-d5 (Surr)	40		11 - 120	10/06/18 15:14	10/08/18 14:18	1
p-Terphenyl-d14	92		64 - 127	10/06/18 15:14	10/08/18 14:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 01:23	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 01:23	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/11/18 01:23	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 01:23	1
1-Methylnaphthalene	ND		2.0	0.51	ug/L		10/09/18 08:04	10/11/18 01:23	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,3,4,6-Tetrachlorophenol	ND		5.1	1.5	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,4,6-Trichlorophenol	ND		5.1	1.1	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,6-Dinitrotoluene	ND *		1.0	0.12	ug/L		10/09/18 08:04	10/11/18 01:23	1
3 & 4 Methylphenol	ND		2.0	0.45	ug/L		10/09/18 08:04	10/11/18 01:23	1
2-Chloronaphthalene	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 01:23	1
2-Chlorophenol	ND		5.1	0.81	ug/L		10/09/18 08:04	10/11/18 01:23	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/11/18 01:23	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 01:23	1
2-Nitroaniline	ND		5.1	1.1	ug/L		10/09/18 08:04	10/11/18 01:23	1
2-Nitrophenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 01:23	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-06C-100218

Lab Sample ID: 480-142837-7

Date Collected: 10/02/18 12:57

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 01:23	1
4,6-Dinitro-2-methylphenol	ND		20	5.0	ug/L		10/09/18 08:04	10/11/18 01:23	1
4-Bromophenyl phenyl ether	ND		5.1	0.92	ug/L		10/09/18 08:04	10/11/18 01:23	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 01:23	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 01:23	1
4-Chlorophenyl phenyl ether	ND		5.1	0.82	ug/L		10/09/18 08:04	10/11/18 01:23	1
4-Nitroaniline	ND		10	4.0	ug/L		10/09/18 08:04	10/11/18 01:23	1
4-Nitrophenol	ND		20	2.4	ug/L		10/09/18 08:04	10/11/18 01:23	1
Acenaphthene	ND		1.0	0.37	ug/L		10/09/18 08:04	10/11/18 01:23	1
Acenaphthylene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 01:23	1
Anthracene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzo[a]pyrene	ND *		0.20	0.057	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzo[b]fluoranthene	ND		0.20	0.059	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzo[g,h,i]perylene	ND		1.0	0.43	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzo[k]fluoranthene	ND		0.20	0.075	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/11/18 01:23	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 01:23	1
Bis(2-chloroethyl)ether	ND		2.0	0.36	ug/L		10/09/18 08:04	10/11/18 01:23	1
Bis(2-ethylhexyl) phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 01:23	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 01:23	1
Chrysene	ND		0.51	0.14	ug/L		10/09/18 08:04	10/11/18 01:23	1
Dibenz(a,h)anthracene	ND		0.30	0.065	ug/L		10/09/18 08:04	10/11/18 01:23	1
Dibenzofuran	ND		2.0	0.36	ug/L		10/09/18 08:04	10/11/18 01:23	1
Diethyl phthalate	ND		2.0	0.45	ug/L		10/09/18 08:04	10/11/18 01:23	1
Dimethyl phthalate	ND		2.0	0.39	ug/L		10/09/18 08:04	10/11/18 01:23	1
Di-n-butyl phthalate	ND		5.1	0.81	ug/L		10/09/18 08:04	10/11/18 01:23	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,3,5,6-Tetrachlorophenol	ND		5.1	2.5	ug/L		10/09/18 08:04	10/11/18 01:23	1
Fluoranthene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 01:23	1
Fluorene	ND		1.0	0.39	ug/L		10/09/18 08:04	10/11/18 01:23	1
Hexachlorobenzene	ND		0.51	0.14	ug/L		10/09/18 08:04	10/11/18 01:23	1
Hexachlorobutadiene	ND		5.1	1.1	ug/L		10/09/18 08:04	10/11/18 01:23	1
Hexachlorocyclopentadiene	ND		20	3.5	ug/L		10/09/18 08:04	10/11/18 01:23	1
Hexachloroethane	ND		5.1	0.99	ug/L		10/09/18 08:04	10/11/18 01:23	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.085	ug/L		10/09/18 08:04	10/11/18 01:23	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 01:23	1
Nitrobenzene	ND		1.0	0.46	ug/L		10/09/18 08:04	10/11/18 01:23	1
N-Nitrosodi-n-propylamine	ND		0.51	0.14	ug/L		10/09/18 08:04	10/11/18 01:23	1
N-Nitrosodiphenylamine	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 01:23	1
Pentachlorophenol	ND		20	5.7	ug/L		10/09/18 08:04	10/11/18 01:23	1
Phenol	ND		5.1	0.37	ug/L		10/09/18 08:04	10/11/18 01:23	1
Pyrene	ND		1.0	0.49	ug/L		10/09/18 08:04	10/11/18 01:23	1
2,4-Dimethylphenol	ND		10	3.4	ug/L		10/09/18 08:04	10/11/18 01:23	1
Benzo[a]anthracene	ND		0.20	0.045	ug/L		10/09/18 08:04	10/11/18 01:23	1
Phenanthrene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 01:23	1
3,3'-Dichlorobenzidine	ND		5.1	0.95	ug/L		10/09/18 08:04	10/11/18 01:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	125		40 - 145	10/09/18 08:04	10/11/18 01:23	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-06C-100218

Lab Sample ID: 480-142837-7

Date Collected: 10/02/18 12:57

Matrix: Water

Date Received: 10/03/18 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	115	X	34 - 110	10/09/18 08:04	10/11/18 01:23	1
2-Fluorophenol (Surr)	61		27 - 110	10/09/18 08:04	10/11/18 01:23	1
Nitrobenzene-d5 (Surr)	106		36 - 120	10/09/18 08:04	10/11/18 01:23	1
Phenol-d5 (Surr)	39		20 - 100	10/09/18 08:04	10/11/18 01:23	1
Terphenyl-d14 (Surr)	124		40 - 145	10/09/18 08:04	10/11/18 01:23	1

Client Sample ID: SUPE-EB--01-100218

Lab Sample ID: 480-142837-8

Date Collected: 10/02/18 13:15

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/12/18 12:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/12/18 12:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/12/18 12:24	1
Benzene	ND		1.0	0.41	ug/L			10/12/18 12:24	1
Chloromethane	ND		1.0	0.35	ug/L			10/12/18 12:24	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/12/18 12:24	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/12/18 12:24	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/12/18 12:24	1
Naphthalene	ND		1.0	0.43	ug/L			10/12/18 12:24	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/12/18 12:24	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/12/18 12:24	1
o-Xylene	ND		1.0	0.76	ug/L			10/12/18 12:24	1
Styrene	ND		1.0	0.73	ug/L			10/12/18 12:24	1
Toluene	ND		1.0	0.51	ug/L			10/12/18 12:24	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/12/18 12:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		77 - 120		10/12/18 12:24	1
4-Bromofluorobenzene (Surr)	90		73 - 120		10/12/18 12:24	1
Dibromofluoromethane (Surr)	95		75 - 123		10/12/18 12:24	1
Toluene-d8 (Surr)	97		80 - 120		10/12/18 12:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		24 - 146	10/06/18 15:14	10/08/18 14:47	1
2-Fluorobiphenyl	94		37 - 120	10/06/18 15:14	10/08/18 14:47	1
2-Fluorophenol (Surr)	56		10 - 120	10/06/18 15:14	10/08/18 14:47	1
Nitrobenzene-d5 (Surr)	98		26 - 120	10/06/18 15:14	10/08/18 14:47	1
Phenol-d5 (Surr)	38		11 - 120	10/06/18 15:14	10/08/18 14:47	1
p-Terphenyl-d14	108		64 - 127	10/06/18 15:14	10/08/18 14:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.1	0.31	ug/L		10/09/18 08:04	10/11/18 01:52	1
1,2-Dichlorobenzene	ND		2.1	0.30	ug/L		10/09/18 08:04	10/11/18 01:52	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-EB--01-100218

Lab Sample ID: 480-142837-8

Date Collected: 10/02/18 13:15

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		2.1	0.26	ug/L		10/09/18 08:04	10/11/18 01:52	1
1,4-Dichlorobenzene	ND		2.1	0.28	ug/L		10/09/18 08:04	10/11/18 01:52	1
1-Methylnaphthalene	ND		2.1	0.52	ug/L		10/09/18 08:04	10/11/18 01:52	1
bis(chloroisopropyl) ether	ND		2.1	0.31	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,3,4,6-Tetrachlorophenol	ND		5.2	1.6	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,4,5-Trichlorophenol	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,4,6-Trichlorophenol	ND		5.2	1.1	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,4-Dinitrophenol	ND		21	7.7	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,4-Dinitrotoluene	ND		1.0	0.31	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,6-Dinitrotoluene	ND	*	1.0	0.12	ug/L		10/09/18 08:04	10/11/18 01:52	1
3 & 4 Methylphenol	ND		2.1	0.45	ug/L		10/09/18 08:04	10/11/18 01:52	1
2-Chloronaphthalene	ND		2.1	0.35	ug/L		10/09/18 08:04	10/11/18 01:52	1
2-Chlorophenol	ND		5.2	0.82	ug/L		10/09/18 08:04	10/11/18 01:52	1
2-Methylnaphthalene	ND		2.1	0.13	ug/L		10/09/18 08:04	10/11/18 01:52	1
2-Methylphenol	ND		2.1	0.32	ug/L		10/09/18 08:04	10/11/18 01:52	1
2-Nitroaniline	ND		5.2	1.1	ug/L		10/09/18 08:04	10/11/18 01:52	1
2-Nitrophenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 01:52	1
3-Nitroaniline	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 01:52	1
4,6-Dinitro-2-methylphenol	ND		21	5.1	ug/L		10/09/18 08:04	10/11/18 01:52	1
4-Bromophenyl phenyl ether	ND		5.2	0.94	ug/L		10/09/18 08:04	10/11/18 01:52	1
4-Chloro-3-methylphenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 01:52	1
4-Chloroaniline	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 01:52	1
4-Chlorophenyl phenyl ether	ND		5.2	0.83	ug/L		10/09/18 08:04	10/11/18 01:52	1
4-Nitroaniline	ND		10	4.0	ug/L		10/09/18 08:04	10/11/18 01:52	1
4-Nitrophenol	ND		21	2.4	ug/L		10/09/18 08:04	10/11/18 01:52	1
Acenaphthene	ND		1.0	0.37	ug/L		10/09/18 08:04	10/11/18 01:52	1
Acenaphthylene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 01:52	1
Anthracene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzo[a]pyrene	ND	*	0.21	0.058	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzo[b]fluoranthene	ND		0.21	0.060	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzo[g,h,i]perylene	ND		1.0	0.43	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzo[k]fluoranthene	ND		0.21	0.076	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzoic acid	ND		21	4.7	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzyl alcohol	ND		21	3.1	ug/L		10/09/18 08:04	10/11/18 01:52	1
Bis(2-chloroethoxy)methane	ND		2.1	0.31	ug/L		10/09/18 08:04	10/11/18 01:52	1
Bis(2-chloroethyl)ether	ND		2.1	0.36	ug/L		10/09/18 08:04	10/11/18 01:52	1
Bis(2-ethylhexyl) phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 01:52	1
Butyl benzyl phthalate	ND		2.1	0.28	ug/L		10/09/18 08:04	10/11/18 01:52	1
Chrysene	ND		0.52	0.14	ug/L		10/09/18 08:04	10/11/18 01:52	1
Dibenz(a,h)anthracene	ND		0.31	0.066	ug/L		10/09/18 08:04	10/11/18 01:52	1
Dibenzofuran	ND		2.1	0.36	ug/L		10/09/18 08:04	10/11/18 01:52	1
Diethyl phthalate	ND		2.1	0.45	ug/L		10/09/18 08:04	10/11/18 01:52	1
Dimethyl phthalate	ND		2.1	0.39	ug/L		10/09/18 08:04	10/11/18 01:52	1
Di-n-butyl phthalate	ND		5.2	0.82	ug/L		10/09/18 08:04	10/11/18 01:52	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,3,5,6-Tetrachlorophenol	ND		5.2	2.6	ug/L		10/09/18 08:04	10/11/18 01:52	1
Fluoranthene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 01:52	1
Fluorene	ND		1.0	0.39	ug/L		10/09/18 08:04	10/11/18 01:52	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-EB--01-100218

Lab Sample ID: 480-142837-8

Date Collected: 10/02/18 13:15

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND		0.52	0.14	ug/L		10/09/18 08:04	10/11/18 01:52	1
Hexachlorobutadiene	ND		5.2	1.1	ug/L		10/09/18 08:04	10/11/18 01:52	1
Hexachlorocyclopentadiene	ND		21	3.5	ug/L		10/09/18 08:04	10/11/18 01:52	1
Hexachloroethane	ND		5.2	1.0	ug/L		10/09/18 08:04	10/11/18 01:52	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.087	ug/L		10/09/18 08:04	10/11/18 01:52	1
Isophorone	ND		2.1	0.30	ug/L		10/09/18 08:04	10/11/18 01:52	1
Nitrobenzene	ND		1.0	0.46	ug/L		10/09/18 08:04	10/11/18 01:52	1
N-Nitrosodi-n-propylamine	ND		0.52	0.14	ug/L		10/09/18 08:04	10/11/18 01:52	1
N-Nitrosodiphenylamine	ND		2.1	0.35	ug/L		10/09/18 08:04	10/11/18 01:52	1
Pentachlorophenol	ND		21	5.8	ug/L		10/09/18 08:04	10/11/18 01:52	1
Phenol	ND		5.2	0.37	ug/L		10/09/18 08:04	10/11/18 01:52	1
Pyrene	ND		1.0	0.49	ug/L		10/09/18 08:04	10/11/18 01:52	1
2,4-Dimethylphenol	ND		10	3.4	ug/L		10/09/18 08:04	10/11/18 01:52	1
Benzo[a]anthracene	ND		0.21	0.045	ug/L		10/09/18 08:04	10/11/18 01:52	1
Phenanthrene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 01:52	1
3,3'-Dichlorobenzidine	ND		5.2	0.97	ug/L		10/09/18 08:04	10/11/18 01:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	109		40 - 145				10/09/18 08:04	10/11/18 01:52	1
2-Fluorobiphenyl	107		34 - 110				10/09/18 08:04	10/11/18 01:52	1
2-Fluorophenol (Surr)	62		27 - 110				10/09/18 08:04	10/11/18 01:52	1
Nitrobenzene-d5 (Surr)	99		36 - 120				10/09/18 08:04	10/11/18 01:52	1
Phenol-d5 (Surr)	36		20 - 100				10/09/18 08:04	10/11/18 01:52	1
Terphenyl-d14 (Surr)	127		40 - 145				10/09/18 08:04	10/11/18 01:52	1

Client Sample ID: SUPE-W-12A-100218

Lab Sample ID: 480-142837-9

Date Collected: 10/02/18 14:08

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 14:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 14:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 14:33	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 14:33	1
Chloromethane	ND	*	1.0	0.35	ug/L			10/11/18 14:33	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 14:33	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 14:33	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 14:33	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 14:33	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 14:33	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 14:33	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 14:33	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 14:33	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 14:33	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 14:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120					10/11/18 14:33	1
4-Bromofluorobenzene (Surr)	91		73 - 120					10/11/18 14:33	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12A-100218

Lab Sample ID: 480-142837-9

Date Collected: 10/02/18 14:08

Matrix: Water

Date Received: 10/03/18 10:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101		75 - 123		10/11/18 14:33	1
Toluene-d8 (Surr)	98		80 - 120		10/11/18 14:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	109		24 - 146	10/06/18 15:14	10/08/18 15:16	1
2-Fluorobiphenyl	97		37 - 120	10/06/18 15:14	10/08/18 15:16	1
2-Fluorophenol (Surr)	54		10 - 120	10/06/18 15:14	10/08/18 15:16	1
Nitrobenzene-d5 (Surr)	93		26 - 120	10/06/18 15:14	10/08/18 15:16	1
Phenol-d5 (Surr)	39		11 - 120	10/06/18 15:14	10/08/18 15:16	1
p-Terphenyl-d14	100		64 - 127	10/06/18 15:14	10/08/18 15:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:21	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 02:21	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/11/18 02:21	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 02:21	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/09/18 08:04	10/11/18 02:21	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,6-Dinitrotoluene	ND	*	1.0	0.12	ug/L		10/09/18 08:04	10/11/18 02:21	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 02:21	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 02:21	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 02:21	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/11/18 02:21	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 02:21	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 02:21	1
2-Nitrophenol	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 02:21	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 02:21	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/09/18 08:04	10/11/18 02:21	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/09/18 08:04	10/11/18 02:21	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 02:21	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 02:21	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/09/18 08:04	10/11/18 02:21	1
4-Nitroaniline	ND		10	3.9	ug/L		10/09/18 08:04	10/11/18 02:21	1
4-Nitrophenol	ND		20	2.3	ug/L		10/09/18 08:04	10/11/18 02:21	1
Acenaphthene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 02:21	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 02:21	1
Anthracene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 02:21	1
Benzo[a]pyrene	ND	*	0.20	0.056	ug/L		10/09/18 08:04	10/11/18 02:21	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/09/18 08:04	10/11/18 02:21	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12A-100218

Lab Sample ID: 480-142837-9

Date Collected: 10/02/18 14:08

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/09/18 08:04	10/11/18 02:21	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/09/18 08:04	10/11/18 02:21	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/11/18 02:21	1
Benzyl alcohol	ND		20	3.0	ug/L		10/09/18 08:04	10/11/18 02:21	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:21	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 02:21	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 02:21	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 02:21	1
Chrysene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 02:21	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/09/18 08:04	10/11/18 02:21	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 02:21	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 02:21	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/09/18 08:04	10/11/18 02:21	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 02:21	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/09/18 08:04	10/11/18 02:21	1
Fluoranthene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 02:21	1
Fluorene	ND		1.0	0.38	ug/L		10/09/18 08:04	10/11/18 02:21	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 02:21	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 02:21	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/09/18 08:04	10/11/18 02:21	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/09/18 08:04	10/11/18 02:21	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/09/18 08:04	10/11/18 02:21	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 02:21	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/09/18 08:04	10/11/18 02:21	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 02:21	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 02:21	1
Pentachlorophenol	ND		20	5.6	ug/L		10/09/18 08:04	10/11/18 02:21	1
Phenol	ND		5.0	0.36	ug/L		10/09/18 08:04	10/11/18 02:21	1
Pyrene	ND		1.0	0.48	ug/L		10/09/18 08:04	10/11/18 02:21	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/09/18 08:04	10/11/18 02:21	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/09/18 08:04	10/11/18 02:21	1
Phenanthrene	ND		1.0	0.35	ug/L		10/09/18 08:04	10/11/18 02:21	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/09/18 08:04	10/11/18 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	136		40 - 145	10/09/18 08:04	10/11/18 02:21	1
2-Fluorobiphenyl	120	X	34 - 110	10/09/18 08:04	10/11/18 02:21	1
2-Fluorophenol (Surr)	61		27 - 110	10/09/18 08:04	10/11/18 02:21	1
Nitrobenzene-d5 (Surr)	110		36 - 120	10/09/18 08:04	10/11/18 02:21	1
Phenol-d5 (Surr)	39		20 - 100	10/09/18 08:04	10/11/18 02:21	1
Terphenyl-d14 (Surr)	141		40 - 145	10/09/18 08:04	10/11/18 02:21	1

Client Sample ID: SUPE-W-12CR-100218

Lab Sample ID: 480-142837-10

Date Collected: 10/02/18 15:23

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 15:01	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12CR-100218

Lab Sample ID: 480-142837-10

Date Collected: 10/02/18 15:23

Matrix: Water

Date Received: 10/03/18 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			10/11/18 15:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 15:01	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 15:01	1
Chloromethane	ND	*	1.0	0.35	ug/L			10/11/18 15:01	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 15:01	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 15:01	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 15:01	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 15:01	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 15:01	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 15:01	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 15:01	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 15:01	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 15:01	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 15:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120		10/11/18 15:01	1
4-Bromofluorobenzene (Surr)	90		73 - 120		10/11/18 15:01	1
Dibromofluoromethane (Surr)	99		75 - 123		10/11/18 15:01	1
Toluene-d8 (Surr)	101		80 - 120		10/11/18 15:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 15:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	105		24 - 146	10/06/18 15:14	10/08/18 15:44	1
2-Fluorobiphenyl	101		37 - 120	10/06/18 15:14	10/08/18 15:44	1
2-Fluorophenol (Surr)	56		10 - 120	10/06/18 15:14	10/08/18 15:44	1
Nitrobenzene-d5 (Surr)	96		26 - 120	10/06/18 15:14	10/08/18 15:44	1
Phenol-d5 (Surr)	38		11 - 120	10/06/18 15:14	10/08/18 15:44	1
p-Terphenyl-d14	106		64 - 127	10/06/18 15:14	10/08/18 15:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:51	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 02:51	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/11/18 02:51	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 02:51	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/09/18 08:04	10/11/18 02:51	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,4-Dinitrophenol	ND		20	7.5	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,6-Dinitrotoluene	ND	*	1.0	0.12	ug/L		10/09/18 08:04	10/11/18 02:51	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 02:51	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 02:51	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12CR-100218

Lab Sample ID: 480-142837-10

Date Collected: 10/02/18 15:23

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 02:51	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/11/18 02:51	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 02:51	1
2-Nitroaniline	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 02:51	1
2-Nitrophenol	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 02:51	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 02:51	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/09/18 08:04	10/11/18 02:51	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/09/18 08:04	10/11/18 02:51	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 02:51	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 02:51	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/09/18 08:04	10/11/18 02:51	1
4-Nitroaniline	ND		10	3.9	ug/L		10/09/18 08:04	10/11/18 02:51	1
4-Nitrophenol	ND		20	2.3	ug/L		10/09/18 08:04	10/11/18 02:51	1
Acenaphthene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 02:51	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 02:51	1
Anthracene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 02:51	1
Benzo[a]pyrene	ND *		0.20	0.056	ug/L		10/09/18 08:04	10/11/18 02:51	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/09/18 08:04	10/11/18 02:51	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/09/18 08:04	10/11/18 02:51	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/09/18 08:04	10/11/18 02:51	1
Benzoic acid	ND		20	4.6	ug/L		10/09/18 08:04	10/11/18 02:51	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/11/18 02:51	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 02:51	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 02:51	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 02:51	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 02:51	1
Chrysene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 02:51	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/09/18 08:04	10/11/18 02:51	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 02:51	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 02:51	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/09/18 08:04	10/11/18 02:51	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 02:51	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/09/18 08:04	10/11/18 02:51	1
Fluoranthene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 02:51	1
Fluorene	ND		1.0	0.38	ug/L		10/09/18 08:04	10/11/18 02:51	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 02:51	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 02:51	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/09/18 08:04	10/11/18 02:51	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/09/18 08:04	10/11/18 02:51	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/09/18 08:04	10/11/18 02:51	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 02:51	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/09/18 08:04	10/11/18 02:51	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 02:51	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 02:51	1
Pentachlorophenol	ND		20	5.6	ug/L		10/09/18 08:04	10/11/18 02:51	1
Phenol	ND		5.0	0.36	ug/L		10/09/18 08:04	10/11/18 02:51	1
Pyrene	ND		1.0	0.48	ug/L		10/09/18 08:04	10/11/18 02:51	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/09/18 08:04	10/11/18 02:51	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12CR-100218

Lab Sample ID: 480-142837-10

Date Collected: 10/02/18 15:23

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/09/18 08:04	10/11/18 02:51	1
Phenanthrene	ND		1.0	0.35	ug/L		10/09/18 08:04	10/11/18 02:51	1
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/09/18 08:04	10/11/18 02:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	122		40 - 145				10/09/18 08:04	10/11/18 02:51	1
2-Fluorobiphenyl	106		34 - 110				10/09/18 08:04	10/11/18 02:51	1
2-Fluorophenol (Surr)	58		27 - 110				10/09/18 08:04	10/11/18 02:51	1
Nitrobenzene-d5 (Surr)	100		36 - 120				10/09/18 08:04	10/11/18 02:51	1
Phenol-d5 (Surr)	37		20 - 100				10/09/18 08:04	10/11/18 02:51	1
Terphenyl-d14 (Surr)	124		40 - 145				10/09/18 08:04	10/11/18 02:51	1

Client Sample ID: SUPE-W-4AR2-100218

Lab Sample ID: 480-142837-11

Date Collected: 10/02/18 00:00

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/12/18 00:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/12/18 00:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/12/18 00:04	1
Benzene	ND		1.0	0.41	ug/L			10/12/18 00:04	1
Chloromethane	ND *		1.0	0.35	ug/L			10/12/18 00:04	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/12/18 00:04	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/12/18 00:04	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/12/18 00:04	1
Naphthalene	ND		1.0	0.43	ug/L			10/12/18 00:04	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/12/18 00:04	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/12/18 00:04	1
o-Xylene	ND		1.0	0.76	ug/L			10/12/18 00:04	1
Styrene	ND		1.0	0.73	ug/L			10/12/18 00:04	1
Toluene	ND		1.0	0.51	ug/L			10/12/18 00:04	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/12/18 00:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		77 - 120					10/12/18 00:04	1
4-Bromofluorobenzene (Surr)	90		73 - 120					10/12/18 00:04	1
Dibromofluoromethane (Surr)	98		75 - 123					10/12/18 00:04	1
Toluene-d8 (Surr)	100		80 - 120					10/12/18 00:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/09/18 20:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		24 - 146				10/06/18 15:14	10/09/18 20:32	1
2-Fluorobiphenyl	96		37 - 120				10/06/18 15:14	10/09/18 20:32	1
2-Fluorophenol (Surr)	59		10 - 120				10/06/18 15:14	10/09/18 20:32	1
Nitrobenzene-d5 (Surr)	83		26 - 120				10/06/18 15:14	10/09/18 20:32	1
Phenol-d5 (Surr)	38		11 - 120				10/06/18 15:14	10/09/18 20:32	1
p-Terphenyl-d14	64		64 - 127				10/06/18 15:14	10/09/18 20:32	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.1	0.31	ug/L		10/09/18 08:04	10/11/18 03:20	1
1,2-Dichlorobenzene	ND		2.1	0.30	ug/L		10/09/18 08:04	10/11/18 03:20	1
1,3-Dichlorobenzene	ND		2.1	0.26	ug/L		10/09/18 08:04	10/11/18 03:20	1
1,4-Dichlorobenzene	ND		2.1	0.28	ug/L		10/09/18 08:04	10/11/18 03:20	1
1-Methylnaphthalene	ND		2.1	0.52	ug/L		10/09/18 08:04	10/11/18 03:20	1
bis(chloroisopropyl) ether	ND		2.1	0.31	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,3,4,6-Tetrachlorophenol	ND		5.2	1.6	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,4,5-Trichlorophenol	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,4,6-Trichlorophenol	ND		5.2	1.2	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,4-Dichlorophenol	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,4-Dinitrophenol	ND		21	7.8	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,4-Dinitrotoluene	ND		1.0	0.31	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,6-Dinitrotoluene	ND	*	1.0	0.13	ug/L		10/09/18 08:04	10/11/18 03:20	1
3 & 4 Methylphenol	ND		2.1	0.46	ug/L		10/09/18 08:04	10/11/18 03:20	1
2-Chloronaphthalene	ND		2.1	0.36	ug/L		10/09/18 08:04	10/11/18 03:20	1
2-Chlorophenol	ND		5.2	0.84	ug/L		10/09/18 08:04	10/11/18 03:20	1
2-Methylnaphthalene	ND		2.1	0.14	ug/L		10/09/18 08:04	10/11/18 03:20	1
2-Methylphenol	ND		2.1	0.32	ug/L		10/09/18 08:04	10/11/18 03:20	1
2-Nitroaniline	ND		5.2	1.1	ug/L		10/09/18 08:04	10/11/18 03:20	1
2-Nitrophenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 03:20	1
3-Nitroaniline	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 03:20	1
4,6-Dinitro-2-methylphenol	ND		21	5.1	ug/L		10/09/18 08:04	10/11/18 03:20	1
4-Bromophenyl phenyl ether	ND		5.2	0.95	ug/L		10/09/18 08:04	10/11/18 03:20	1
4-Chloro-3-methylphenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 03:20	1
4-Chloroaniline	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 03:20	1
4-Chlorophenyl phenyl ether	ND		5.2	0.85	ug/L		10/09/18 08:04	10/11/18 03:20	1
4-Nitroaniline	ND		10	4.1	ug/L		10/09/18 08:04	10/11/18 03:20	1
4-Nitrophenol	ND		21	2.4	ug/L		10/09/18 08:04	10/11/18 03:20	1
Acenaphthene	ND		1.0	0.38	ug/L		10/09/18 08:04	10/11/18 03:20	1
Acenaphthylene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 03:20	1
Anthracene	ND		1.0	0.33	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzo[a]pyrene	ND	*	0.21	0.059	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzo[b]fluoranthene	ND		0.21	0.061	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzo[g,h,i]perylene	ND		1.0	0.44	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzo[k]fluoranthene	ND		0.21	0.077	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzoic acid	ND		21	4.8	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzyl alcohol	ND		21	3.2	ug/L		10/09/18 08:04	10/11/18 03:20	1
Bis(2-chloroethoxy)methane	ND		2.1	0.31	ug/L		10/09/18 08:04	10/11/18 03:20	1
Bis(2-chloroethyl)ether	ND		2.1	0.37	ug/L		10/09/18 08:04	10/11/18 03:20	1
Bis(2-ethylhexyl) phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 03:20	1
Butyl benzyl phthalate	ND		2.1	0.28	ug/L		10/09/18 08:04	10/11/18 03:20	1
Chrysene	ND		0.52	0.15	ug/L		10/09/18 08:04	10/11/18 03:20	1
Dibenz(a,h)anthracene	ND		0.31	0.067	ug/L		10/09/18 08:04	10/11/18 03:20	1
Dibenzofuran	ND		2.1	0.37	ug/L		10/09/18 08:04	10/11/18 03:20	1
Diethyl phthalate	ND		2.1	0.46	ug/L		10/09/18 08:04	10/11/18 03:20	1
Dimethyl phthalate	ND		2.1	0.40	ug/L		10/09/18 08:04	10/11/18 03:20	1
Di-n-butyl phthalate	ND		5.2	0.84	ug/L		10/09/18 08:04	10/11/18 03:20	1
Di-n-octyl phthalate	ND		10	2.6	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,3,5,6-Tetrachlorophenol	ND		5.2	2.6	ug/L		10/09/18 08:04	10/11/18 03:20	1
Fluoranthene	0.45	J	1.0	0.33	ug/L		10/09/18 08:04	10/11/18 03:20	1
Fluorene	ND		1.0	0.40	ug/L		10/09/18 08:04	10/11/18 03:20	1
Hexachlorobenzene	ND		0.52	0.15	ug/L		10/09/18 08:04	10/11/18 03:20	1
Hexachlorobutadiene	ND		5.2	1.2	ug/L		10/09/18 08:04	10/11/18 03:20	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-4AR2-100218

Lab Sample ID: 480-142837-11

Date Collected: 10/02/18 00:00

Matrix: Water

Date Received: 10/03/18 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	ND		21	3.6	ug/L		10/09/18 08:04	10/11/18 03:20	1
Hexachloroethane	ND		5.2	1.0	ug/L		10/09/18 08:04	10/11/18 03:20	1
Indeno[1,2,3-cd]pyrene	ND		0.21	0.088	ug/L		10/09/18 08:04	10/11/18 03:20	1
Isophorone	ND		2.1	0.30	ug/L		10/09/18 08:04	10/11/18 03:20	1
Nitrobenzene	ND		1.0	0.47	ug/L		10/09/18 08:04	10/11/18 03:20	1
N-Nitrosodi-n-propylamine	ND		0.52	0.15	ug/L		10/09/18 08:04	10/11/18 03:20	1
N-Nitrosodiphenylamine	ND		2.1	0.36	ug/L		10/09/18 08:04	10/11/18 03:20	1
Pentachlorophenol	ND		21	5.9	ug/L		10/09/18 08:04	10/11/18 03:20	1
Phenol	ND		5.2	0.38	ug/L		10/09/18 08:04	10/11/18 03:20	1
Pyrene	ND		1.0	0.50	ug/L		10/09/18 08:04	10/11/18 03:20	1
2,4-Dimethylphenol	ND		10	3.5	ug/L		10/09/18 08:04	10/11/18 03:20	1
Benzo[a]anthracene	ND		0.21	0.046	ug/L		10/09/18 08:04	10/11/18 03:20	1
Phenanthrene	ND		1.0	0.37	ug/L		10/09/18 08:04	10/11/18 03:20	1
3,3'-Dichlorobenzidine	ND		5.2	0.98	ug/L		10/09/18 08:04	10/11/18 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	122		40 - 145	10/09/18 08:04	10/11/18 03:20	1
2-Fluorobiphenyl	109		34 - 110	10/09/18 08:04	10/11/18 03:20	1
2-Fluorophenol (Surr)	57		27 - 110	10/09/18 08:04	10/11/18 03:20	1
Nitrobenzene-d5 (Surr)	98		36 - 120	10/09/18 08:04	10/11/18 03:20	1
Phenol-d5 (Surr)	34		20 - 100	10/09/18 08:04	10/11/18 03:20	1
Terphenyl-d14 (Surr)	119		40 - 145	10/09/18 08:04	10/11/18 03:20	1

Surrogate Summary

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

TestAmerica Job ID: 480-142837-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(77-120)	(73-120)	(75-123)	(80-120)
480-142837-1	SUPE-TB-01-100218	97	93	101	101
480-142837-2	SUPE-W-28C-100218	95	96	99	101
480-142837-2 MS	SUPE-W-28C-100218	95	98	102	103
480-142837-2 MSD	SUPE-W-28C-100218	92	96	98	103
480-142837-4	SUPE-W-10AR2-100218	93	97	98	103
480-142837-5	SUPE-W-30C-100218	95	93	99	99
480-142837-6	SUPE-W-06A-100218	98	93	99	101
480-142837-7	SUPE-W-06C-100218	97	91	97	99
480-142837-8	SUPE-EB--01-100218	91	90	95	97
480-142837-9	SUPE-W-12A-100218	98	91	101	98
480-142837-10	SUPE-W-12CR-100218	97	90	99	101
480-142837-11	SUPE-W-4AR2-100218	93	90	98	100
LCS 480-438768/5	Lab Control Sample	96	97	100	102
LCS 480-438802/5	Lab Control Sample	91	94	96	104
LCS 480-438997/5	Lab Control Sample	94	98	97	103
LCS 480-439047/5	Lab Control Sample	90	98	98	102
MB 480-438768/7	Method Blank	97	95	98	102
MB 480-438802/7	Method Blank	98	94	97	99
MB 480-438997/7	Method Blank	101	93	103	99
MB 480-439047/7	Method Blank	97	93	98	101

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP	FBP	2FP	NBZ	PHL	TPHL
		(40-145)	(34-110)	(27-110)	(36-120)	(20-100)	(40-145)
480-142837-2	SUPE-W-28C-100218	115	105	59	98	35	127
480-142837-2 MS	SUPE-W-28C-100218	143	122 X	68	117	50	130
480-142837-2 MSD	SUPE-W-28C-100218	135	117 X	66	116	49	124
480-142837-3	SUPE-W-18D-100218	127	111 X	58	100	33	122
480-142837-4	SUPE-W-10AR2-100218	128	102	49	88	42	108
480-142837-5	SUPE-W-30C-100218	130	118 X	63	110	38	131
480-142837-6	SUPE-W-06A-100218	124	113 X	56	107	40	124
480-142837-7	SUPE-W-06C-100218	125	115 X	61	106	39	124
480-142837-8	SUPE-EB--01-100218	109	107	62	99	36	127
480-142837-9	SUPE-W-12A-100218	136	120 X	61	110	39	141
480-142837-10	SUPE-W-12CR-100218	122	106	58	100	37	124
480-142837-11	SUPE-W-4AR2-100218	122	109	57	98	34	119
LCS 500-453886/2-A	Lab Control Sample	120	101	73	109	50	114
MB 500-453886/1-A	Method Blank	104	100	69	99	38	121

Surrogate Legend

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

TestAmerica Buffalo

Surrogate Summary

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

TestAmerica Job ID: 480-142837-1

FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (24-146)	FBP (37-120)	2FP (10-120)	NBZ (26-120)	PHL (11-120)	TPHd14 (64-127)
480-142837-2	SUPE-W-28C-100218	94	104	59	97	40	93
480-142837-2 MS	SUPE-W-28C-100218	93	95	61	99	44	91
480-142837-2 MSD	SUPE-W-28C-100218	105	99	65	94	46	97
480-142837-3	SUPE-W-18D-100218	89	67	36	53	28	78
480-142837-4	SUPE-W-10AR2-100218	91	88	44	86	36	61 X
480-142837-5	SUPE-W-30C-100218	99	96	63	94	38	94
480-142837-6	SUPE-W-06A-100218	96	95	59	88	36	82
480-142837-7	SUPE-W-06C-100218	100	96	66	93	40	92
480-142837-8	SUPE-EB--01-100218	75	94	56	98	38	108
480-142837-9	SUPE-W-12A-100218	109	97	54	93	39	100
480-142837-10	SUPE-W-12CR-100218	105	101	56	96	38	106
480-142837-11	SUPE-W-4AR2-100218	100	96	59	83	38	64
LCS 480-438068/2-A	Lab Control Sample	106	97	59	97	46	107
LCS 480-438261/2-A	Lab Control Sample	86	92	60	94	42	103
LCSD 480-438261/3-A	Lab Control Sample Dup	81	87	57	92	40	97
MB 480-438068/1-A	Method Blank	92	97	59	92	41	113
MB 480-438261/1-A	Method Blank	77	84	65	101	41	106

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHd14 = p-Terphenyl-d14

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: MB 480-438768/7

Matrix: Water

Analysis Batch: 438768

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/10/18 23:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/10/18 23:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/10/18 23:39	1
Benzene	ND		1.0	0.41	ug/L			10/10/18 23:39	1
Chloromethane	ND		1.0	0.35	ug/L			10/10/18 23:39	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/10/18 23:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/10/18 23:39	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/10/18 23:39	1
Naphthalene	ND		1.0	0.43	ug/L			10/10/18 23:39	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/10/18 23:39	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/10/18 23:39	1
o-Xylene	ND		1.0	0.76	ug/L			10/10/18 23:39	1
Styrene	ND		1.0	0.73	ug/L			10/10/18 23:39	1
Toluene	ND		1.0	0.51	ug/L			10/10/18 23:39	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/10/18 23:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120		10/10/18 23:39	1
4-Bromofluorobenzene (Surr)	95		73 - 120		10/10/18 23:39	1
Dibromofluoromethane (Surr)	98		75 - 123		10/10/18 23:39	1
Toluene-d8 (Surr)	102		80 - 120		10/10/18 23:39	1

Lab Sample ID: LCS 480-438768/5

Matrix: Water

Analysis Batch: 438768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.9		ug/L		92	73 - 126
1,2,4-Trimethylbenzene	25.0	24.8		ug/L		99	76 - 121
1,3,5-Trimethylbenzene	25.0	24.0		ug/L		96	77 - 121
Benzene	25.0	25.2		ug/L		101	71 - 124
Chloromethane	25.0	30.9		ug/L		124	68 - 124
Ethylbenzene	25.0	24.4		ug/L		98	77 - 123
Methyl tert-butyl ether	25.0	22.5		ug/L		90	77 - 120
m-Xylene & p-Xylene	25.0	23.9		ug/L		95	76 - 122
Naphthalene	25.0	20.5		ug/L		82	66 - 125
n-Butylbenzene	25.0	23.8		ug/L		95	71 - 128
N-Propylbenzene	25.0	24.4		ug/L		98	75 - 127
o-Xylene	25.0	24.3		ug/L		97	76 - 122
Styrene	25.0	24.0		ug/L		96	80 - 120
Toluene	25.0	24.9		ug/L		100	80 - 122
Xylenes, Total	50.0	48.2		ug/L		96	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		77 - 120
4-Bromofluorobenzene (Surr)	97		73 - 120
Dibromofluoromethane (Surr)	100		75 - 123

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: LCS 480-438768/5
Matrix: Water
Analysis Batch: 438768

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: MB 480-438802/7
Matrix: Water
Analysis Batch: 438802

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 13:47	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 13:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 13:47	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 13:47	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 13:47	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 13:47	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 13:47	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 13:47	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 13:47	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 13:47	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 13:47	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 13:47	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 13:47	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 13:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 13:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		10/11/18 13:47	1
4-Bromofluorobenzene (Surr)	94		73 - 120		10/11/18 13:47	1
Dibromofluoromethane (Surr)	97		75 - 123		10/11/18 13:47	1
Toluene-d8 (Surr)	99		80 - 120		10/11/18 13:47	1

Lab Sample ID: LCS 480-438802/5
Matrix: Water
Analysis Batch: 438802

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.4		ug/L		90	73 - 126
1,2,4-Trimethylbenzene	25.0	27.9		ug/L		111	76 - 121
1,3,5-Trimethylbenzene	25.0	26.5		ug/L		106	77 - 121
Benzene	25.0	25.7		ug/L		103	71 - 124
Chloromethane	25.0	32.2	*	ug/L		129	68 - 124
Ethylbenzene	25.0	25.4		ug/L		102	77 - 123
Methyl tert-butyl ether	25.0	22.6		ug/L		90	77 - 120
m-Xylene & p-Xylene	25.0	24.8		ug/L		99	76 - 122
Naphthalene	25.0	24.2		ug/L		97	66 - 125
n-Butylbenzene	25.0	26.1		ug/L		105	71 - 128
N-Propylbenzene	25.0	26.4		ug/L		106	75 - 127
o-Xylene	25.0	25.0		ug/L		100	76 - 122
Styrene	25.0	26.2		ug/L		105	80 - 120
Toluene	25.0	25.9		ug/L		103	80 - 122

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QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: LCS 480-438802/5
Matrix: Water
Analysis Batch: 438802

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Xylenes, Total	50.0	49.8		ug/L		100	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		77 - 120
4-Bromofluorobenzene (Surr)	94		73 - 120
Dibromofluoromethane (Surr)	96		75 - 123
Toluene-d8 (Surr)	104		80 - 120

Lab Sample ID: MB 480-438997/7
Matrix: Water
Analysis Batch: 438997

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/11/18 22:28	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/11/18 22:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/11/18 22:28	1
Benzene	ND		1.0	0.41	ug/L			10/11/18 22:28	1
Chloromethane	ND		1.0	0.35	ug/L			10/11/18 22:28	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/11/18 22:28	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/11/18 22:28	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/11/18 22:28	1
Naphthalene	ND		1.0	0.43	ug/L			10/11/18 22:28	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/11/18 22:28	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/11/18 22:28	1
o-Xylene	ND		1.0	0.76	ug/L			10/11/18 22:28	1
Styrene	ND		1.0	0.73	ug/L			10/11/18 22:28	1
Toluene	ND		1.0	0.51	ug/L			10/11/18 22:28	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/11/18 22:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		77 - 120		10/11/18 22:28	1
4-Bromofluorobenzene (Surr)	93		73 - 120		10/11/18 22:28	1
Dibromofluoromethane (Surr)	103		75 - 123		10/11/18 22:28	1
Toluene-d8 (Surr)	99		80 - 120		10/11/18 22:28	1

Lab Sample ID: LCS 480-438997/5
Matrix: Water
Analysis Batch: 438997

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	23.5		ug/L		94	73 - 126
1,2,4-Trimethylbenzene	25.0	25.5		ug/L		102	76 - 121
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	77 - 121
Benzene	25.0	25.7		ug/L		103	71 - 124
Chloromethane	25.0	32.2	*	ug/L		129	68 - 124
Ethylbenzene	25.0	25.7		ug/L		103	77 - 123
Methyl tert-butyl ether	25.0	21.1		ug/L		85	77 - 120
m-Xylene & p-Xylene	25.0	24.5		ug/L		98	76 - 122

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QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: LCS 480-438997/5
Matrix: Water
Analysis Batch: 438997

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	25.0	21.2		ug/L		85	66 - 125
n-Butylbenzene	25.0	25.1		ug/L		100	71 - 128
N-Propylbenzene	25.0	24.9		ug/L		99	75 - 127
o-Xylene	25.0	24.8		ug/L		99	76 - 122
Styrene	25.0	25.3		ug/L		101	80 - 120
Toluene	25.0	25.6		ug/L		103	80 - 122
Xylenes, Total	50.0	49.3		ug/L		99	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	97		75 - 123
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: 480-142837-2 MS
Matrix: Water
Analysis Batch: 438997

Client Sample ID: SUPE-W-28C-100218
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	24.5		ug/L		98	73 - 126
1,2,4-Trimethylbenzene	ND		25.0	25.5		ug/L		102	76 - 121
1,3,5-Trimethylbenzene	ND		25.0	24.4		ug/L		98	77 - 121
Benzene	ND		25.0	26.8		ug/L		107	71 - 124
Chloromethane	ND		25.0	33.6	F1	ug/L		135	68 - 124
Ethylbenzene	ND		25.0	25.5		ug/L		102	77 - 123
Methyl tert-butyl ether	ND		25.0	20.9		ug/L		84	77 - 120
m-Xylene & p-Xylene	ND		25.0	25.4		ug/L		101	76 - 122
Naphthalene	ND		25.0	19.2		ug/L		77	66 - 125
n-Butylbenzene	ND		25.0	24.0		ug/L		96	71 - 128
N-Propylbenzene	ND		25.0	24.9		ug/L		100	75 - 127
o-Xylene	ND		25.0	24.5		ug/L		98	76 - 122
Styrene	ND		25.0	25.1		ug/L		101	80 - 120
Toluene	ND		25.0	25.5		ug/L		102	80 - 122
Xylenes, Total	ND		50.0	49.9		ug/L		100	76 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	102		75 - 123
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: 480-142837-2 MSD
Matrix: Water
Analysis Batch: 438997

Client Sample ID: SUPE-W-28C-100218
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	ND		25.0	26.2		ug/L		105	73 - 126	7	15
1,2,4-Trimethylbenzene	ND		25.0	27.5		ug/L		110	76 - 121	7	20

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QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: 480-142837-2 MSD

Client Sample ID: SUPE-W-28C-100218

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 438997

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	ND		25.0	26.8		ug/L		107	77 - 121	9	20
Benzene	ND		25.0	28.2		ug/L		113	71 - 124	5	13
Chloromethane	ND		25.0	36.0	F1	ug/L		144	68 - 124	7	15
Ethylbenzene	ND		25.0	27.8		ug/L		111	77 - 123	9	15
Methyl tert-butyl ether	ND		25.0	23.5		ug/L		94	77 - 120	12	37
m-Xylene & p-Xylene	ND		25.0	27.1		ug/L		108	76 - 122	7	16
Naphthalene	ND		25.0	21.9		ug/L		88	66 - 125	14	20
n-Butylbenzene	ND		25.0	26.8		ug/L		107	71 - 128	11	15
N-Propylbenzene	ND		25.0	27.0		ug/L		108	75 - 127	8	15
o-Xylene	ND		25.0	27.1		ug/L		108	76 - 122	10	16
Styrene	ND		25.0	27.4		ug/L		110	80 - 120	9	20
Toluene	ND		25.0	27.8		ug/L		111	80 - 122	8	15
Xylenes, Total	ND		50.0	54.2		ug/L		108	76 - 122	8	16
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	92		77 - 120								
4-Bromofluorobenzene (Surr)	96		73 - 120								
Dibromofluoromethane (Surr)	98		75 - 123								
Toluene-d8 (Surr)	103		80 - 120								

Lab Sample ID: MB 480-439047/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 439047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/12/18 11:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			10/12/18 11:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			10/12/18 11:39	1
Benzene	ND		1.0	0.41	ug/L			10/12/18 11:39	1
Chloromethane	ND		1.0	0.35	ug/L			10/12/18 11:39	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/12/18 11:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/12/18 11:39	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			10/12/18 11:39	1
Naphthalene	ND		1.0	0.43	ug/L			10/12/18 11:39	1
n-Butylbenzene	ND		1.0	0.64	ug/L			10/12/18 11:39	1
N-Propylbenzene	ND		1.0	0.69	ug/L			10/12/18 11:39	1
o-Xylene	ND		1.0	0.76	ug/L			10/12/18 11:39	1
Styrene	ND		1.0	0.73	ug/L			10/12/18 11:39	1
Toluene	ND		1.0	0.51	ug/L			10/12/18 11:39	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/12/18 11:39	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	97		77 - 120				10/12/18 11:39	1	
4-Bromofluorobenzene (Surr)	93		73 - 120				10/12/18 11:39	1	
Dibromofluoromethane (Surr)	98		75 - 123				10/12/18 11:39	1	
Toluene-d8 (Surr)	101		80 - 120				10/12/18 11:39	1	

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QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: LCS 480-439047/5

Matrix: Water

Analysis Batch: 439047

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	19.8		ug/L		79	73 - 126
1,2,4-Trimethylbenzene	25.0	25.1		ug/L		100	76 - 121
1,3,5-Trimethylbenzene	25.0	23.6		ug/L		94	77 - 121
Benzene	25.0	23.6		ug/L		94	71 - 124
Chloromethane	25.0	29.6		ug/L		118	68 - 124
Ethylbenzene	25.0	23.3		ug/L		93	77 - 123
Methyl tert-butyl ether	25.0	21.6		ug/L		87	77 - 120
m-Xylene & p-Xylene	25.0	23.2		ug/L		93	76 - 122
Naphthalene	25.0	21.8		ug/L		87	66 - 125
n-Butylbenzene	25.0	22.6		ug/L		90	71 - 128
N-Propylbenzene	25.0	23.0		ug/L		92	75 - 127
o-Xylene	25.0	23.7		ug/L		95	76 - 122
Styrene	25.0	24.5		ug/L		98	80 - 120
Toluene	25.0	23.6		ug/L		94	80 - 122
Xylenes, Total	50.0	46.9		ug/L		94	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	102		80 - 120

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

Lab Sample ID: MB 500-453886/1-A

Matrix: Water

Analysis Batch: 454447

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 453886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 20:43	1
1,2-Dichlorobenzene	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 20:43	1
1,3-Dichlorobenzene	ND		2.0	0.25	ug/L		10/09/18 08:04	10/11/18 20:43	1
1,4-Dichlorobenzene	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 20:43	1
1-Methylnaphthalene	ND		2.0	0.50	ug/L		10/09/18 08:04	10/11/18 20:43	1
bis(chloroisopropyl) ether	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,3,4,6-Tetrachlorophenol	ND		5.0	1.5	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,4,5-Trichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,4,6-Trichlorophenol	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,4-Dichlorophenol	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,4-Dinitrophenol	ND		20	7.4	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,4-Dinitrotoluene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,6-Dinitrotoluene	ND		1.0	0.12	ug/L		10/09/18 08:04	10/11/18 20:43	1
3 & 4 Methylphenol	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 20:43	1
2-Chloronaphthalene	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 20:43	1
2-Chlorophenol	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 20:43	1
2-Methylnaphthalene	ND		2.0	0.13	ug/L		10/09/18 08:04	10/11/18 20:43	1
2-Methylphenol	ND		2.0	0.31	ug/L		10/09/18 08:04	10/11/18 20:43	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: MB 500-453886/1-A
Matrix: Water
Analysis Batch: 454447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 453886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 20:43	1
2-Nitrophenol	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 20:43	1
3-Nitroaniline	ND		10	2.3	ug/L		10/09/18 08:04	10/11/18 20:43	1
4,6-Dinitro-2-methylphenol	ND		20	4.9	ug/L		10/09/18 08:04	10/11/18 20:43	1
4-Bromophenyl phenyl ether	ND		5.0	0.91	ug/L		10/09/18 08:04	10/11/18 20:43	1
4-Chloro-3-methylphenol	ND		10	2.2	ug/L		10/09/18 08:04	10/11/18 20:43	1
4-Chloroaniline	ND		10	2.1	ug/L		10/09/18 08:04	10/11/18 20:43	1
4-Chlorophenyl phenyl ether	ND		5.0	0.81	ug/L		10/09/18 08:04	10/11/18 20:43	1
4-Nitroaniline	ND		10	3.9	ug/L		10/09/18 08:04	10/11/18 20:43	1
4-Nitrophenol	ND		20	2.3	ug/L		10/09/18 08:04	10/11/18 20:43	1
Acenaphthene	ND		1.0	0.36	ug/L		10/09/18 08:04	10/11/18 20:43	1
Acenaphthylene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 20:43	1
Anthracene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzo[a]pyrene	ND		0.20	0.056	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzo[b]fluoranthene	ND		0.20	0.058	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzo[g,h,i]perylene	ND		1.0	0.42	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzo[k]fluoranthene	ND		0.20	0.074	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzoic acid	27.2		20	4.6	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzyl alcohol	ND		20	3.1	ug/L		10/09/18 08:04	10/11/18 20:43	1
Bis(2-chloroethoxy)methane	ND		2.0	0.30	ug/L		10/09/18 08:04	10/11/18 20:43	1
Bis(2-chloroethyl)ether	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 20:43	1
Bis(2-ethylhexyl) phthalate	ND		10	2.4	ug/L		10/09/18 08:04	10/11/18 20:43	1
Butyl benzyl phthalate	ND		2.0	0.27	ug/L		10/09/18 08:04	10/11/18 20:43	1
Chrysene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 20:43	1
Dibenz(a,h)anthracene	ND		0.30	0.064	ug/L		10/09/18 08:04	10/11/18 20:43	1
Dibenzofuran	ND		2.0	0.35	ug/L		10/09/18 08:04	10/11/18 20:43	1
Diethyl phthalate	ND		2.0	0.44	ug/L		10/09/18 08:04	10/11/18 20:43	1
Dimethyl phthalate	ND		2.0	0.38	ug/L		10/09/18 08:04	10/11/18 20:43	1
Di-n-butyl phthalate	ND		5.0	0.80	ug/L		10/09/18 08:04	10/11/18 20:43	1
Di-n-octyl phthalate	ND		10	2.5	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,3,5,6-Tetrachlorophenol	ND		5.0	2.5	ug/L		10/09/18 08:04	10/11/18 20:43	1
Fluoranthene	ND		1.0	0.32	ug/L		10/09/18 08:04	10/11/18 20:43	1
Fluorene	ND		1.0	0.38	ug/L		10/09/18 08:04	10/11/18 20:43	1
Hexachlorobenzene	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 20:43	1
Hexachlorobutadiene	ND		5.0	1.1	ug/L		10/09/18 08:04	10/11/18 20:43	1
Hexachlorocyclopentadiene	ND		20	3.4	ug/L		10/09/18 08:04	10/11/18 20:43	1
Hexachloroethane	ND		5.0	0.97	ug/L		10/09/18 08:04	10/11/18 20:43	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.084	ug/L		10/09/18 08:04	10/11/18 20:43	1
Isophorone	ND		2.0	0.29	ug/L		10/09/18 08:04	10/11/18 20:43	1
Nitrobenzene	ND		1.0	0.45	ug/L		10/09/18 08:04	10/11/18 20:43	1
N-Nitrosodi-n-propylamine	ND		0.50	0.14	ug/L		10/09/18 08:04	10/11/18 20:43	1
N-Nitrosodiphenylamine	ND		2.0	0.34	ug/L		10/09/18 08:04	10/11/18 20:43	1
Pentachlorophenol	ND		20	5.6	ug/L		10/09/18 08:04	10/11/18 20:43	1
Phenol	ND		5.0	0.36	ug/L		10/09/18 08:04	10/11/18 20:43	1
Pyrene	ND		1.0	0.48	ug/L		10/09/18 08:04	10/11/18 20:43	1
2,4-Dimethylphenol	ND		10	3.3	ug/L		10/09/18 08:04	10/11/18 20:43	1
Benzo[a]anthracene	ND		0.20	0.044	ug/L		10/09/18 08:04	10/11/18 20:43	1
Phenanthrene	ND		1.0	0.35	ug/L		10/09/18 08:04	10/11/18 20:43	1

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QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: MB 500-453886/1-A
Matrix: Water
Analysis Batch: 454447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 453886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	ND		5.0	0.94	ug/L		10/09/18 08:04	10/11/18 20:43	1
Naphthalene	ND		1.0	0.30	ug/L		10/09/18 08:04	10/11/18 20:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	104		40 - 145	10/09/18 08:04	10/11/18 20:43	1
2-Fluorobiphenyl	100		34 - 110	10/09/18 08:04	10/11/18 20:43	1
2-Fluorophenol (Surr)	69		27 - 110	10/09/18 08:04	10/11/18 20:43	1
Nitrobenzene-d5 (Surr)	99		36 - 120	10/09/18 08:04	10/11/18 20:43	1
Phenol-d5 (Surr)	38		20 - 100	10/09/18 08:04	10/11/18 20:43	1
Terphenyl-d14 (Surr)	121		40 - 145	10/09/18 08:04	10/11/18 20:43	1

Lab Sample ID: LCS 500-453886/2-A
Matrix: Water
Analysis Batch: 454447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 453886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	40.0	31.7		ug/L		79	26 - 110
1,2-Dichlorobenzene	40.0	31.4		ug/L		78	26 - 110
1,3-Dichlorobenzene	40.0	30.4		ug/L		76	22 - 110
1,4-Dichlorobenzene	40.0	30.5		ug/L		76	23 - 110
1-Methylnaphthalene	40.0	33.9		ug/L		85	38 - 110
bis(chloroisopropyl) ether	40.0	34.0		ug/L		85	38 - 110
2,3,4,6-Tetrachlorophenol	40.0	43.6		ug/L		109	44 - 118
2,4,5-Trichlorophenol	40.0	44.5		ug/L		111	63 - 120
2,4,6-Trichlorophenol	40.0	42.5		ug/L		106	62 - 110
2,4-Dichlorophenol	40.0	42.0		ug/L		105	62 - 110
2,4-Dinitrophenol	80.0	84.6		ug/L		106	37 - 130
2,4-Dinitrotoluene	40.0	47.4		ug/L		119	63 - 122
2,6-Dinitrotoluene	40.0	48.1	*	ug/L		120	63 - 119
3 & 4 Methylphenol	40.0	36.1		ug/L		90	53 - 110
2-Chloronaphthalene	40.0	34.9		ug/L		87	39 - 110
2-Chlorophenol	40.0	39.6		ug/L		99	59 - 110
2-Methylnaphthalene	40.0	33.6		ug/L		84	34 - 110
2-Methylphenol	40.0	38.9		ug/L		97	53 - 110
2-Nitroaniline	40.0	40.0		ug/L		100	59 - 122
2-Nitrophenol	40.0	41.9		ug/L		105	58 - 110
3-Nitroaniline	40.0	27.5		ug/L		69	47 - 123
4,6-Dinitro-2-methylphenol	80.0	90.1		ug/L		113	50 - 117
4-Bromophenyl phenyl ether	40.0	38.2		ug/L		96	58 - 120
4-Chloro-3-methylphenol	40.0	41.4		ug/L		103	64 - 120
4-Chloroaniline	40.0	34.1		ug/L		85	35 - 128
4-Chlorophenyl phenyl ether	40.0	37.4		ug/L		93	47 - 112
4-Nitroaniline	40.0	32.1		ug/L		80	52 - 147
4-Nitrophenol	80.0	38.6		ug/L		48	20 - 110
Acenaphthene	40.0	37.0		ug/L		93	46 - 110
Acenaphthylene	40.0	38.0		ug/L		95	47 - 110
Anthracene	40.0	41.9		ug/L		105	67 - 110
Benzo[a]pyrene	40.0	48.6	*	ug/L		121	70 - 120

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QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: LCS 500-453886/2-A
Matrix: Water
Analysis Batch: 454447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 453886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	40.0	46.5		ug/L		116	69 - 123
Benzo[g,h,i]perylene	40.0	47.7		ug/L		119	70 - 120
Benzo[k]fluoranthene	40.0	46.0		ug/L		115	70 - 120
Benzoic acid	80.0	33.8		ug/L		42	10 - 100
Benzyl alcohol	40.0	36.4		ug/L		91	33 - 127
Bis(2-chloroethoxy)methane	40.0	41.3		ug/L		103	60 - 110
Bis(2-chloroethyl)ether	40.0	40.0		ug/L		100	49 - 110
Bis(2-ethylhexyl) phthalate	40.0	45.5		ug/L		114	69 - 120
Butyl benzyl phthalate	40.0	44.9		ug/L		112	68 - 120
Chrysene	40.0	43.2		ug/L		108	68 - 120
Dibenz(a,h)anthracene	40.0	48.7		ug/L		122	70 - 127
Dibenzofuran	40.0	38.0		ug/L		95	51 - 110
Diethyl phthalate	40.0	41.6		ug/L		104	62 - 120
Dimethyl phthalate	40.0	42.9		ug/L		107	63 - 120
Di-n-butyl phthalate	40.0	43.6		ug/L		109	70 - 120
Di-n-octyl phthalate	40.0	45.3		ug/L		113	70 - 122
Fluoranthene	40.0	44.0		ug/L		110	68 - 120
Fluorene	40.0	38.9		ug/L		97	53 - 120
Hexachlorobenzene	40.0	40.0		ug/L		100	61 - 120
Hexachlorobutadiene	40.0	30.2		ug/L		76	20 - 100
Hexachlorocyclopentadiene	40.0	24.8		ug/L		62	10 - 100
Hexachloroethane	40.0	28.1		ug/L		70	20 - 100
Indeno[1,2,3-cd]pyrene	40.0	47.9		ug/L		120	65 - 133
Isophorone	40.0	41.4		ug/L		103	57 - 110
Nitrobenzene	40.0	42.0		ug/L		105	53 - 110
N-Nitrosodi-n-propylamine	40.0	39.3		ug/L		98	58 - 110
N-Nitrosodiphenylamine	40.0	42.8		ug/L		107	66 - 110
Pentachlorophenol	80.0	85.7		ug/L		107	23 - 129
Phenol	40.0	19.6		ug/L		49	33 - 100
Pyrene	40.0	43.5		ug/L		109	70 - 110
2,4-Dimethylphenol	40.0	42.2		ug/L		105	51 - 110
Benzo[a]anthracene	40.0	43.2		ug/L		108	70 - 120
Phenanthrene	40.0	42.3		ug/L		106	65 - 120
3,3'-Dichlorobenzidine	40.0	40.3		ug/L		101	60 - 132
Naphthalene	40.0	34.8		ug/L		87	36 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	120		40 - 145
2-Fluorobiphenyl	101		34 - 110
2-Fluorophenol (Surr)	73		27 - 110
Nitrobenzene-d5 (Surr)	109		36 - 120
Phenol-d5 (Surr)	50		20 - 100
Terphenyl-d14 (Surr)	114		40 - 145

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: 480-142837-2 MS

Matrix: Water

Analysis Batch: 454239

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA

Prep Batch: 453886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	ND		41.1	37.1		ug/L		90	26 - 110
1,2-Dichlorobenzene	ND		41.1	36.3		ug/L		88	26 - 110
1,3-Dichlorobenzene	ND		41.1	34.7		ug/L		84	22 - 110
1,4-Dichlorobenzene	ND		41.1	35.1		ug/L		85	23 - 110
1-Methylnaphthalene	ND		41.1	41.3		ug/L		100	38 - 110
bis(chloroisopropyl) ether	ND		41.1	40.8		ug/L		99	38 - 110
2,3,4,6-Tetrachlorophenol	ND	F1	41.1	52.1	F1	ug/L		127	44 - 118
2,4,5-Trichlorophenol	ND	F1	41.1	51.5	F1	ug/L		125	63 - 120
2,4,6-Trichlorophenol	ND	F1	41.1	49.3	F1	ug/L		120	62 - 110
2,4-Dichlorophenol	ND	F1	41.1	48.1	F1	ug/L		117	62 - 110
2,4-Dinitrophenol	ND		82.2	96.8		ug/L		118	37 - 130
2,4-Dinitrotoluene	ND	F1	41.1	56.0	F1	ug/L		136	63 - 122
2,6-Dinitrotoluene	ND	F1 *	41.1	56.7	F1	ug/L		138	63 - 119
3 & 4 Methylphenol	ND		41.1	40.0		ug/L		97	53 - 110
2-Chloronaphthalene	ND		41.1	41.1		ug/L		100	39 - 110
2-Chlorophenol	ND		41.1	45.1		ug/L		110	59 - 110
2-Methylnaphthalene	ND		41.1	40.5		ug/L		98	34 - 110
2-Methylphenol	ND		41.1	43.5		ug/L		106	53 - 110
2-Nitroaniline	ND		41.1	48.2		ug/L		117	59 - 122
2-Nitrophenol	ND	F1	41.1	48.8	F1	ug/L		119	58 - 110
3-Nitroaniline	ND		41.1	36.4		ug/L		89	47 - 123
4,6-Dinitro-2-methylphenol	ND	F1	82.2	102	F1	ug/L		124	50 - 117
4-Bromophenyl phenyl ether	ND		41.1	47.2		ug/L		115	58 - 120
4-Chloro-3-methylphenol	ND		41.1	49.1		ug/L		119	64 - 120
4-Chloroaniline	ND		41.1	42.1		ug/L		102	35 - 128
4-Chlorophenyl phenyl ether	ND	F1	41.1	46.4	F1	ug/L		113	47 - 112
4-Nitroaniline	ND		41.1	36.6		ug/L		89	52 - 147
4-Nitrophenol	ND		82.2	45.9		ug/L		56	20 - 110
Acenaphthene	ND		41.1	43.7		ug/L		106	46 - 110
Acenaphthylene	ND		41.1	44.7		ug/L		109	47 - 110
Anthracene	ND	F1	41.1	49.7	F1	ug/L		121	67 - 110
Benzo[a]pyrene	ND	F1 *	41.1	55.8	F1	ug/L		136	70 - 120
Benzo[b]fluoranthene	ND	F1	41.1	54.6	F1	ug/L		133	69 - 123
Benzo[g,h,i]perylene	ND	F1	41.1	54.3	F1	ug/L		132	70 - 120
Benzo[k]fluoranthene	ND	F1	41.1	53.0	F1	ug/L		129	70 - 120
Benzoic acid	ND		82.2	48.2		ug/L		59	10 - 100
Benzyl alcohol	ND		41.1	42.8		ug/L		104	33 - 127
Bis(2-chloroethoxy)methane	ND	F1	41.1	47.6	F1	ug/L		116	60 - 110
Bis(2-chloroethyl)ether	ND	F1	41.1	45.7	F1	ug/L		111	49 - 110
Bis(2-ethylhexyl) phthalate	ND	F1	41.1	52.1	F1	ug/L		127	69 - 120
Butyl benzyl phthalate	ND	F1	41.1	53.2	F1	ug/L		129	68 - 120
Chrysene	ND	F1	41.1	50.4	F1	ug/L		123	68 - 120
Dibenz(a,h)anthracene	ND	F1	41.1	55.6	F1	ug/L		135	70 - 127
Dibenzofuran	ND		41.1	45.2		ug/L		110	51 - 110
Diethyl phthalate	ND		41.1	49.2		ug/L		120	62 - 120
Dimethyl phthalate	ND	F1	41.1	49.6	F1	ug/L		121	63 - 120
Di-n-butyl phthalate	ND	F1	41.1	50.1	F1	ug/L		122	70 - 120
Di-n-octyl phthalate	ND	F1	41.1	54.0	F1	ug/L		131	70 - 122

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: 480-142837-2 MS

Matrix: Water

Analysis Batch: 454239

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA

Prep Batch: 453886

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Fluoranthene	ND	F1	41.1	51.1	F1	ug/L		124		68 - 120
Fluorene	ND		41.1	47.4		ug/L		115		53 - 120
Hexachlorobenzene	ND		41.1	47.9		ug/L		117		61 - 120
Hexachlorobutadiene	ND		41.1	32.5		ug/L		79		20 - 100
Hexachlorocyclopentadiene	ND		41.1	32.8		ug/L		80		10 - 100
Hexachloroethane	ND		41.1	32.1		ug/L		78		20 - 100
Indeno[1,2,3-cd]pyrene	ND		41.1	54.7		ug/L		133		65 - 133
Isophorone	ND	F1	41.1	48.0	F1	ug/L		117		57 - 110
Nitrobenzene	ND	F1	41.1	48.1	F1	ug/L		117		53 - 110
N-Nitrosodi-n-propylamine	ND	F1	41.1	46.5	F1	ug/L		113		58 - 110
N-Nitrosodiphenylamine	ND	F1	41.1	49.5	F1	ug/L		120		66 - 110
Pentachlorophenol	ND		82.2	105		ug/L		127		23 - 129
Phenol	ND		41.1	20.2		ug/L		49		33 - 100
Pyrene	ND	F1	41.1	49.8	F1	ug/L		121		70 - 110
2,4-Dimethylphenol	ND	F1	41.1	47.7	F1	ug/L		116		51 - 110
Benzo[a]anthracene	ND	F1	41.1	50.4	F1	ug/L		122		70 - 120
Phenanthrene	ND	F1	41.1	49.8	F1	ug/L		121		65 - 120
3,3'-Dichlorobenzidine	ND		41.1	48.2		ug/L		117		60 - 132

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	143		40 - 145
2-Fluorobiphenyl	122	X	34 - 110
2-Fluorophenol (Surr)	68		27 - 110
Nitrobenzene-d5 (Surr)	117		36 - 120
Phenol-d5 (Surr)	50		20 - 100
Terphenyl-d14 (Surr)	130		40 - 145

Lab Sample ID: 480-142837-2 MSD

Matrix: Water

Analysis Batch: 454239

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA

Prep Batch: 453886

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		41.3	39.2		ug/L		95		26 - 110	6	20
1,2-Dichlorobenzene	ND		41.3	37.6		ug/L		91		26 - 110	3	20
1,3-Dichlorobenzene	ND		41.3	35.9		ug/L		87		22 - 110	3	20
1,4-Dichlorobenzene	ND		41.3	35.8		ug/L		87		23 - 110	2	20
1-Methylnaphthalene	ND		41.3	41.4		ug/L		100		38 - 110	0	20
bis(chloroisopropyl) ether	ND		41.3	39.9		ug/L		97		38 - 110	2	20
2,3,4,6-Tetrachlorophenol	ND	F1	41.3	50.4	F1	ug/L		122		44 - 118	3	20
2,4,5-Trichlorophenol	ND	F1	41.3	49.2		ug/L		119		63 - 120	5	20
2,4,6-Trichlorophenol	ND	F1	41.3	48.3	F1	ug/L		117		62 - 110	2	20
2,4-Dichlorophenol	ND	F1	41.3	47.5	F1	ug/L		115		62 - 110	1	20
2,4-Dinitrophenol	ND		82.5	95.8		ug/L		116		37 - 130	1	20
2,4-Dinitrotoluene	ND	F1	41.3	55.2	F1	ug/L		134		63 - 122	1	20
2,6-Dinitrotoluene	ND	F1 *	41.3	54.6	F1	ug/L		132		63 - 119	4	20
3 & 4 Methylphenol	ND		41.3	38.9		ug/L		94		53 - 110	3	20
2-Chloronaphthalene	ND		41.3	42.0		ug/L		102		39 - 110	2	20
2-Chlorophenol	ND		41.3	44.6		ug/L		108		59 - 110	1	20

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: 480-142837-2 MSD

Matrix: Water

Analysis Batch: 454239

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA

Prep Batch: 453886

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
2-Methylnaphthalene	ND		41.3	41.5		ug/L		100	34 - 110	2	20
2-Methylphenol	ND		41.3	42.4		ug/L		103	53 - 110	2	20
2-Nitroaniline	ND		41.3	46.1		ug/L		112	59 - 122	4	20
2-Nitrophenol	ND	F1	41.3	48.6	F1	ug/L		118	58 - 110	0	20
3-Nitroaniline	ND		41.3	36.9		ug/L		89	47 - 123	1	20
4,6-Dinitro-2-methylphenol	ND	F1	82.5	99.1	F1	ug/L		120	50 - 117	3	20
4-Bromophenyl phenyl ether	ND		41.3	45.5		ug/L		110	58 - 120	4	20
4-Chloro-3-methylphenol	ND		41.3	48.1		ug/L		117	64 - 120	2	20
4-Chloroaniline	ND		41.3	43.0		ug/L		104	35 - 128	2	20
4-Chlorophenyl phenyl ether	ND	F1	41.3	46.1		ug/L		112	47 - 112	1	20
4-Nitroaniline	ND		41.3	35.9		ug/L		87	52 - 147	2	20
4-Nitrophenol	ND		82.5	42.1		ug/L		51	20 - 110	9	20
Acenaphthene	ND		41.3	43.7		ug/L		106	46 - 110	0	20
Acenaphthylene	ND		41.3	44.3		ug/L		107	47 - 110	1	20
Anthracene	ND	F1	41.3	48.0	F1	ug/L		116	67 - 110	3	20
Benzo[a]pyrene	ND	F1 *	41.3	55.3	F1	ug/L		134	70 - 120	1	20
Benzo[b]fluoranthene	ND	F1	41.3	54.3	F1	ug/L		132	69 - 123	1	20
Benzo[g,h,i]perylene	ND	F1	41.3	53.3	F1	ug/L		129	70 - 120	2	20
Benzo[k]fluoranthene	ND	F1	41.3	51.6	F1	ug/L		125	70 - 120	3	20
Benzoic acid	ND		82.5	48.6		ug/L		59	10 - 100	1	20
Benzyl alcohol	ND		41.3	40.9		ug/L		99	33 - 127	4	20
Bis(2-chloroethoxy)methane	ND	F1	41.3	46.1	F1	ug/L		112	60 - 110	3	20
Bis(2-chloroethyl)ether	ND	F1	41.3	45.2		ug/L		109	49 - 110	1	20
Bis(2-ethylhexyl) phthalate	ND	F1	41.3	52.1	F1	ug/L		126	69 - 120	0	20
Butyl benzyl phthalate	ND	F1	41.3	51.8	F1	ug/L		126	68 - 120	3	20
Chrysene	ND	F1	41.3	49.2		ug/L		119	68 - 120	3	20
Dibenz(a,h)anthracene	ND	F1	41.3	54.6	F1	ug/L		132	70 - 127	2	20
Dibenzofuran	ND		41.3	44.4		ug/L		108	51 - 110	2	20
Diethyl phthalate	ND		41.3	47.9		ug/L		116	62 - 120	3	20
Dimethyl phthalate	ND	F1	41.3	48.0		ug/L		116	63 - 120	3	20
Di-n-butyl phthalate	ND	F1	41.3	49.2		ug/L		119	70 - 120	2	20
Di-n-octyl phthalate	ND	F1	41.3	52.3	F1	ug/L		127	70 - 122	3	20
Fluoranthene	ND	F1	41.3	49.2		ug/L		119	68 - 120	4	20
Fluorene	ND		41.3	46.4		ug/L		113	53 - 120	2	20
Hexachlorobenzene	ND		41.3	46.7		ug/L		113	61 - 120	2	20
Hexachlorobutadiene	ND		41.3	34.2		ug/L		83	20 - 100	5	20
Hexachlorocyclopentadiene	ND		41.3	34.7		ug/L		84	10 - 100	6	20
Hexachloroethane	ND		41.3	33.8		ug/L		82	20 - 100	5	20
Indeno[1,2,3-cd]pyrene	ND		41.3	53.7		ug/L		130	65 - 133	2	20
Isophorone	ND	F1	41.3	47.6	F1	ug/L		115	57 - 110	1	20
Nitrobenzene	ND	F1	41.3	47.6	F1	ug/L		115	53 - 110	1	20
N-Nitrosodi-n-propylamine	ND	F1	41.3	45.0		ug/L		109	58 - 110	3	20
N-Nitrosodiphenylamine	ND	F1	41.3	48.3	F1	ug/L		117	66 - 110	2	20
Pentachlorophenol	ND		82.5	101		ug/L		123	23 - 129	3	20
Phenol	ND		41.3	19.7		ug/L		48	33 - 100	2	20
Pyrene	ND	F1	41.3	49.0	F1	ug/L		119	70 - 110	2	20
2,4-Dimethylphenol	ND	F1	41.3	48.0	F1	ug/L		116	51 - 110	1	20
Benzo[a]anthracene	ND	F1	41.3	48.8		ug/L		118	70 - 120	3	20

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: 480-142837-2 MSD

Matrix: Water

Analysis Batch: 454239

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA

Prep Batch: 453886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenanthrene	ND	F1	41.3	48.8		ug/L		118	65 - 120	2	20
3,3'-Dichlorobenzidine	ND		41.3	48.1		ug/L		117	60 - 132	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	135		40 - 145
2-Fluorobiphenyl	117	X	34 - 110
2-Fluorophenol (Surr)	66		27 - 110
Nitrobenzene-d5 (Surr)	116		36 - 120
Phenol-d5 (Surr)	49		20 - 100
Terphenyl-d14 (Surr)	124		40 - 145

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

Lab Sample ID: MB 480-438068/1-A

Matrix: Water

Analysis Batch: 438143

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 438068

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/06/18 15:14	10/08/18 10:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		24 - 146	10/06/18 15:14	10/08/18 10:29	1
2-Fluorobiphenyl	97		37 - 120	10/06/18 15:14	10/08/18 10:29	1
2-Fluorophenol (Surr)	59		10 - 120	10/06/18 15:14	10/08/18 10:29	1
Nitrobenzene-d5 (Surr)	92		26 - 120	10/06/18 15:14	10/08/18 10:29	1
Phenol-d5 (Surr)	41		11 - 120	10/06/18 15:14	10/08/18 10:29	1
p-Terphenyl-d14	113		64 - 127	10/06/18 15:14	10/08/18 10:29	1

Lab Sample ID: LCS 480-438068/2-A

Matrix: Water

Analysis Batch: 438143

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 438068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	16.0	18.1		ug/L		113	10 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	106		24 - 146
2-Fluorobiphenyl	97		37 - 120
2-Fluorophenol (Surr)	59		10 - 120
Nitrobenzene-d5 (Surr)	97		26 - 120
Phenol-d5 (Surr)	46		11 - 120
p-Terphenyl-d14	107		64 - 127

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: 480-142837-2 MS

Matrix: Water
Analysis Batch: 438143

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA
Prep Batch: 438068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Pentachlorophenol	ND		16.0	17.4		ug/L		109	10 - 131
Surrogate	%Recovery	Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	93		24 - 146						
2-Fluorobiphenyl	95		37 - 120						
2-Fluorophenol (Surr)	61		10 - 120						
Nitrobenzene-d5 (Surr)	99		26 - 120						
Phenol-d5 (Surr)	44		11 - 120						
p-Terphenyl-d14	91		64 - 127						

Lab Sample ID: 480-142837-2 MSD

Matrix: Water
Analysis Batch: 438143

Client Sample ID: SUPE-W-28C-100218

Prep Type: Total/NA
Prep Batch: 438068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Pentachlorophenol	ND		16.0	19.9		ug/L		125	10 - 131	13	37
Surrogate	%Recovery	Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	105		24 - 146								
2-Fluorobiphenyl	99		37 - 120								
2-Fluorophenol (Surr)	65		10 - 120								
Nitrobenzene-d5 (Surr)	94		26 - 120								
Phenol-d5 (Surr)	46		11 - 120								
p-Terphenyl-d14	97		64 - 127								

Lab Sample ID: MB 480-438261/1-A

Matrix: Water
Analysis Batch: 438866

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 438261

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0	0.34	ug/L		10/08/18 14:31	10/12/18 08:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		24 - 146				10/08/18 14:31	10/12/18 08:48	1
2-Fluorobiphenyl	84		37 - 120				10/08/18 14:31	10/12/18 08:48	1
2-Fluorophenol (Surr)	65		10 - 120				10/08/18 14:31	10/12/18 08:48	1
Nitrobenzene-d5 (Surr)	101		26 - 120				10/08/18 14:31	10/12/18 08:48	1
Phenol-d5 (Surr)	41		11 - 120				10/08/18 14:31	10/12/18 08:48	1
p-Terphenyl-d14	106		64 - 127				10/08/18 14:31	10/12/18 08:48	1

Lab Sample ID: LCS 480-438261/2-A

Matrix: Water
Analysis Batch: 438649

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 438261

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Pentachlorophenol	16.0	15.9		ug/L		99	10 - 131

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-142837-1

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

Lab Sample ID: LCS 480-438261/2-A
Matrix: Water
Analysis Batch: 438649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438261

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	86		24 - 146
2-Fluorobiphenyl	92		37 - 120
2-Fluorophenol (Surr)	60		10 - 120
Nitrobenzene-d5 (Surr)	94		26 - 120
Phenol-d5 (Surr)	42		11 - 120
p-Terphenyl-d14	103		64 - 127

Lab Sample ID: LCSD 480-438261/3-A
Matrix: Water
Analysis Batch: 438649

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438261

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Pentachlorophenol	16.0	14.8		ug/L		93	10 - 131	7	171	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	81		24 - 146
2-Fluorobiphenyl	87		37 - 120
2-Fluorophenol (Surr)	57		10 - 120
Nitrobenzene-d5 (Surr)	92		26 - 120
Phenol-d5 (Surr)	40		11 - 120
p-Terphenyl-d14	97		64 - 127

QC Association Summary

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

TestAmerica Job ID: 480-142837-1

GC/MS VOA

Analysis Batch: 438768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-1	SUPE-TB-01-100218	Total/NA	Water	8260C	
480-142837-2	SUPE-W-28C-100218	Total/NA	Water	8260C	
480-142837-4	SUPE-W-10AR2-100218	Total/NA	Water	8260C	
480-142837-5	SUPE-W-30C-100218	Total/NA	Water	8260C	
480-142837-6	SUPE-W-06A-100218	Total/NA	Water	8260C	
480-142837-7	SUPE-W-06C-100218	Total/NA	Water	8260C	
MB 480-438768/7	Method Blank	Total/NA	Water	8260C	
LCS 480-438768/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 438802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-9	SUPE-W-12A-100218	Total/NA	Water	8260C	
480-142837-10	SUPE-W-12CR-100218	Total/NA	Water	8260C	
MB 480-438802/7	Method Blank	Total/NA	Water	8260C	
LCS 480-438802/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 438997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-11	SUPE-W-4AR2-100218	Total/NA	Water	8260C	
MB 480-438997/7	Method Blank	Total/NA	Water	8260C	
LCS 480-438997/5	Lab Control Sample	Total/NA	Water	8260C	
480-142837-2 MS	SUPE-W-28C-100218	Total/NA	Water	8260C	
480-142837-2 MSD	SUPE-W-28C-100218	Total/NA	Water	8260C	

Analysis Batch: 439047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-8	SUPE-EB--01-100218	Total/NA	Water	8260C	
MB 480-439047/7	Method Blank	Total/NA	Water	8260C	
LCS 480-439047/5	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 438068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-2	SUPE-W-28C-100218	Total/NA	Water	3510C	
480-142837-4	SUPE-W-10AR2-100218	Total/NA	Water	3510C	
480-142837-5	SUPE-W-30C-100218	Total/NA	Water	3510C	
480-142837-6	SUPE-W-06A-100218	Total/NA	Water	3510C	
480-142837-7	SUPE-W-06C-100218	Total/NA	Water	3510C	
480-142837-8	SUPE-EB--01-100218	Total/NA	Water	3510C	
480-142837-9	SUPE-W-12A-100218	Total/NA	Water	3510C	
480-142837-10	SUPE-W-12CR-100218	Total/NA	Water	3510C	
480-142837-11	SUPE-W-4AR2-100218	Total/NA	Water	3510C	
MB 480-438068/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-438068/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-142837-2 MS	SUPE-W-28C-100218	Total/NA	Water	3510C	
480-142837-2 MSD	SUPE-W-28C-100218	Total/NA	Water	3510C	

TestAmerica Buffalo

QC Association Summary

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

TestAmerica Job ID: 480-142837-1

GC/MS Semi VOA (Continued)

Analysis Batch: 438143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-2	SUPE-W-28C-100218	Total/NA	Water	8270D LL	438068
480-142837-4	SUPE-W-10AR2-100218	Total/NA	Water	8270D LL	438068
480-142837-5	SUPE-W-30C-100218	Total/NA	Water	8270D LL	438068
480-142837-6	SUPE-W-06A-100218	Total/NA	Water	8270D LL	438068
480-142837-7	SUPE-W-06C-100218	Total/NA	Water	8270D LL	438068
480-142837-8	SUPE-EB--01-100218	Total/NA	Water	8270D LL	438068
480-142837-9	SUPE-W-12A-100218	Total/NA	Water	8270D LL	438068
480-142837-10	SUPE-W-12CR-100218	Total/NA	Water	8270D LL	438068
MB 480-438068/1-A	Method Blank	Total/NA	Water	8270D LL	438068
LCS 480-438068/2-A	Lab Control Sample	Total/NA	Water	8270D LL	438068
480-142837-2 MS	SUPE-W-28C-100218	Total/NA	Water	8270D LL	438068
480-142837-2 MSD	SUPE-W-28C-100218	Total/NA	Water	8270D LL	438068

Prep Batch: 438261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-3	SUPE-W-18D-100218	Total/NA	Water	3510C	
MB 480-438261/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-438261/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-438261/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 438470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-11	SUPE-W-4AR2-100218	Total/NA	Water	8270D LL	438068

Analysis Batch: 438649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-438261/2-A	Lab Control Sample	Total/NA	Water	8270D LL	438261
LCSD 480-438261/3-A	Lab Control Sample Dup	Total/NA	Water	8270D LL	438261

Analysis Batch: 438866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-438261/1-A	Method Blank	Total/NA	Water	8270D LL	438261

Analysis Batch: 439490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-3	SUPE-W-18D-100218	Total/NA	Water	8270D LL	438261

Prep Batch: 453886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-2	SUPE-W-28C-100218	Total/NA	Water	3510C	
480-142837-3	SUPE-W-18D-100218	Total/NA	Water	3510C	
480-142837-4	SUPE-W-10AR2-100218	Total/NA	Water	3510C	
480-142837-5	SUPE-W-30C-100218	Total/NA	Water	3510C	
480-142837-6	SUPE-W-06A-100218	Total/NA	Water	3510C	
480-142837-7	SUPE-W-06C-100218	Total/NA	Water	3510C	
480-142837-8	SUPE-EB--01-100218	Total/NA	Water	3510C	
480-142837-9	SUPE-W-12A-100218	Total/NA	Water	3510C	
480-142837-10	SUPE-W-12CR-100218	Total/NA	Water	3510C	
480-142837-11	SUPE-W-4AR2-100218	Total/NA	Water	3510C	
MB 500-453886/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-453886/2-A	Lab Control Sample	Total/NA	Water	3510C	

TestAmerica Buffalo

QC Association Summary

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

TestAmerica Job ID: 480-142837-1

GC/MS Semi VOA (Continued)

Prep Batch: 453886 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-2 MS	SUPE-W-28C-100218	Total/NA	Water	3510C	
480-142837-2 MSD	SUPE-W-28C-100218	Total/NA	Water	3510C	

Analysis Batch: 454239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-142837-2	SUPE-W-28C-100218	Total/NA	Water	8270D	453886
480-142837-3	SUPE-W-18D-100218	Total/NA	Water	8270D	453886
480-142837-4	SUPE-W-10AR2-100218	Total/NA	Water	8270D	453886
480-142837-5	SUPE-W-30C-100218	Total/NA	Water	8270D	453886
480-142837-6	SUPE-W-06A-100218	Total/NA	Water	8270D	453886
480-142837-7	SUPE-W-06C-100218	Total/NA	Water	8270D	453886
480-142837-8	SUPE-EB--01-100218	Total/NA	Water	8270D	453886
480-142837-9	SUPE-W-12A-100218	Total/NA	Water	8270D	453886
480-142837-10	SUPE-W-12CR-100218	Total/NA	Water	8270D	453886
480-142837-11	SUPE-W-4AR2-100218	Total/NA	Water	8270D	453886
480-142837-2 MS	SUPE-W-28C-100218	Total/NA	Water	8270D	453886
480-142837-2 MSD	SUPE-W-28C-100218	Total/NA	Water	8270D	453886

Analysis Batch: 454447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-453886/1-A	Method Blank	Total/NA	Water	8270D	453886
LCS 500-453886/2-A	Lab Control Sample	Total/NA	Water	8270D	453886

Lab Chronicle

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-TB-01-100218

Date Collected: 10/02/18 00:00

Date Received: 10/03/18 10:00

Lab Sample ID: 480-142837-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438768	10/11/18 03:09	OMI	TAL BUF

Client Sample ID: SUPE-W-28C-100218

Date Collected: 10/02/18 10:04

Date Received: 10/03/18 10:00

Lab Sample ID: 480-142837-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438768	10/11/18 03:36	OMI	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/10/18 22:58	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 12:23	RJS	TAL BUF

Client Sample ID: SUPE-W-18D-100218

Date Collected: 10/02/18 13:51

Date Received: 10/03/18 10:00

Lab Sample ID: 480-142837-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/10/18 23:27	GES	TAL CHI
Total/NA	Prep	3510C			438261	10/08/18 14:31	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	439490	10/15/18 19:03	PJQ	TAL BUF

Client Sample ID: SUPE-W-10AR2-100218

Date Collected: 10/02/18 16:14

Date Received: 10/03/18 10:00

Lab Sample ID: 480-142837-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438768	10/11/18 04:03	OMI	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/10/18 23:56	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		5	438143	10/08/18 12:52	RJS	TAL BUF

Client Sample ID: SUPE-W-30C-100218

Date Collected: 10/02/18 10:13

Date Received: 10/03/18 10:00

Lab Sample ID: 480-142837-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438768	10/11/18 04:31	OMI	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 00:25	GES	TAL CHI

TestAmerica Buffalo

Lab Chronicle

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-30C-100218

Lab Sample ID: 480-142837-5

Date Collected: 10/02/18 10:13

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 13:21	RJS	TAL BUF

Client Sample ID: SUPE-W-06A-100218

Lab Sample ID: 480-142837-6

Date Collected: 10/02/18 11:44

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438768	10/11/18 04:58	OMI	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 00:54	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 13:49	RJS	TAL BUF

Client Sample ID: SUPE-W-06C-100218

Lab Sample ID: 480-142837-7

Date Collected: 10/02/18 12:57

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438768	10/11/18 05:26	OMI	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 01:23	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 14:18	RJS	TAL BUF

Client Sample ID: SUPE-EB--01-100218

Lab Sample ID: 480-142837-8

Date Collected: 10/02/18 13:15

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	439047	10/12/18 12:24	RLB	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 01:52	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 14:47	RJS	TAL BUF

Client Sample ID: SUPE-W-12A-100218

Lab Sample ID: 480-142837-9

Date Collected: 10/02/18 14:08

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438802	10/11/18 14:33	RLB	TAL BUF

TestAmerica Buffalo

Lab Chronicle

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

TestAmerica Job ID: 480-142837-1

Client Sample ID: SUPE-W-12A-100218

Lab Sample ID: 480-142837-9

Date Collected: 10/02/18 14:08

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 02:21	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 15:16	RJS	TAL BUF

Client Sample ID: SUPE-W-12CR-100218

Lab Sample ID: 480-142837-10

Date Collected: 10/02/18 15:23

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438802	10/11/18 15:01	RLB	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 02:51	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438143	10/08/18 15:44	RJS	TAL BUF

Client Sample ID: SUPE-W-4AR2-100218

Lab Sample ID: 480-142837-11

Date Collected: 10/02/18 00:00

Matrix: Water

Date Received: 10/03/18 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	438997	10/12/18 00:04	OMI	TAL BUF
Total/NA	Prep	3510C			453886	10/09/18 08:04	DAK	TAL CHI
Total/NA	Analysis	8270D		1	454239	10/11/18 03:20	GES	TAL CHI
Total/NA	Prep	3510C			438068	10/06/18 15:14	ATG	TAL BUF
Total/NA	Analysis	8270D LL		1	438470	10/09/18 20:32	PJQ	TAL BUF

Laboratory References:

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

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 480-142837-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998310390	08-31-19

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

Laboratory: TestAmerica Pittsburgh

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-19
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19
North Carolina (WW/SW)	State Program	4	434	12-31-18
Oregon	NELAP	10	PA-2151	01-28-19
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-19
Wisconsin	State Program	5	998027800	08-31-19

Method Summary

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

TestAmerica Job ID: 480-142837-1

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

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

Sample Summary

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

TestAmerica Job ID: 480-142837-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-142837-1	SUPE-TB-01-100218	Water	10/02/18 00:00	10/03/18 10:00
480-142837-2	SUPE-W-28C-100218	Water	10/02/18 10:04	10/03/18 10:00
480-142837-3	SUPE-W-18D-100218	Water	10/02/18 13:51	10/03/18 10:00
480-142837-4	SUPE-W-10AR2-100218	Water	10/02/18 16:14	10/03/18 10:00
480-142837-5	SUPE-W-30C-100218	Water	10/02/18 10:13	10/03/18 10:00
480-142837-6	SUPE-W-06A-100218	Water	10/02/18 11:44	10/03/18 10:00
480-142837-7	SUPE-W-06C-100218	Water	10/02/18 12:57	10/03/18 10:00
480-142837-8	SUPE-EB--01-100218	Water	10/02/18 13:15	10/03/18 10:00
480-142837-9	SUPE-W-12A-100218	Water	10/02/18 14:08	10/03/18 10:00
480-142837-10	SUPE-W-12CR-100218	Water	10/02/18 15:23	10/03/18 10:00
480-142837-11	SUPE-W-4AR2-100218	Water	10/02/18 00:00	10/03/18 10:00





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500816



Project Name: Superior 2018 2SA Sampling
 Project Number: OM-0556-18
 Laboratory: TABUF
 Shipment Method: FEDEX
 Company: Field & Technical Services
 Address: 200 Third Avenue
 Carnegie, PA 15106
 (412) 279-3363
 Client: Beazer East, Inc.
 Contact: (412) 680-4312
 brick.2006@f-ts.com



480-142837 COI

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative HCL			Total Bottle Count	Notes:
					8260B_VOA+naphtha	8270C_SVOC (less naphtha)	8270C_SVOC+naphtha		
10/02/2018	0000	GW	SUPE-TB-01-100218	2	0	0	2		
10/02/2018	1004	GW	SUPE-W-28C-100218	6	3	0	3		
10/02/2018	1004	GW	SUPE-W-28C-MS/MSD-100218	12	6	0	6		
10/02/2018	1351	GW	SUPE-W-18D-100218	3	0	0	3		
10/02/2018	1614	GW	SUPE-W-10AR2-100218	6	3	0	3		

Temp 3.6 4.4 2.4 2.6 #1 IC12

Relinquished by: Signature: <i>Brendan Rick</i> Printed Name: Brendan Rick Firm: FTS Date/Time: 10/02/2018 1655	Received by: Signature: <i>Yankow</i> Printed Name: Yankow Firm: TA Date/Time: 10/03/18 1644	Relinquished by: Signature: Printed Name: Firm: Date/Time:	Received by: Signature: Printed Name: Firm: Date/Time:
Turnaround Requirements <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard			





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 500816



Project Name: Superior 2018 2SA Sampling
 Project Number: OM-0556-18
 Laboratory: TABUF
 Shipment Method FEDEX
 Program: Superior 2018 2SA Sampling_001

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

Client: Beazer East, Inc.
 Contact: (412) 680-4312
 brick.2006@f-ts.com



480-142837 COI

Sample Date	Sample Matrix	Sample Identification	Analysis	Preservative			Total Bottle Count	Notes:
				HCL	None	8270C_SVOC (less naphtha)		
10/02/2018	0000	GW SUPE-TB-01-100218		2	0	0	2	
10/02/2018	1004	GW SUPE-W-28C-100218		3	3	0	6	
10/02/2018	1004	GW SUPE-W-28C-MS/MSD-100218		6	6	0	12	
10/02/2018	1351	GW SUPE-W-18D-100218		0	0	3	3	
10/02/2018	1614	GW SUPE-W-10AR2-100218		3	3	0	6	

Temp 3.6 4.4 2.4 2.6 #1 ICE

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>Brendan Rick</i>	Signature: <i>Jim Kow</i>	Signature:	Signature:	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
Printed Name: Brendan Rick	Printed Name: J Kow	Printed Name:	Printed Name:	
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 10/02/2018 1655	Date/Time: 10/03/18 1655	Date/Time:	Date/Time:	





CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 1354

Project Name: Superior 2018 2SA Sampling Company: Field & Technical Services Client: Beazer East, Inc.
 Project Number: OM-0556-18 Address: 200 Third Avenue Contact: (724) 207-0014
 Laboratory: TABUF Carnegie, PA 15106 Contact: jlexie.2006@fts.com
 Shipment Method: FEDEX (412) 279-3363

Program: Superior 2018 2SA Sampling_001

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Preservative		Total Bottle Count													Notes:	
					8260B_VOA+naphtha	8270C_SVOC (less naphtha)															
10/02/2018	1013	GW	SUPE-W-30C-100218		3	3	6														
10/02/2018	1144	GW	SUPE-W-06A-100218		3	3	6														
10/02/2018	1257	GW	SUPE-W-06C-100218		3	3	6														
10/02/2018	1315	GW	SUPE-EB-01-100218		3	3	6														
10/02/2018	1408	GW	SUPE-W-12A-100218		3	3	6														
10/02/2018	1523	GW	SUPE-W-12CR-100218		3	3	6														

Relinquished by:	Received by:	Relinquished by:	Received by:	Turnaround Requirements
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature:	Signature:	<input type="checkbox"/> Rush <input checked="" type="checkbox"/> Standard
Printed Name: Jera Lexie	Printed Name: <i>[Signature]</i>	Printed Name:	Printed Name:	
Firm: FTS	Firm: TA	Firm:	Firm:	
Date/Time: 10/02/2018 1700	Date/Time: 10/03/18 1000	Date/Time:	Date/Time:	



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-142837-1

Login Number: 142837

List Source: TestAmerica Buffalo

List Number: 1

Creator: Harper, Marcus D

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	fts
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-142837-1

Login Number: 142837

List Source: TestAmerica Buffalo

List Number: 2

Creator: Harper, Marcus D

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 480-142837-1

Login Number: 142837

List Number: 3

Creator: James, Jeff A

List Source: TestAmerica Chicago

List Creation: 10/07/18 02:50 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



APPENDIX D

Data Summary Tables

First Semi-Annual Event

Table D1
Summary of Detected Constituents
First Semi-Annual 2018 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8270D LL					
W-10AR2	Acenaphthene	16	NA	NA	NA
W-30A	Acenaphthene	15	NA	NA	NA
W-10AR2	Acenaphthylene	0.68 J	NA	NA	NA
W-30A	Acenaphthylene	0.49 J	NA	NA	NA
W-04AR2	Anthracene	0.92 J	600	3000	NA
W-30A	Anthracene	0.47 J	600	3000	NA
W-30A	Benzo(a)anthracene	0.16 J	NA	NA	NA
W-10AR2	Dibenzofuran	1.5 J	NA	NA	NA
W-30A	Dibenzofuran	2.1	NA	NA	NA
W-18D	Di-n-butyl phthalate	1.6 J	20	100	NA
W-10AR2	Fluoranthene	0.62 J	80	400	NA
W-30A	Fluoranthene	0.58 J	80	400	NA
W-10AR2	Fluorene	2	80	400	NA
W-30A	Fluorene	1.2	80	400	NA
W-10AR2	Pyrene	0.59 J	50	250	NA
W-30A	Pyrene	0.57 J	50	250	NA
8260C					
W-10AR2	1,2,4-Trimethylbenzene	5.2	96*	480*	NA
W-30A	1,2,4-Trimethylbenzene	4.5	96*	480*	NA
W-10AR2	Benzene	13	0.5	5	5
W-30A	Benzene	8.9	0.5	5	5
W-10AR2	Ethylbenzene	21	140	700	700
W-30A	Ethylbenzene	22	140	700	700
W-10AR2	Naphthalene	1.5	10	100	NA
W-30A	Naphthalene	29	10	100	NA
W-10AR2	Toluene	1.3	160	800	1000
W-30A	Toluene	0.75 J	160	800	1000
W-10AR2	Xylene, Meta & Para	2.5	400**	2000**	10000**
W-30A	Xylene, Meta & Para	2.8	400**	2000**	10000**
W-10AR2	Xylene, Ortho	13	400**	2000**	10000**
W-30A	Xylene, Ortho	3.9	400**	2000**	10000**
8290A					
W-04AR2	1,2,3,4,6,7,8-HPCDD	0.00016	NA	NA	NA
W-06A	1,2,3,4,6,7,8-HPCDD	0.0000066 J	NA	NA	NA
W-10AR2	1,2,3,4,6,7,8-HPCDD	0.000011 J	NA	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDD	0.00003 J	NA	NA	NA
W-28C	1,2,3,4,6,7,8-HPCDD	0.0000079 J	NA	NA	NA
W-28C DUP	1,2,3,4,6,7,8-HPCDD	0.0000027 J	NA	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDD	0.00022	NA	NA	NA
W-30C	1,2,3,4,6,7,8-HPCDD	0.0000092 J	NA	NA	NA
W-04AR2	1,2,3,4,6,7,8-HPCDF	0.000037 J	NA	NA	NA
W-12A	1,2,3,4,6,7,8-HPCDF	0.0000082 J	NA	NA	NA
W-28C	1,2,3,4,6,7,8-HPCDF	0.0000058 J	NA	NA	NA
W-30A	1,2,3,4,6,7,8-HPCDF	0.000082	NA	NA	NA

Table D1
Summary of Detected Constituents
First Semi-Annual 2018 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
W-04AR2	1,2,3,4,7,8,9-HPCDF	0.0000023 J	NA	NA	NA
W-30A	1,2,3,4,7,8,9-HPCDF	0.0000095 J	NA	NA	NA
W-04AR2	1,2,3,4,7,8-HXCDD	0.000002 J	NA	NA	NA
W-04AR2	1,2,3,4,7,8-HXCDF	0.0000032 J	NA	NA	NA
W-30A	1,2,3,4,7,8-HXCDF	0.00001 J	NA	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDD	0.0000049 J	NA	NA	NA
W-30A	1,2,3,6,7,8-HXCDD	0.000011 J	NA	NA	NA
W-04AR2	1,2,3,6,7,8-HXCDF	0.0000027 J	NA	NA	NA
W-12A	1,2,3,6,7,8-HXCDF	0.0000026 J	NA	NA	NA
W-30A	1,2,3,6,7,8-HXCDF	0.000011 J	NA	NA	NA
W-04AR2	1,2,3,7,8,9-HXCDD	0.0000032 J	NA	NA	NA
W-04AR2	1,2,3,7,8-PECDD	0.0000063 J	NA	NA	NA
W-04AR2	2,3,4,6,7,8-HXCDF	0.000001 J	NA	NA	NA
W-04AR2	OCDD	0.0013	NA	NA	NA
W-06A	OCDD	0.000055 J	NA	NA	NA
W-06C	OCDD	0.0000085 J	NA	NA	NA
W-10AR2	OCDD	0.00011	NA	NA	NA
W-12A	OCDD	0.00027	NA	NA	NA
W-12CR	OCDD	0.000031 J	NA	NA	NA
W-28C	OCDD	0.00008 J	NA	NA	NA
W-28C DUP	OCDD	0.000041 J	NA	NA	NA
W-30A	OCDD	0.0028	NA	NA	NA
W-30C	OCDD	0.00019	NA	NA	NA
W-04AR2	OCDF	0.0001	NA	NA	NA
W-10AR2	OCDF	0.0000089 J	NA	NA	NA
W-12A	OCDF	0.000026 J	NA	NA	NA
W-28C	OCDF	0.000013 J	NA	NA	NA
W-30A	OCDF	0.00024	NA	NA	NA
W-30C	OCDF	0.000018 J	NA	NA	NA
W-04AR2	Total HPCDD	0.00039	NA	NA	NA
W-06A	Total HPCDD	0.000029 J	NA	NA	NA
W-10AR2	Total HPCDD	0.000044 J	NA	NA	NA
W-12A	Total HPCDD	0.00006	NA	NA	NA
W-28C	Total HPCDD	0.000028 J	NA	NA	NA
W-28C DUP	Total HPCDD	0.000011 J	NA	NA	NA
W-30A	Total HPCDD	0.00052	NA	NA	NA
W-30C	Total HPCDD	0.000025 J	NA	NA	NA
W-04AR2	Total HPCDF	0.00014	NA	NA	NA
W-10AR2	Total HPCDF	0.0000073 J	NA	NA	NA
W-12A	Total HPCDF	0.000028 J	NA	NA	NA
W-28C	Total HPCDF	0.000011 J	NA	NA	NA
W-30A	Total HPCDF	0.00031	NA	NA	NA
W-30C	Total HPCDF	0.0000055 J	NA	NA	NA
W-04AR2	Total HXCDD	0.000034 J	NA	NA	NA
W-28C	Total HXCDD	0.0000019 J	NA	NA	NA
W-30A	Total HXCDD	0.000038 J	NA	NA	NA
W-04AR2	Total HXCDF	0.000061	NA	NA	NA
W-10AR2	Total HXCDF	0.0000017 J	NA	NA	NA
W-12A	Total HXCDF	0.000022 J	NA	NA	NA
W-28C	Total HXCDF	0.0000091 J	NA	NA	NA
W-30A	Total HXCDF	0.0002	NA	NA	NA

Table D1
Summary of Detected Constituents
First Semi-Annual 2018 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
W-04AR2	Total PECDD	0.00000063 J	NA	NA	NA
W-06C	Total PECDD	0.0000019 J	NA	NA	NA
W-04AR2	Total PECDF	0.0000069 J	NA	NA	NA
W-12A	Total PECDF	0.0000092 J	NA	NA	NA
W-30A	Total PECDF	0.000047 J	NA	NA	NA
W-04AR2	Total TCDF	0.0000019 J	NA	NA	NA
W-30A	Total TCDF	0.000011	NA	NA	NA
W-04AR2	2,3,7,8-TCDD TEQ	4.74E-06	3E-06	0.00003	0.00003
W-06A	2,3,7,8-TCDD TEQ	8.25E-08	3E-06	0.00003	0.00003
W-06C	2,3,7,8-TCDD TEQ	2.55E-09	3E-06	0.00003	0.00003
W-10AR2	2,3,7,8-TCDD TEQ	1.46E-07	3E-06	0.00003	0.00003
W-12A	2,3,7,8-TCDD TEQ	7.31E-07	3E-06	0.00003	0.00003
W-12CR	2,3,7,8-TCDD TEQ	9.30E-09	3E-06	0.00003	0.00003
W-28C	2,3,7,8-TCDD TEQ	1.65E-07	3E-06	0.00003	0.00003
W-28C DUP	2,3,7,8-TCDD TEQ	3.93E-08	3E-06	0.00003	0.00003
W-30A	2,3,7,8-TCDD TEQ	7.23E-06	3E-06	0.00003	0.00003
W-30C	2,3,7,8-TCDD TEQ	1.54E-07	3E-06	0.00003	0.00003

Notes:

 - Indicates the detected value exceeds one or more specified standards.

PAL - Preventative Action Limit

MCL - Maximum Contaminant Levels for drinking water

ES - Enforcement Standard

NA - Not available

J - Estimated

* - Total trimethylbenzene standard

** - Total xylene standard

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

Second Semi-Annual Event

Table D2
Summary of Detected Constituents
Second Semi-Annual 2018 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
8270D LL					
W-10AR2	1-Methylnaphthalene	14	NA	NA	NA
W-30A DUP	1-Methylnaphthalene	2.1	NA	NA	NA
W-10AR2	Acenaphthene	67	NA	NA	NA
W-30A	Acenaphthene	8.6 J	NA	NA	NA
W-30A DUP	Acenaphthene	17 J	NA	NA	NA
W-10AR2	Acenaphthylene	2.1	NA	NA	NA
W-30A DUP	Acenaphthylene	0.38 J	NA	NA	NA
W-10AR2	Anthracene	0.72 J	600	3000	NA
W-30A	Anthracene	0.65 J	600	3000	NA
W-30A DUP	Anthracene	0.69 J	600	3000	NA
W-30A	Benzo(a)pyrene	0.15 J	0.02	0.2	NA
W-30A	Benzo(b)fluoranthene	0.17 J	0.02	0.2	NA
W-30A	Benzo(k)fluoranthene	0.098 J	NA	NA	NA
W-10AR2	Dibenzofuran	5.2	NA	NA	NA
W-30A	Dibenzofuran	1.1 J	NA	NA	NA
W-30A DUP	Dibenzofuran	4.5 J	NA	NA	NA
W-04AR2	Fluoranthene	0.45 J	80	400	NA
W-10AR2	Fluoranthene	2.5	80	400	NA
W-30A	Fluoranthene	1.4 J	80	400	NA
W-30A DUP	Fluoranthene	0.9 J	80	400	NA
W-10AR2	Fluorene	11	80	400	NA
W-30A DUP	Fluorene	1.7	80	400	NA
W-10AR2	Phenanthrene	0.45 J	NA	NA	NA
W-10AR2	Phenol	0.47 J	400	2000	NA
W-10AR2	Pyrene	1.6	50	250	NA
W-30A	Pyrene	0.92 J	50	250	NA
W-30A DUP	Pyrene	0.55 J	50	250	NA
8260C					
W-10AR2	1,2,4-Trimethylbenzene	6.4	96*	480*	NA
W-30A	1,2,4-Trimethylbenzene	2.1	96*	480*	NA
W-30A DUP	1,2,4-Trimethylbenzene	2.4	96*	480*	NA
W-10AR2	Benzene	16	0.5	5	5
W-30A	Benzene	3.6	0.5	5	5
W-30A DUP	Benzene	3.5	0.5	5	5
W-10AR2	Ethylbenzene	30	140	700	700
W-30A	Ethylbenzene	9	140	700	700
W-30A DUP	Ethylbenzene	8.6	140	700	700
W-10AR2	Naphthalene	1.9	10	100	NA
W-30A	Naphthalene	67	10	100	NA
W-30A DUP	Naphthalene	70	10	100	NA

Table D2
Summary of Detected Constituents
Second Semi-Annual 2018 Sampling Event
Superior Facility
Superior, Wisconsin

Location	Parameter	Results ug/L	PAL ug/L	ES ug/L	MCL ug/L
W-10AR2	Toluene	2.7	160	800	1000
W-30A	Toluene	1.2 J	160	800	1000
W-30A DUP	Toluene	1 J	160	800	1000
W-10AR2	Xylene, Meta & Para	3.3	400**	2000**	10000**
W-30A	Xylene, Meta & Para	3.2 J	400**	2000**	10000**
W-30A DUP	Xylene, Meta & Para	3.1 J	400**	2000**	10000**
W-10AR2	Xylene, Ortho	14	400**	2000**	10000**
W-30A	Xylene, Ortho	2.5	400**	2000**	10000**
W-30A DUP	Xylene, Ortho	2.4	400**	2000**	10000**

Notes:

- Indicates the detected value exceeds one or more specified standards.

PAL - Preventative Action Limit

MCL - Maximum Contaminant Levels for drinking water

ES - Enforcement Standard

NA - Not available

J - Estimated

* - Total trimethylbenzene standard

** - Total xylene standard

APPENDIX E

Linear Regression Analysis

BENZENE STATISTICAL ANALYSIS

	W-10AR2 Benzene	W-30A Benzene	PAL	ES/MCL	
Feb-99		0	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	0.5	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	

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2018)

SUMMARY OUTPUT

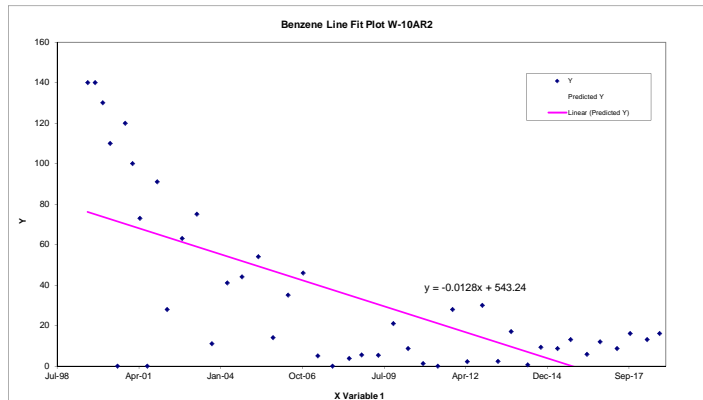
Regression Statistics	
Multiple R	0.674043096
R Square	0.454334096
Adjusted R Square	0.44134205
Standard Error	31.45942314
Observations	44

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	34609.8177	34609.8177	34.97017472	5.28856E-07
Residual	42	41567.20277	989.695304		
Total	43	76177.02047			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	543.2351537	86.04395357	6.3134611	1.40567E-07	369.5914254	716.8788821	369.5914254	716.8788821
X Variable 1	-0.012842188	0.002171651	-5.91355855	5.28856E-07	-0.017224758	-0.008459618	-0.017224758	-0.008459618

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	76.12624944	63.87375056
2	74.94476815	65.05523185
3	73.76328685	66.23671315
4	72.58180555	67.41819445
5	71.40032425	68.60067575
6	70.21884295	69.78315705
7	69.03736165	70.96563835
8	67.85588035	72.14811965
9	66.67439905	73.33060095
10	65.49291775	74.51308225
11	64.31143645	75.69556355
12	63.12995515	76.87804485
13	61.94847385	78.06052615
14	60.76699255	79.24300745
15	59.58551125	80.42548875
16	58.40402995	81.60797005
17	57.22254865	82.79045135
18	56.04106735	83.97293265
19	54.85958605	85.15541395
20	53.67810475	86.33789525
21	52.49662345	87.52037655
22	51.31514215	88.70285785
23	50.13366085	89.88533915
24	48.95217955	91.06782045
25	47.77069825	92.25030175
26	46.58921695	93.43278305
27	45.40773565	94.61526435
28	44.22625435	95.79774565
29	43.04477305	96.98022695
30	41.86329175	98.16270825
31	40.68181045	99.34518955
32	39.50032915	100.52767085
33	38.31884785	101.71015215
34	37.13736655	102.89263345
35	35.95588525	104.07511475
36	34.77440395	105.25759605
37	33.59292265	106.44007735
38	32.41144135	107.62255865
39	31.22996005	108.80503995
40	30.04847875	110.08752125
41	28.86699745	111.37000255
42	27.68551615	112.65248385
43	26.50403485	113.93496515
44	25.32255355	115.21744645



BENZENE STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2018)

SUMMARY OUTPUT

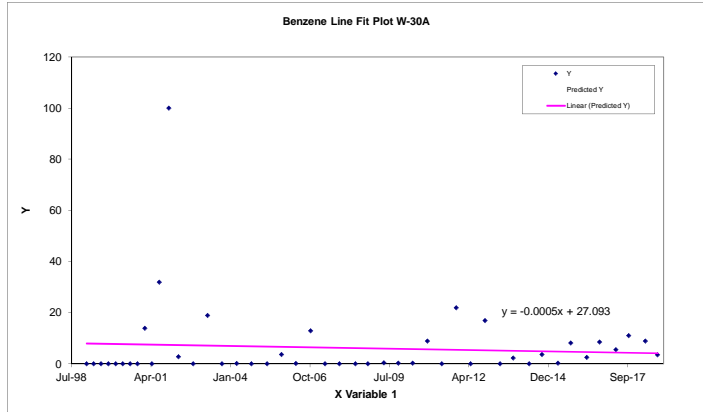
Regression Statistics	
Multiple R	0.075786779
R Square	0.005473636
Adjusted R Square	-0.0168531
Standard Error	15.92669649
Observations	46

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	64.47518691	64.47518691	0.254179898	0.616662498
Residual	44	11161.02509	253.6596612		
Total	45	11225.50028			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	27.00338958	41.37085749	0.654889945	0.515947804	-56.28412612	110.4708433	-56.28412612	110.4708433
X Variable 1	-0.000528305	0.001047886	-0.504162571	0.616662498	-0.00264018	0.001583571	-0.00264018	0.001583571

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	7.972947392	-7.972947392
2	7.925929256	-7.925929256
3	7.877324204	-7.877324204
4	7.828720153	-7.828720153
5	7.780116101	-7.780116101
6	7.73256886	-7.73256886
7	7.683964608	-7.683964608
8	7.635360557	-7.635360557
9	7.586756505	6.413243495
10	7.538152453	-7.538152453
11	7.489548401	24.50886668
12	7.440944349	92.57331988
13	7.392340297	-4.562755225
14	7.343736245	-7.266075427
15	7.295132193	11.83007607
16	7.246528141	-7.073244136
17	6.94979423	-6.794079423
18	6.878299625	-6.878299625
19	6.774223559	-6.774223559
20	6.677543761	-2.977543761
21	6.581392268	-6.441392268
22	6.48471247	6.51528753
23	6.388617587	-6.388617587
24	6.293466094	-6.293466094
25	6.186220197	-6.186220197
26	6.104332937	-6.104332937
27	5.997615346	-5.997615346
28	5.900935548	-5.900935548
29	5.805840665	-5.455840665
30	5.709632562	3.191367438
31	5.613009374	-5.613009374
32	5.51639576	16.48367042
33	5.421234692	-5.421234692
34	5.32402659	11.67597341
35	5.224176962	-5.224176962
36	5.138591567	-2.838591567
37	5.031873976	-5.031873976
38	4.946816886	-1.246816886
39	4.839042685	-4.509042685
40	4.753985595	3.446014405
41	4.647796309	-2.147796309
42	4.562210914	3.33779996
43	4.454436713	1.145563287
44	4.369379623	6.630620377
45	4.258435593	4.641564407
46	4.177604942	-0.577604942



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

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 2018)

SUMMARY OUTPUT

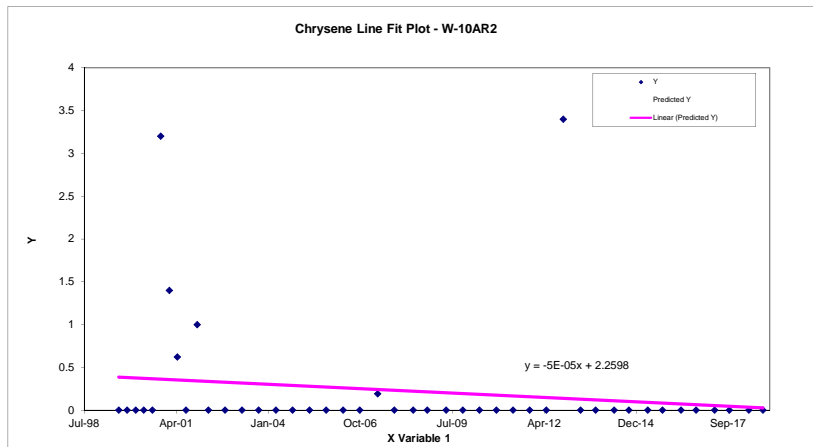
Regression Statistics	
Multiple R	0.15558637
R Square	0.024207824
Adjusted R Square	0.000974677
Standard Error	0.730894719
Observations	44

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.556618142	0.556618142	1.041951994	0.313211869
Residual	42	22.43669777	0.53420709		
Total	43	22.99331591			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2.259846005	1.998504472	1.130768551	0.264568422	-1.773299302	6.292991312	-1.773299302	6.292991312
X Variable 1	-5.14889E-05	5.04417E-05	-1.020760498	0.313211869	-0.000153284	5.03066E-05	-0.000153284	5.03066E-05

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	0.387039227	-0.387039227
2	0.382302246	-0.382302246
3	0.377565264	-0.377565264
4	0.372931261	-0.372931261
5	0.36819428	-0.36819428
6	0.363457298	2.836542702
7	0.358720317	1.041279683
8	0.354137802	0.265862198
9	0.349400821	-0.349400821
10	0.343119172	0.656880828
11	0.336889011	-0.336889011
12	0.327466537	-0.327466537
13	0.318095553	-0.318095553
14	0.308673079	-0.308673079
15	0.299096138	-0.299096138
16	0.289673664	-0.289673664
17	0.280302679	-0.280302679
18	0.270880206	-0.270880206
19	0.261509221	-0.261509221
20	0.252086747	-0.252086747
21	0.242046406	-0.052046406
22	0.232778399	-0.232778399
23	0.22223169	-0.22223169
24	0.214242385	-0.214242385
25	0.203841621	-0.203841621
26	0.194419148	-0.194419148
27	0.18515114	-0.18515114
28	0.17567178	-0.17567178
29	0.166357682	-0.166357682
30	0.156935208	-0.156935208
31	0.147667201	-0.147667201
32	0.138193238	3.261806762
33	0.128461831	-0.128461831
34	0.120120624	-0.120120624
35	0.109719861	-0.109719861
36	0.101430144	-0.101430144
37	0.090926402	-0.090926402
38	0.082636685	-0.082636685
39	0.07228741	-0.07228741
40	0.063946204	-0.063946204
41	0.053442463	-0.053442463
42	0.045152745	-0.045152745
43	0.03434007	-0.03434007
44	0.026462264	-0.026462264



CHRYSENE STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2018)

SUMMARY OUTPUT

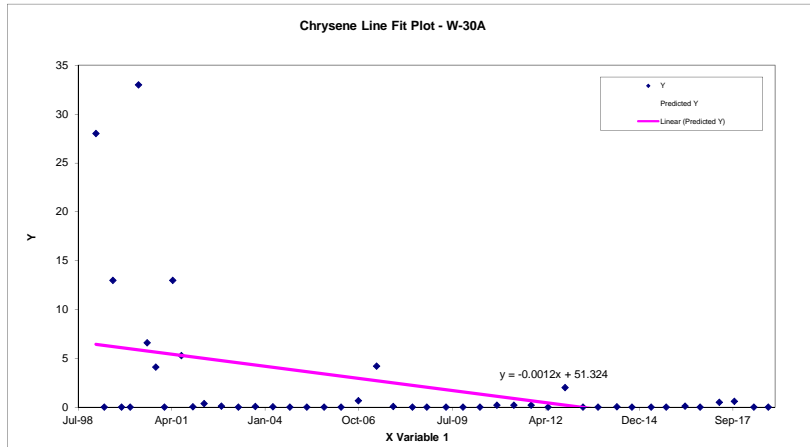
Regression Statistics	
Multiple R	0.416637046
R Square	0.173586428
Adjusted R Square	0.154804301
Standard Error	6.200831623
Observations	46

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	355.3619135	355.3619135	9.242107214	0.003973756
Residual	44	1691.813764	38.45031282		
Total	45	2047.175677			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	51.32425275	16.10372647	3.187104105	0.002644614	18.86932458	83.77918091	18.86932458	83.77918091
X Variable 1	-0.001240069	0.000407906	-3.040083422	0.003973756	-0.002062151	-0.000417988	-0.002062151	-0.000417988

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	6.443664277	21.55633572
2	6.333298108	-6.333298108
3	6.219211732	6.780788268
4	6.105125355	-6.105125355
5	5.991038979	-5.991038979
6	5.879432741	27.12056726
7	5.768346364	0.834653636
8	5.651259988	-1.551259988
9	5.537173611	-5.537173611
10	5.426807443	7.573192557
11	5.312721066	-0.012721066
12	5.16143261	-5.10243261
13	5.011384224	-4.651384224
14	4.78445154	-4.66445154
15	4.558758926	-4.558758926
16	4.331826242	-4.264826242
17	4.10117335	-4.06017335
18	3.874240666	-3.874240666
19	3.648548052	-3.648548052
20	3.421615368	-3.421615368
21	3.195922754	-3.195922754
22	2.96899007	-2.28899007
23	2.727176555	1.472823445
24	2.503964079	-2.429964079
25	2.24974987	-2.24974987
26	2.057539127	-2.057539127
27	1.807045127	-1.807045127
28	1.580112443	-1.580112443
29	1.356899967	-1.356899967
30	1.128727214	-0.908727214
31	0.904274669	-0.684274669
32	0.677341985	-0.477341985
33	0.454129509	-0.454129509
34	0.225956756	1.774043244
35	-0.008416343	0.008416343
36	-0.209307571	0.209307571
37	-0.459801572	0.509801572
38	-0.659452731	0.659452731
39	-0.91242687	0.91242687
40	-1.12078029	1.12078029
41	-1.36133196	1.49133196
42	-1.562223189	1.562223189
43	-1.815197328	2.315197328
44	-2.014848487	2.634848487
45	-2.275263042	2.275263042
46	-2.464993646	2.464993646



NAPHTHALENE STATISTICAL ANALYSIS

	W-10AR2 Naphthalene	W-30A Naphthalene	PAL	ES/MCL
Feb-99		8500	10	100
May-99		5300	10	100
Aug-99	4100	2600	10	100
Nov-99	5300	4800	10	100
Feb-00	4400	6200	10	100
May-00	3400	2700	10	100
Aug-00	3400	1400	10	100
Nov-00	3000	2000	10	100
Feb-01	3100	4000	10	100
May-01	2500	2600	10	100
Aug-01	0	8000	10	100
Dec-01	3800	56	10	100
Apr-02	1000	1600	10	100
Oct-02	1900	0	10	100
Apr-03	1200	1300	10	100
Oct-03	290	240	10	100
Apr-04	800	7.1	10	100
Oct-04	1400	130	10	100
Apr-05	2000	110	10	100
Oct-05	660	92	10	100
Apr-06	2000	22	10	100
Oct-06	2100	610	10	100
Apr-07	220	2500	10	100
Oct-07	0	0	10	100
May-08	70	20	10	100
Oct-08	240	37	10	100
Apr-09	200	54	10	100
Oct-09	660	44	10	100
Apr-10	200	35	10	100
Oct-10	33	300	10	100
Apr-11	60	84	10	100
Oct-11	890	810	10	100
Apr-12	210	9.9	10	100
Oct-12	780	230	10	100
May-13	11	15	10	100
Oct-13	69	96	10	100
Apr-14	4.9	4.2	10	100
Oct-14	47	11	10	100
Apr-15	37	1.8	10	100
Oct-15	49	37	10	100
Apr-16	7.2	11	10	100
Oct-16	1.5	12	10	100
Apr-17	2	14	10	100
Oct-17	1.7	26	10	100
May-18	1.5	29	10	100
Oct-18	1.9	67	10	100

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 2018)

SUMMARY OUTPUT

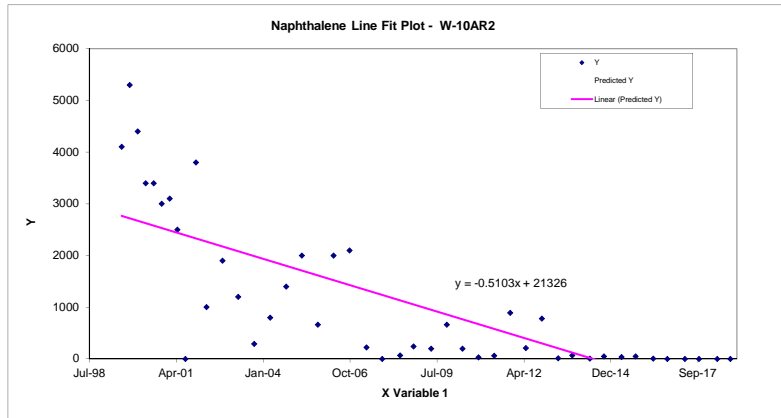
Regression Statistics	
Multiple R	0.765885918
R Square	0.586581239
Adjusted R Square	0.576737935
Standard Error	957.778934
Observations	44

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	54666063.66	54666063.66	59.59190628	1.38373E-09
Residual	42	38528297.17	917340.4087		
Total	43	93194360.83			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	21325.59738	2618.879782	8.143022648	3.53607E-10	16040.48401	26610.71075	16040.48401	26610.71075
X Variable 1	-0.510262993	0.066099844	-7.719579411	1.38373E-09	-0.643657879	-0.376868108	-0.643657879	-0.376868108

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2765.801515	1334.198485
2	2718.85732	2581.14268
3	2671.913125	1728.086875
4	2625.969455	774.0105447
5	2579.04526	820.9547401
6	2532.101064	467.8989355
7	2485.156869	614.8431309
8	2438.743463	60.25653736
9	2392.799267	-2392.799267
10	2330.547182	1469.452818
11	2268.80536	-1268.80536
12	2175.427232	-275.427232
13	2082.559367	-882.5593672
14	1989.181239	-1699.181239
15	1894.272323	-1094.272323
16	1800.894195	-400.8941948
17	1708.02633	291.97367
18	1614.648202	-954.6482022
19	1521.780337	478.2196626
20	1428.40221	671.5977904
21	1328.900926	-1108.900926
22	1237.053587	-1237.053587
23	1132.449673	-1062.449673
24	1053.358909	-813.3589094
25	950.2857847	-750.2857847
26	856.9076569	-196.9076569
27	765.0603181	-565.0603181
28	671.1719273	-638.1719273
29	578.8143255	-518.8143255
30	485.4361977	404.5638023
31	393.5888589	-183.5888589
32	299.7004681	480.2995319
33	203.2607623	-192.2607623
34	120.5981574	-51.59815735
35	17.52503267	-12.62503267
36	-64.62730927	111.6273093
37	-168.7209599	205.7209599
38	-250.8733019	299.8733019
39	-353.4361636	360.6361636
40	-436.0987685	437.5987685
41	-540.1924192	542.1924192
42	-622.3447611	624.0447611
43	-729.4999898	730.9999898
44	-807.5702278	809.4702278



NAPHTHALENE STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2018)

SUMMARY OUTPUT

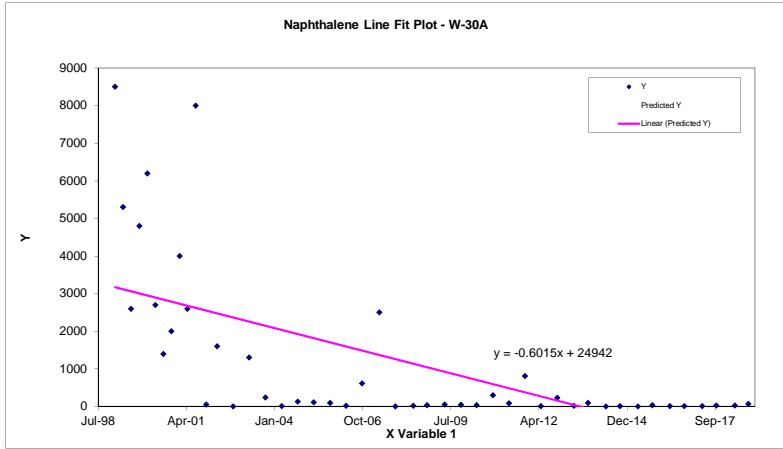
Regression Statistics	
Multiple R	0.630287902
R Square	0.397262839
Adjusted R Square	0.383564268
Standard Error	1697.965992
Observations	46

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	83610462.63	83610462.63	29.00031072	2.6772E-06
Residual	44	126855894.5	2883088.511		
Total	45	210466357.1			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	24941.52428	4409.663342	5.656106226	1.07787E-06	16054.43177	33828.6168	16054.43177	33828.6168
X Variable 1	-0.601507204	0.111696485	-5.385193656	2.6772E-06	-0.826616678	-0.376397729	-0.826616678	-0.376397729

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	3171.775568	5328.224432
2	3118.241426	2181.758574
3	3062.902764	-462.9027637
4	3007.564101	1792.435899
5	2952.225438	3247.774562
6	2898.08979	-198.0897898
7	2842.751127	-1442.751127
8	2787.412464	-787.4124644
9	2732.073802	1267.926198
10	2678.53966	-78.53966049
11	2623.200998	5376.799002
12	2549.817119	-2493.817119
13	2477.034747	-877.0347473
14	2366.958929	-2366.958929
15	2257.484618	-957.4846179
16	2147.4088	-1907.4088
17	2035.52846	-2028.42846
18	1925.452641	-1795.452641
19	1815.97833	-1705.97833
20	1705.902512	-1613.902512
21	1596.428201	-1574.428201
22	1486.352383	-876.3523828
23	1369.058478	1130.941522
24	1260.787181	-1260.787181
25	1137.478205	-1117.478205
26	1044.244588	-1007.244588
27	922.7401329	-868.7401329
28	812.6643146	-768.6643146
29	704.393018	-669.393018
30	593.7156925	-293.7156925
31	484.8428886	-400.8428886
32	374.7670703	435.2329297
33	266.4957737	-256.5957737
34	155.8184482	74.18155179
35	42.13358671	-27.13358671
36	-55.31058029	151.3105803
37	-176.8150354	181.0150354
38	-273.6576952	284.6576952
39	-396.3651648	398.1651648
40	-493.2078246	530.2078246
41	-614.1107725	625.1107725
42	-711.5549395	723.5549395
43	-834.2624091	848.2624091
44	-931.1050689	957.1050689
45	-1057.421582	1086.421582
46	-1149.452184	1216.452184



PENTACHLOROPHENOL STATISTICAL ANALYSIS

	W-10AR2 Penta	W-30A Penta	PAL	ES
Feb-99		0	0.1	1
May-99		6	0.1	1
Aug-99	260	6	0.1	1
Nov-99	320	10	0.1	1
Feb-00	450	3.1	0.1	1
May-00	150	0	0.1	1
Aug-00	280	0	0.1	1
Nov-00	440	1.1	0.1	1
Feb-01	290	3.7	0.1	1
May-01	140	0	0.1	1
Dec-01	400	3.8	0.1	1
Apr-02	58	0	0.1	1
Oct-02	0.0255	1.7	0.1	1
Apr-03	3.8	0.18	0.1	1
Oct-03	60	0.95	0.1	1
Apr-04	42	0.4	0.1	1
Oct-04	38	0	0.1	1
Apr-05	0.4695	0	0.1	1
Oct-05	8.3	0	0.1	1
Apr-06	0	0.11	0.1	1
Oct-06	0.305	0	0.1	1
Apr-07	16	0.24	0.1	1
Oct-07	0	0	0.1	1
May-08	0	0	0.1	1
Oct-08	0	0	0.1	1
Apr-09	0	0	0.1	1
Oct-09	0	0	0.1	1
Apr-10	0	0	0.1	1
Oct-10	0	0	0.1	1
Apr-11	0	0	0.1	1
Oct-11	0	0	0.1	1
Apr-12	0	0	0.1	1
Oct-12	0	0	0.1	1
May-13	0.81	0	0.1	1
Oct-13	0	0	0.1	1
Apr-14	0.76	0	0.1	1
Oct-14	0.35	0	0.1	1
Apr-15	0	0	0.1	1
Oct-15	0	0.39	0.1	1
Apr-16	0	0	0.1	1
Oct-16	0	0	0.1	1
Apr-17	0	0	0.1	1
Oct-17	0	0	0.1	1
May-18	0	0	0.1	1
Oct-18	0	0	0.1	1

Pentachlorophenol data for Feb-99 W-10AR2 and May-99 W-10AR2 not included; Well W-10A was abandoned prior to 3rd quarter 1999 sampling and well W-10AR was installed. Data is not available for W-10A. Pentachlorophenol data for Aug-01 W-10AR2 not available

SUMMARY OUTPUT FOR W-10AR2 (August 1999 - October 2018)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.667073328
R Square	0.444986825
Adjusted R Square	0.431449918
Standard Error	99.92525388
Observations	43

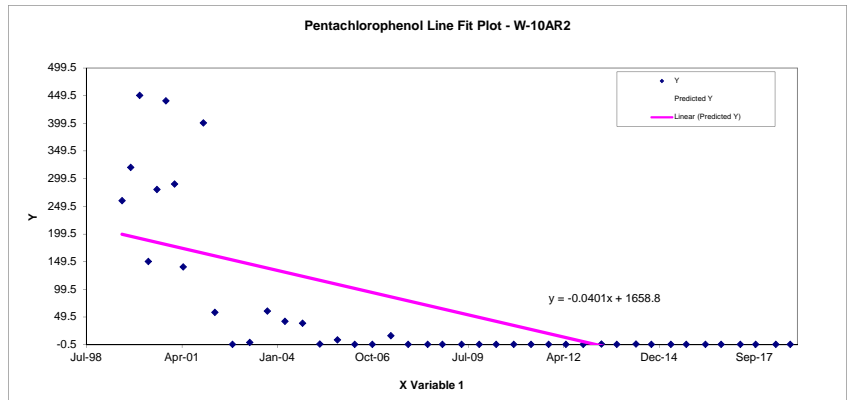
ANOVA

	df	SS	MS	F	Significance F
Regression	1	328229.9734	328229.9734	32.87212024	1.03542E-06
Residual	41	409387.3108	9985.056362		
Total	42	737617.2842			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1658.786709	277.7356604	5.972537724	4.73385E-07	1097.888164	2219.685254	1097.888164	2219.685254
X Variable 1	-0.040133822	0.006999978	-5.733421338	1.03542E-06	-0.054270563	-0.02599708	-0.054270563	-0.02599708

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	198.9992178	61.00078217
2	195.3069062	124.6930938
3	191.6145947	258.3854053
4	188.0025507	-38.00255072
5	184.3102391	95.68976086
6	180.6179276	259.3820724
7	176.925616	113.074384
8	173.3537059	-33.35370586
9	164.765068	235.234932
10	159.9088756	-101.9088756
11	152.5643863	-152.5388863
12	145.2600308	-141.4600308
13	137.9155414	-77.91554143
14	130.4506506	-88.45065062
15	123.1061613	-85.10616128
16	115.8018058	-115.3323058
17	108.4573164	-100.1573164
18	101.1529609	-101.1529609
19	93.80847154	-93.50347154
20	85.98237634	-69.98237634
21	78.75828846	-78.75828846
22	70.53085505	-70.53085505
23	64.3101127	-64.3101127
24	56.2038075	-56.2038075
25	48.85859141	-48.85859141
26	41.63450353	-41.63450353
27	34.24988036	-34.24988036
28	26.98565866	-26.98565866
29	19.64116932	-19.64116932
30	12.41708144	-12.41708144
31	5.032458274	-5.032458274
32	-2.552833999	3.362833999
33	-9.05451309	9.05451309
34	-17.16154504	17.92154504
35	-23.62309031	23.97309031
36	-31.81038991	31.81038991
37	-38.27193518	38.27193518
38	-46.33883331	46.33883331
39	-52.8405124	52.8405124
40	-61.027812	61.027812
41	-67.48935727	67.48935727
42	-75.91745979	75.91745979
43	-82.01780067	82.01780067



PENTACHLOROPHENOL STATISTICAL ANALYSIS

SUMMARY OUTPUT FOR W-30A (February 1999 - October 2018)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.491735803
R Square	0.2418041
Adjusted R Square	0.224572375
Standard Error	1.782119246
Observations	46

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	44.56648941	44.56648941	14.03249527	0.000519212
Residual	44	139.7417562	3.175949006		
Total	45	184.3082457			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	18.12826024	4.628222998	3.916894291	0.000308728	8.80068968	27.4558308	8.80068968	27.4558308
X Variable 1	-0.000439153	0.000117233	-3.745997233	0.000519212	-0.00067542	-0.000202886	-0.00067542	-0.000202886

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2.234427892	-2.234427892
2	2.195343258	3.804656742
3	2.154941164	3.845058836
4	2.11453907	7.88546093
5	2.074136976	1.025863024
6	2.034613189	-2.034613189
7	1.994211095	-1.994211095
8	1.953809002	-0.853809002
9	1.913406908	1.786593092
10	1.87322274	-1.87322274
11	1.83392018	1.96607982
12	1.780343491	-1.780343491
13	1.727205954	-0.027205954
14	1.64684092	-1.46684092
15	1.566915039	-0.616915039
16	1.486550005	-1.086550005
17	1.404867511	-1.404867511
18	1.324502477	-1.324502477
19	1.244576596	-1.244576596
20	1.164211561	-1.054211561
21	1.08428568	-1.08428568
22	1.003920646	-0.763920646
23	0.918285774	-0.918285774
24	0.839238199	-0.839238199
25	0.749211794	-0.749211794
26	0.68114305	-0.68114305
27	0.592434105	-0.592434105
28	0.512508224	-0.512508224
29	0.433021496	-0.433021496
30	0.352217308	-0.352217308
31	0.27273058	-0.27273058
32	0.192365546	-0.192365546
33	0.113317971	-0.113317971
34	0.032513784	-0.032513784
35	-0.050486169	0.050486169
36	-0.121628987	0.121628987
37	-0.210337931	0.210337931
38	-0.281041595	0.281041595
39	-0.370628847	0.760628847
40	-0.441332511	0.441332511
41	-0.529602302	0.529602302
42	-0.60074512	0.60074512
43	-0.690332371	0.690332371
44	-0.761036035	0.761036035
45	-0.853258205	0.853258205
46	-0.920448644	0.920448644

