September 6, 2023

Thomas Mongelli
Remedial Project Manager – Tri-Cities Barrel Site
Emergency and Remedial Response Division
United States Environmental Protection Agency, Region 2
290 Broadway, 20th Floor
New York, New York 10007-1866

Subject: **June 2023 Groundwater Monitoring Report**
Tri-Cities Barrel Superfund Site, Fenton, New York

Dear Mr. Mongelli:

WSP prepared this report to provide the U. S. Environmental Protection Agency (EPA) with the results for the June 2023 groundwater sampling event for the Tri-Cities Barrel Superfund Site, Fenton, New York (Site). The scope of work was conducted in accordance with the Long Term Monitored Natural Attenuation (MNA) Sampling Program (Version 2), dated May 3, 2022.

MNA SAMPLING PROGRAM

The June 2023 groundwater sampling event was conducted on June 13-14, 2023. As specified in the Long Term MNA Sampling Program and consistent with previous sampling protocols for the Site (Figure 1), groundwater samples were collected from nine monitoring wells (MW-2S, MW-2, MW-3S, MW 3, MW-7S, MW-16S, MW 18S, MW-19, and PMW-1). The monitoring wells were gauged for depth to water, field measurements obtained, and samples collected for laboratory analysis of:

- volatile organic compounds (VOCs) by EPA Solid Waste (SW)-846 Method 8260D
- alkalinity by Standard Method (SM) 2320B-2011
- chloride, nitrate, sulfate by SW-846 9056A
- sulfide by SW-846 9034
- dissolved organic carbon by SW-846 5030B[1]

The samples were couriered to Eurofins Savannah, Georgia under strict chain-of-custody procedures for analysis. All samples were collected in accordance with the EPA Region 2 low-flow sampling protocols and WSP Standard Operating Procedures.

The June 2023 groundwater elevations are presented in Table 1, the validated analytical results are presented in Table 2, the data validation report is presented in Enclosure A, and the data package is presented in Enclosure B. Data validation was performed by de maximis Data Management Solutions of St. Paul, Minnesota. Historical analytical and field data are presented in Table 3. Time-series concentration and plume centerline plots are provided in Figures 2 through 8. As defined in the 2016 Amendment to the Consent Decree, Appendix AA – 2011 Record of Decision (ROD) Amendment, the performance standards are the:

[1] The laboratory discontinued analysis by method SW-846 9060 as specified in the Long Term MNA Sampling Program.

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- National Primary Drinking Water Regulations maximum contaminant levels (federal MCLs; Code of Federal Regulations, Chapter 40, Section 141.61)
- New York State Department of Environmental Conservation (NYSDEC) groundwater quality standards (GWQS) for potable water supply (New York Codes, Rules and Regulations, Title 6, Part 701-703 [6 CRR-NY 701-703])
- New York State Department of Health maximum contaminant levels (state MCLs; 10 CRR-NY 5-1).

A statistical evaluation of VOCs historically detected above performance standard by well is presented using Box-Whisker plots in Figures 2-4, and Figures 6-8. In the plots, the upper and lower quartiles are defined by the extent of the box (i.e., concentration range of 25 percent to 75 percent of the dataset); the capped lines ("whiskers") represent the minimum and maximum concentrations measured. The VOC data was divided into three temporal datasets: comprehensive (installation date to June 2023), post-remedial action (RA; April 2004 to June 2023), and long term monitoring (LTM; December 2011 to June 2023).

The groundwater sampling results continue to indicate that natural attenuation mechanisms including biodegradation are active and effective at the Site, the groundwater plume is stable/decreasing, and VOC-affected groundwater is primarily restricted to the area south of I-88. Most of the dissolved organic contaminant mass is located in the shallow portion of the unconfined water-bearing zone in the area defined by samples collected from monitoring well MW-16S, and is primarily comprised of trichloroethene (TCE) and its sequential reductive breakdown products. Groundwater VOC data collected since the mid-1990s have consistently shown the plume to be positionally stable.

SHALLOW GROUNDWATER RESULTS

Concentrations of 1,1-dichloroethane (1,1-DCA; 16 micrograms per liter [µg/l]) and cis-1,2-dichloroethene (cis-1,2-DCE; 9.1 µg/l) were detected above the performance standard of 5 micrograms per liter (µg/l) in the sample collected from MW-2S. Low levels of chloroethane (0.75 µg/l; estimated) and vinyl chloride (0.85 µg/l; estimated) were detected below the performance standards of 5 µg/l and 2 µg/l, respectively. No other VOCs were detected in the sample collected from MW-2S. As shown in Figure 2, the concentrations of both 1,1-DCA and cis-1,2-DCE have increased slightly since the June 2021, and vinyl chloride was detected for the first time since 2019. The concentrations of 1,1-DCA and cis-1,2-DCE were greater than the median values in all three statistical evaluations, and represent maximum values for the long term monitoring dataset.

In the sample collected from MW-3S, all VOCs were either not detected or detected below the performance standards (acetone [2.1 µg/l; estimated], 1,1-DCA [2 µg/l] and cis-1,2-DCE [2.1 µg/l]). The concentrations of 1,1-DCA and cis-1,2-DCE were the lowest since 1994 (Figure 3). Groundwater samples collected from MW-3S have met performance standards since June 2021.

Consistent with historical results, no VOCs were detected in the sample collected from MW-7S.

The following VOCs were detected at concentrations greater than their respective performance standards in the sample collected from MW-16S: 1,1-DCA (44 µg/l), cis-1,2-DCE (1,200 µg/l), TCE (1,100 µg/l), and vinyl chloride (330 µg/l). The performance standard for TCE is 5 µg/l, and is 2 µg/l for vinyl chloride. Although concentrations of 1,1-DCA, cis-1,2-DCE, TCE and vinyl chloride have increased as compared to the historical low measured after the remedial action in October 2003, concentrations have been relatively stable to slightly increasing since commencement of the long-term monitoring program (Figure 4). The maximum concentration of 1,1-DCA for the post remedial action and long term monitoring data sets was measured in the sample collected in June 2023; 1,1-DCA was greater than the upper quartile value for the comprehensive statistical evaluation. The cis-1,2-DCE concentration was greater than the upper quartile value for the comprehensive statistical evaluation, and represented maximum values for the post remedial action and long term monitoring data sets. The maximum concentration of TCE for all three datasets was measured in the sample collected in June 2023. The concentration of vinyl chloride was equal to the upper quartile value for the comprehensive and post remediation action statistical evaluation, and greater than the median value in the long term monitoring statistical evaluations. Although concentrations of TCE have increased, the generation of daughter products remains strong and is indicative of biodegradation.

Consistent with historical results, no VOCs were detected in the sample and duplicate sample collected from MW-18S.

Downgradient distance versus concentration plots were prepared for the groundwater plume centerline (MW-18S, MW-16S, MW-3S, MW-20S and MW-7S) (Figure 5); plots were prepared to identify conditions before the remedial action (June 2002), approximately 1 year after the remedial action (October 2004), a decade prior to the current event (June 2013), and for the most recent sampling event (June 2023). The June 2002 and October 2004 plots show that the highest VOC concentrations within the groundwater plume were in the vicinity of MW-3S. Over time, concentrations of VOCs in the vicinity of MW-3S have attenuated and the groundwater plume has decreased in size. Currently, the highest concentrations within the groundwater plume are in the vicinity of MW-16S. In 2013, concentrations of TCE were greater than the concentration of its daughter product cis-1,2-DCE. Currently, concentrations of cis-1,2-DCE exceed TCE. These VOCs degrade rapidly downgradient (i.e., MW-3S). Overall, these data indicate that biodegradation is active and effective and the groundwater plume size is stable to decreasing.

DEEP GROUNDWATER

1,1-DCA (6.3 µg/l), cis-1,2-DCE (9.9 µg/l), and TCE (33 µg/l) were detected at concentrations greater than their respective performance standards in the sample collected from MW-2. Low concentrations, below their respective performance standards, of chloroethene (1.6 µg/l) and vinyl chloride (1.1 µg/l) were detected. Groundwater sample concentrations have increased since the historical low measured in June 2010, but have been decreasing since December 2016 (Figure 6). Concentrations of 1,1-DCA, cis-1,2-DCE and TCE measured during the June 2023 event were less than or equal to the median values for all statistical evaluations. In the long term monitoring statistical evaluation, the minimum concentration of TCE was measured in the sample collected in June 2023.

Consistent with historical results, no VOCs were detected in the sample and duplicate sample collected from MW-3.

MW-19 AREA

Based on previous investigations, the area near shallow monitoring well MW-19 and PMW-1 is an isolated area with PCE and 1,1,1-TCA concentrations in groundwater above the performance standards. In December 2008, an enhanced reductive dechlorination (ERD) pilot test was performed and the technology was not recommended for further evaluation or full-scale application. After the pilot study was performed, the EPA required supplemental investigation work with the objective of identifying the source of PCE and 1,1,1-TCA and remediating the source via in situ ERD. A soil source was not identified by the supplemental investigation in the MW-19 Area or nearby vicinity. The data collected indicate that affected groundwater (i.e., total VOCs above 5 µg/l) is limited to the thin, discontinuous sand/gravel zone in the immediate vicinity of MW-19 with an approximate areal extent of 9,000 square feet (Figure 1). As discussed in the Record of Decision Amendment (September 2011), the EPA determined that groundwater in the MW-19 Area is subject to a Technical Impracticability (TI) Waiver and the chemical-specific applicable or relevant and appropriate requirements are waived.

In June 2023, tetrachloroethene (PCE; 200 µg/l), 1,1,1-trichloroethane (1,1,1-TCA; 45 µg/l), and TCE (14 µg/l) were detected above performance standards in the samples collected from MW-19; the performance standard for both PCE and 1,1,1-TCA is 5 µg/l. Concentrations of 1,1-dichloroethane (1,1-DCA; 4.6 µg/l), 1,1-dichloroethene (DCE; 3.2 µg/l), and cis-1,2-DCE (0.75 µg/l; estimated) were all less than performance standards. 1,1-DCA concentrations were greater than the upper quartile values for the comprehensive and post remediation statistical evaluations, and greater than the median value for the long term monitoring data set (Figure 7). 1,1,1-TCA concentrations were less than the lower quartile value for all statistical evaluations. The PCE concentration was equal to the maximum value all statistical evaluations. TCE concentrations were greater than the upper quartile values for all statistical evaluations.

1,1-DCA (5.1 µg/l), PCE (190 µg/l), 1,1,1-TCA (48 µg/l), and TCE (26 µg/l) were detected at concentrations greater than their respective performance standard in the sample collected from PMW-1. The concentrations of 1,1-DCA and 1,1,1-TCA were less than the median values for all statistical evaluations (Figure 8). The PCE concentration was equal to the maximum value for both the

comprehensive and long term monitoring statistical evaluation. The TCE concentration was greater than the median value for the comprehensive statistical evaluations and less than the median value for the long term monitoring statistical evaluation.

MNA PARAMETER RESULTS

Chloride is an innocuous end product of reductive dechlorination and was detected in samples from all wells at concentrations ranging from 4.5 mg/l (MW-2S) to 280 mg/l (MW-3); chloride was generally detected at higher concentrations in the deeper wells (Table 2).

Nitrate was detected in MW-2S (0.41 mg/l; estimated), MW-3S (0.38 mg/l; estimated), and MW-7S (0.034 mg/l; estimated); it was not detected in any other samples. The groundwater sample concentrations indicate that nitrate is not likely to interfere with reductive dechlorination processes at the site.

Ferrous iron, the product of iron reduction, was detected in MW-3S (0.1 mg/l), MW-16S (0.3 mg/l), MW-19 (0.4 mg/l), and PMW-1 (0.2 mg/l).

Sulfate was detected in samples collected from all wells and ranged from 2.5 mg/l (estimated; MW-2S) to 53 mg/l (MW-16S). Sulfide is the product of sulfate reduction, which at high concentrations can inhibit key dechlorinating microbes. Sulfide is known to react with ferrous iron to produce ferrous sulfide, a reactive mineral which stimulates abiotic reduction of chlorinated VOCs. Sulfide was not detected in any samples, and is therefore not expected to inhibit dechlorinating microbes.

Dissolved organic carbon, a microbial food source (i.e., electron donor), was detected in all groundwater samples collected and ranged in concentration from 0.67 mg/l (duplicate; PMW-1) to 5.5 mg/l (MW-16S). Generally, the lowest concentrations have been measured in samples collected from the MW-19 area and the highest concentrations have been measured in samples collected from MW-16S. The levels of organic carbon measured in MW-16S are consistent with historical levels indicating that organic carbon remains present to drive chlorinated VOC reduction.

Alkalinity, indicative of microbial activity, ranged from 72 mg/l (MW-7S) to 380 mg/l (MW-16S). The sample results are consistent with historical results with the exceptions that the highest concentrations were formally measured in samples collected from MW-3S. The alkalinity results indicate that the MW-16S area is bioactive.

Dissolved oxygen concentrations were less than 1 mg/l (anoxic) at all wells except MW-2S. Dissolved oxygen concentrations ranged from 0.00 mg/l (MW-19) to 4.13 mg/l (MW-2S).

Negative oxidation reduction potential (ORP) measurements, indicating reducing conditions, were observed at MW-7S, MW-16S, MW-19 and PMW-1. ORP ranged from -252.5 millivolts (mV) (PMW-1) to 206.4 mV (MW-3S).

The data generally indicate anaerobic conditions, within the range favorable to reductive dechlorination, are present; conditions appear favorable to vinyl chloride oxidation downgradient (i.e., MW-7S).

DIFFICULTIES ENCOUNTERED AND RESOLUTION

No difficulties were encountered during the June 2023 monitoring event.

COMMUNITY RELATIONS

No community relations support has been required since the submittal of the June 2021 groundwater monitoring report on September 3, 2021.

INSTITUTIONAL CONTROLS

Three warning signs, marking the boundaries of contaminated soils remaining in place under a subsurface liner along Osborne Hollow Road, were installed on June 6, 2017 (Figure 1). The signs were inspected during the June 2023 event, and one of the signs was missing. A replacement sign was installed on September 1, 2023.

WSP confirmed on that the Town of Fenton has a record of EPA's request that the Town of Fenton's building inspector confer with EPA before issuing any building permits for construction at the Tri-Cities Barrel Superfund Site (Enclosure C).

SCHEDULE

The next groundwater monitoring event would be conducted in June 2025. Samples for VOCs and MNA parameters will be collected during this event.

CONCLUSIONS

Overall groundwater VOC data collected since the mid-1990s have consistently shown the plume to be positionally stable to decreasing in size. VOC concentrations with distance along the centerline of the plume show an apparent accelerated attenuation zone in the area of MW-3S, downgradient of the highest residual VOC concentration area (MW-16S). This area has led to significant VOC concentration decreases and is protective of downgradient migration. With the exception of the MW-19/PMW-1 TI Waiver Area, groundwater quality at the Site continues to improve and the data continue to indicate that MNA is an appropriate remedy for groundwater at the Site. Natural attenuation mechanisms have proven to be effective in reducing VOC mass in groundwater and preventing the migration of VOCs.

If you have any questions or require additional information, please do not hesitate to contact me at (412) 604-1040.

Sincerely yours,

Erin Huntley
Assistant Vice President

Matt Burns
Technical Fellow/Senior Vice President

EMH/MB/DH/MS
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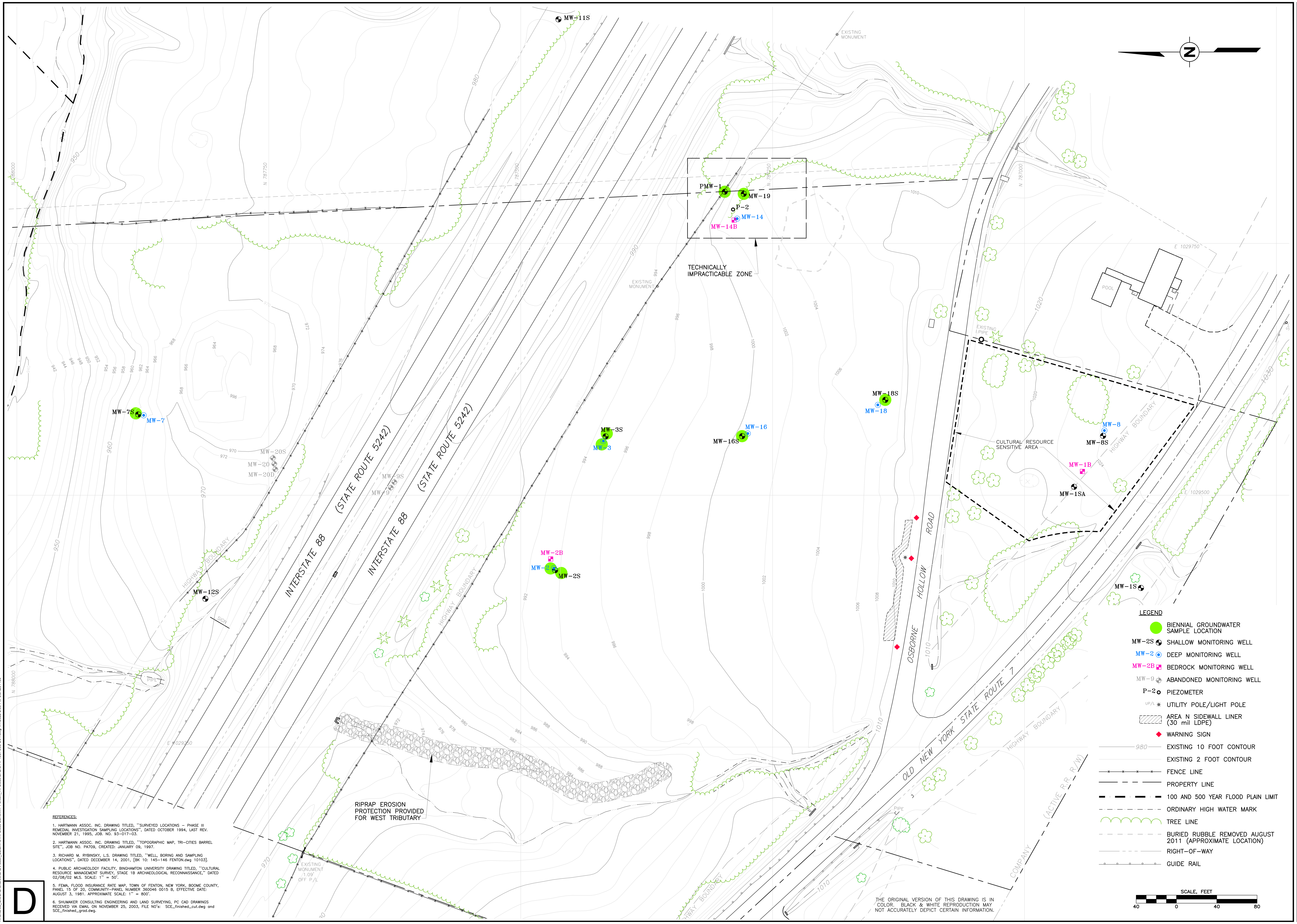
Encl.

cc/encl.: Michael Mintzer, EPA Region II
EES Case Management Unit, U. S. Department of Justice (DOJ #90-11-3-1514/1)
Thomas Spina, U.S. Attorney's Office Northern District of New York
Charles T Gregory, NYSDEC
John Uruskyj, Project Coordinator, de maximis inc.

FIGURES


MW-11S
EXISTING MONUMENT
PMW-1
MW-19
P-2
MW-14
MW-14B
TECHNICALLY IMPRACTICABLE ZONE
MW-7S
MW-7
MW-20S
MW-20
MW-20D
MW-9S
MW-9
INTERSTATE 88
(STATE ROUTE 5242)
MW-3S
MW-3
MW-16
MW-16S
MW-18S
MW-18
MW-8
MW-8S
CULTURAL RESOURCE SENSITIVE AREA
MW-1B
MW-1SA
MW-2B
MW-2
MW-2S
MW-12S
MW-1S
OSBORNE HOLLOW ROAD
OLD NEW YORK STATE ROUTE 7
HIGHWAY BOUNDARY
POOL
RIPRAP EROSION PROTECTION PROVIDED FOR WEST TRIBUTARY
LEGEND
BIENNIAL GROUNDWATER SAMPLE LOCATION
MW-2S SHALLOW MONITORING WELL
MW-2 DEEP MONITORING WELL
MW-2B BEDROCK MONITORING WELL
MW-9 ABANDONED MONITORING WELL
P-2 PIEZOMETER
UTILITY POLE/LIGHT POLE
AREA N SIDEWALL LINER (30 mil LDPE)
WARNING SIGN
EXISTING 10 FOOT CONTOUR
EXISTING 2 FOOT CONTOUR
FENCE LINE
PROPERTY LINE
100 AND 500 YEAR FLOOD PLAIN LIMIT
ORDINARY HIGH WATER MARK
TREE LINE
BURIED RUBBLE REMOVED AUGUST 2011 (APPROXIMATE LOCATION)
RIGHT-OF-WAY
GUIDE RAIL
SCALE, FEET
40 0 40 80
THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

REFERENCES:

1. HARTMANN ASSOC. INC. DRAWING TITLED, "SURVEYED LOCATIONS – PHASE III REMEDIAL INVESTIGATION SAMPLING LOCATIONS", DATED OCTOBER 1994, LAST REV. NOVEMBER 21, 1995, JOB. NO. 93-017-03.

2. HARTMANN ASSOC. INC. DRAWING TITLED, "TOPOGRAPHIC MAP, TRI-CITIES BARREL SITE", JOB NO. PA709, CREATED: JANUARY 09, 1997.

3. RICHARD M. RYBINSKY, L.S. DRAWING TITLED, "WELL, BORING AND SAMPLING LOCATIONS", DATED DECEMBER 14, 2001, [BK 10: 145-146 FENTON.dwg 10103].

4. PUBLIC ARCHAEOLOGY FACILITY, BINGHAMTON UNIVERSITY DRAWING TITLED, "CULTURAL RESOURCE MANAGEMENT SURVEY, STAGE 1B ARCHAEOLOGICAL RECONNAISSANCE," DATED 02/08/02 MLS. SCALE: 1" = 50'.

5. FEMA, FLOOD INSURANCE RATE MAP, TOWN OF FENTON, NEW YORK, BOOME COUNTY, PANEL 15 OF 20, COMMUNITY-PANEL NUMBER 360046 0015 B, EFFECTIVE DATE: AUGUST 3, 1981. APPROXIMATE SCALE: 1" = 800'.

6. SHUMAKER CONSULTING ENGINEERING AND LAND SURVEYING, PC CAD DRAWINGS RECEIVED VIA EMAIL ON NOVEMBER 25, 2003, FILE NO's: SCE_finished_cut.dwg and SCE_finished_grad.dwg.

D

REVISIONS

REV	DESCRIPTION

SEAL

DATE

DRAWN BY: RAZ 02/22/2022
CHECKED: MJG 04/07/2022
APPROVED

REVISED LONG TERM MNA SAMPLING PROGRAM MONITORING WELL NETWORK

TRI-CITIES BARREL, SUPERFUND SITE
FENTON, NEW YORK

PREPARED FOR
TRI-CITIES BARREL
SITE RESPONDENTS

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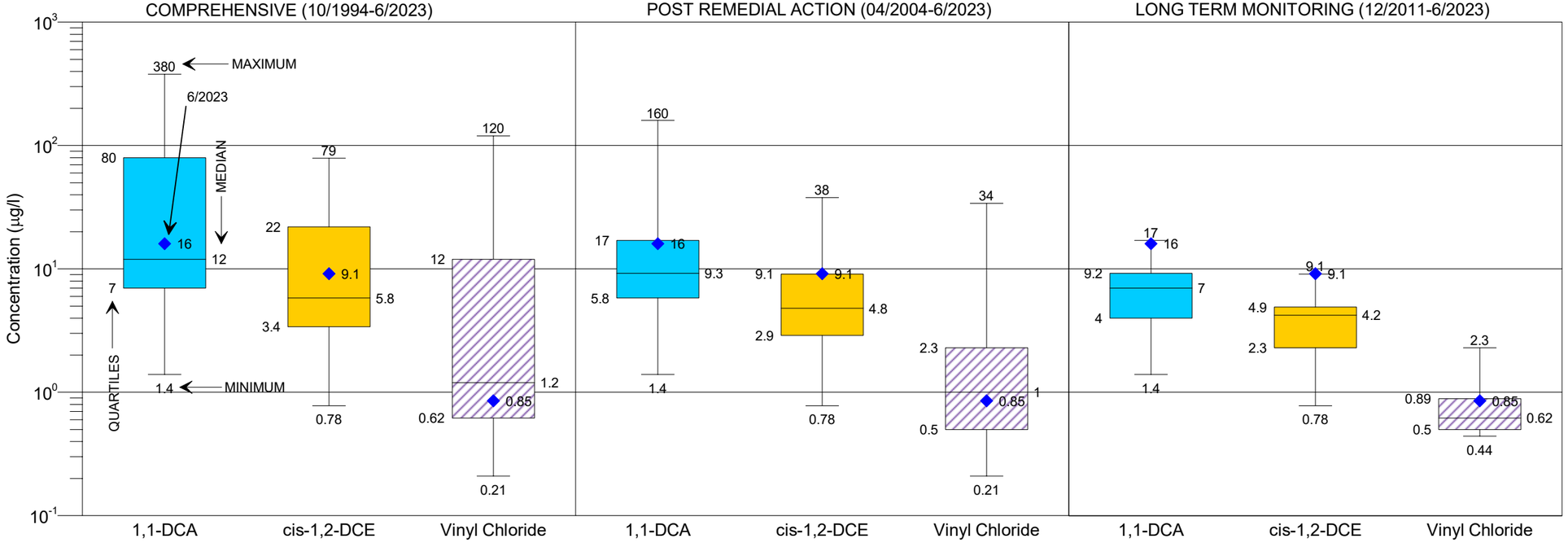
FIGURE 1

Drawing Number
314P1357.003-D01

BOX-WHISKER



Legend

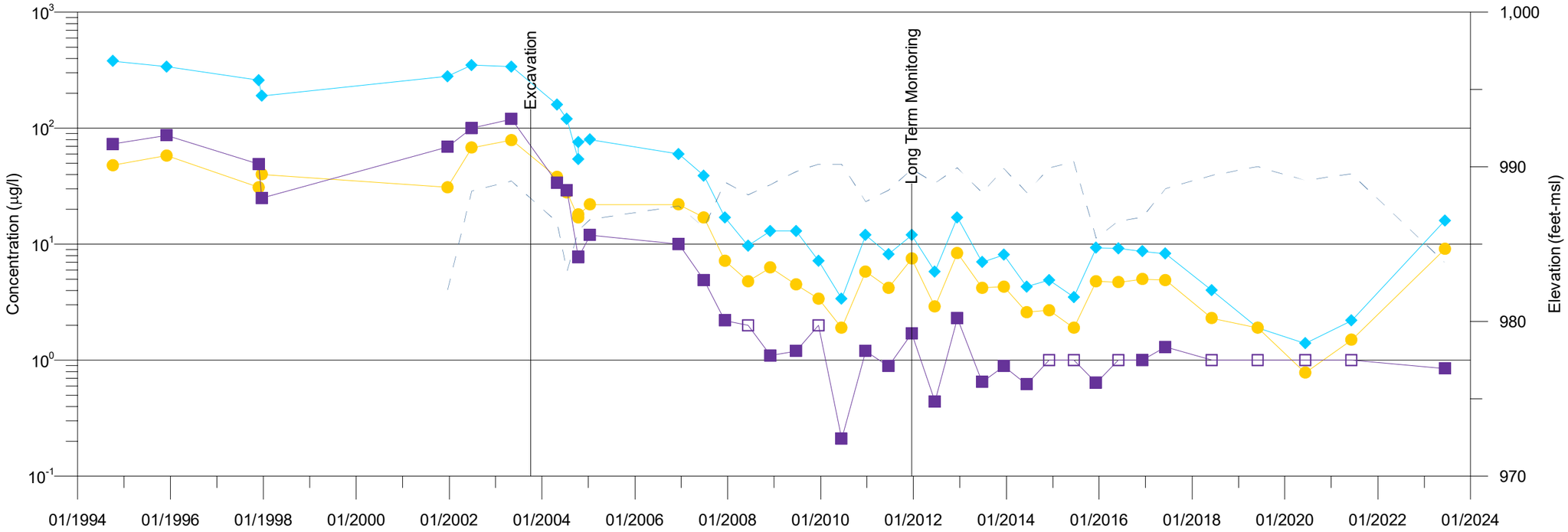
- 1,1-DCA
- cis-1,2-DCE
- Vinyl Chloride
- Water Level

Notes

a/ Cross hatch indicates data-set contains non-detect values. Non-detect values were substituted for half the reporting limit in the statistical evaluation.

b/ Open symbol indicates non-detect result at the reporting limit.

CONCENTRATION VERSUS TIME



B

Drawn By:	EMH 8/3/23
Checked:	DH 8/9/23
Approved:	MB 8/11/23
DWG Name:	31406650_0623B

TRI-CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

PREPARED FOR
TRI-CITIES BARREL
SITE RESPONDENTS

FIGURE 2

MW-2S
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

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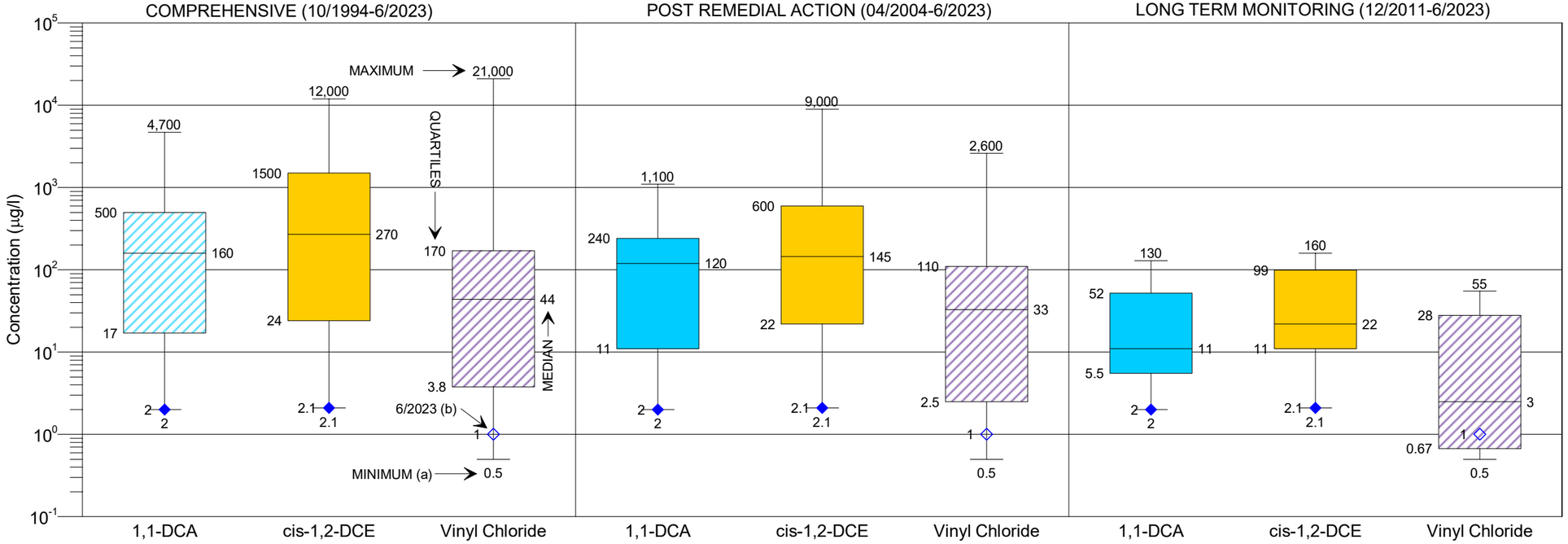
BOX-WHISKER

COMPREHENSIVE (10/1994-6/2023) | POST REMEDIAL ACTION (04/2004-6/2023) | LONG TERM MONITORING (12/2011-6/2023)



Legend

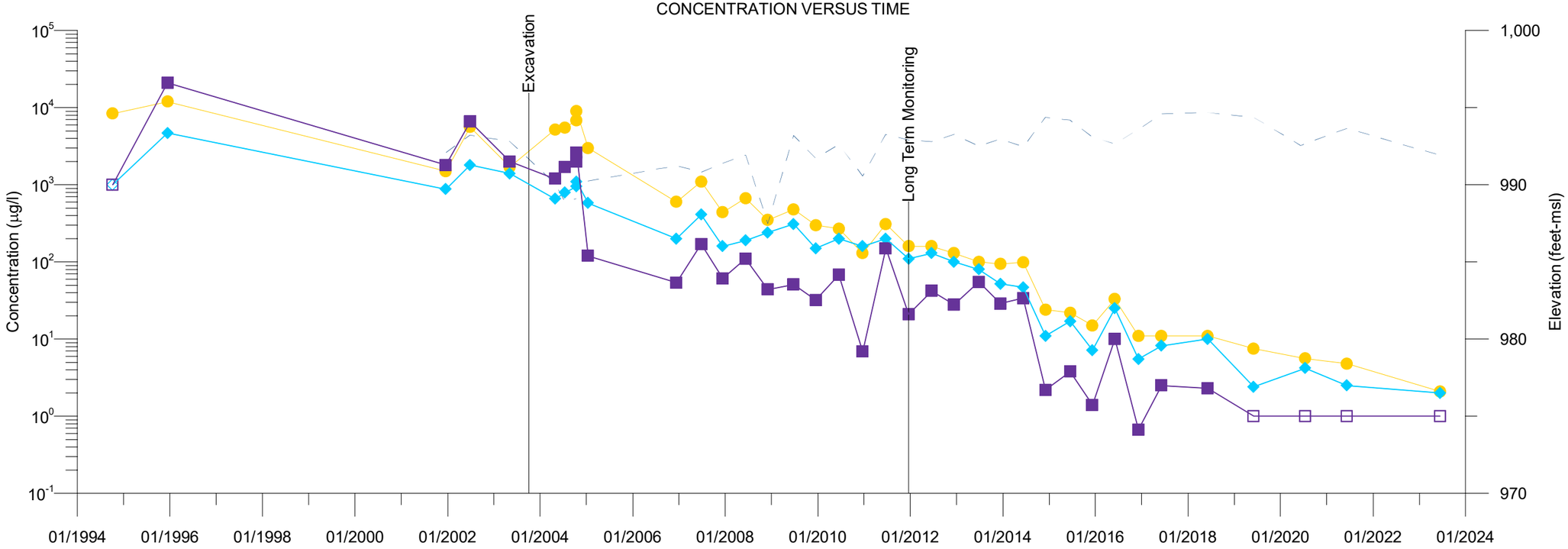
- 1,1-DCA
- cis-1,2-DCE
- Vinyl Chloride
- Water Level

Notes

a/ Cross hatch indicates data-set contains non-detect values. Non-detect values were substituted for half the reporting limit in the statistical evaluation.

b/ Open symbol indicates non-detect result at the reporting limit.

CONCENTRATION VERSUS TIME



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TRI-CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

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FIGURE 3

MW-3S
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

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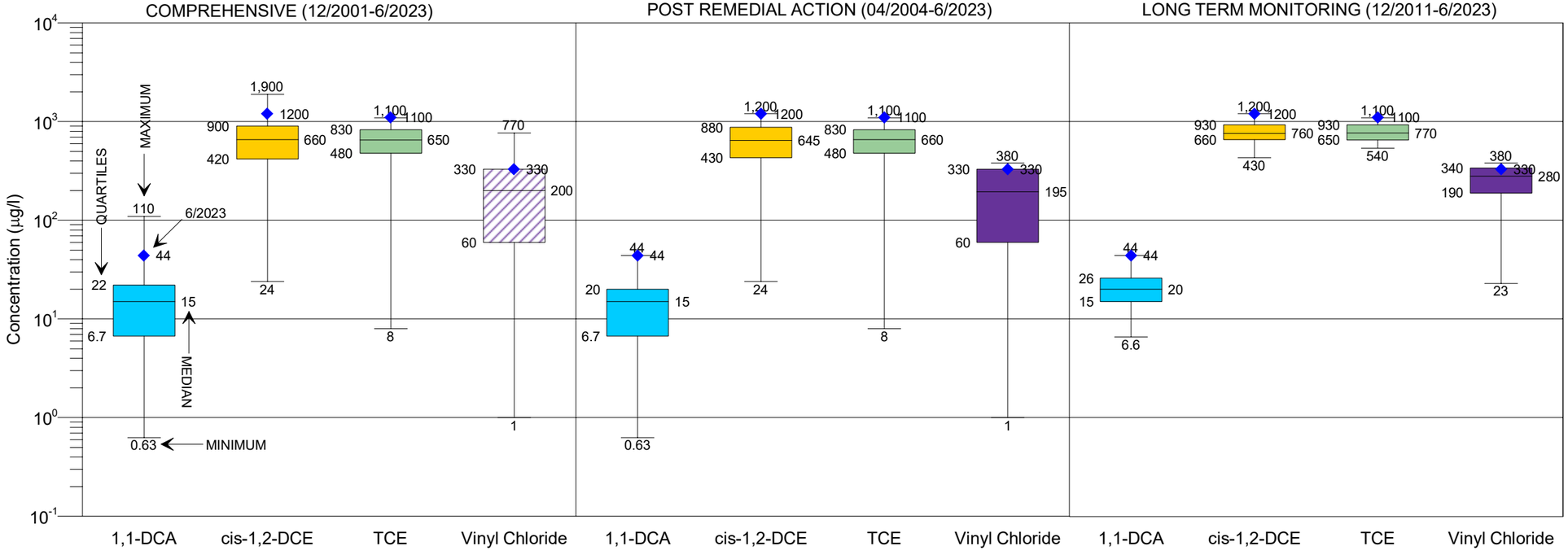
BOX-WHISKER

COMPREHENSIVE (12/2001-6/2023) | POST REMEDIAL ACTION (04/2004-6/2023) | LONG TERM MONITORING (12/2011-6/2023)



Legend
- 1,1-DCA
- cis-1,2-DCE
- TCE
- Vinyl Chloride
- Water Level

Notes
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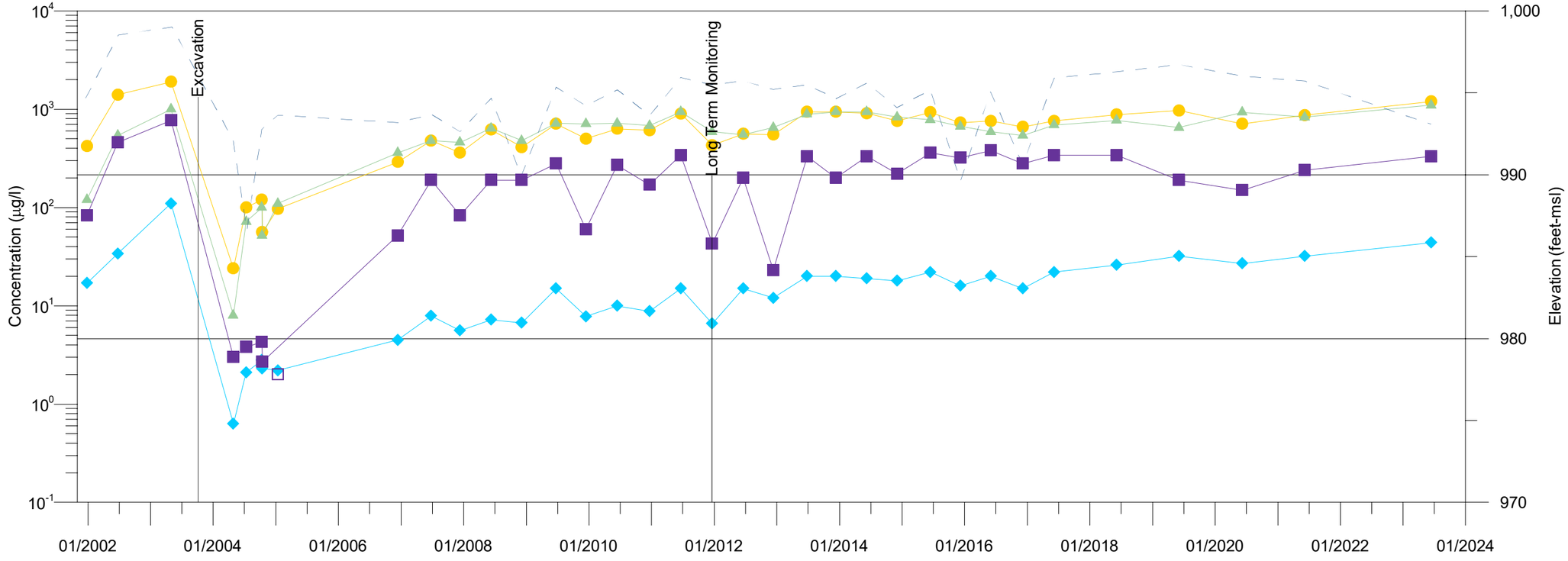
b/ Open symbol indicates non-detect result at the reporting limit.

CONCENTRATION VERSUS TIME



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Approved: MB 8/11/23
DWG Name: 31406650_0623B

TRI-CITIES BARREL SUPERFUND SITE
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FIGURE 4
MW-16S
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

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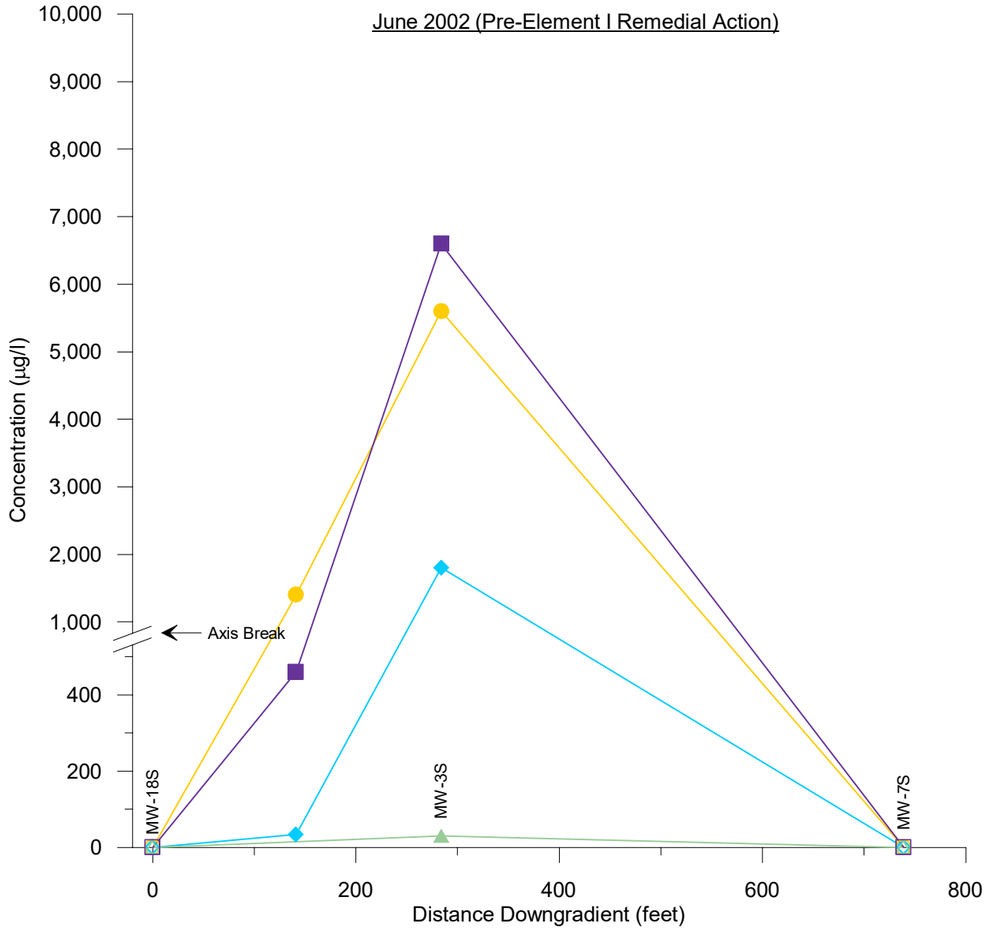

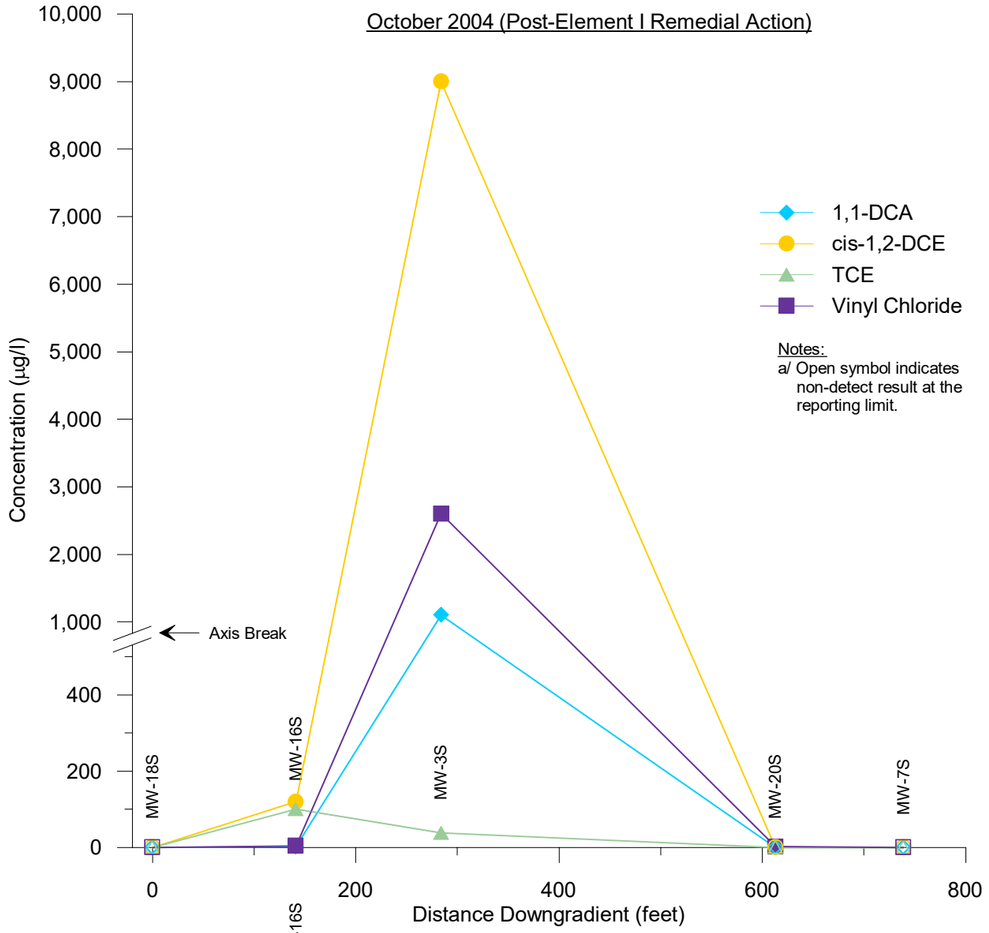

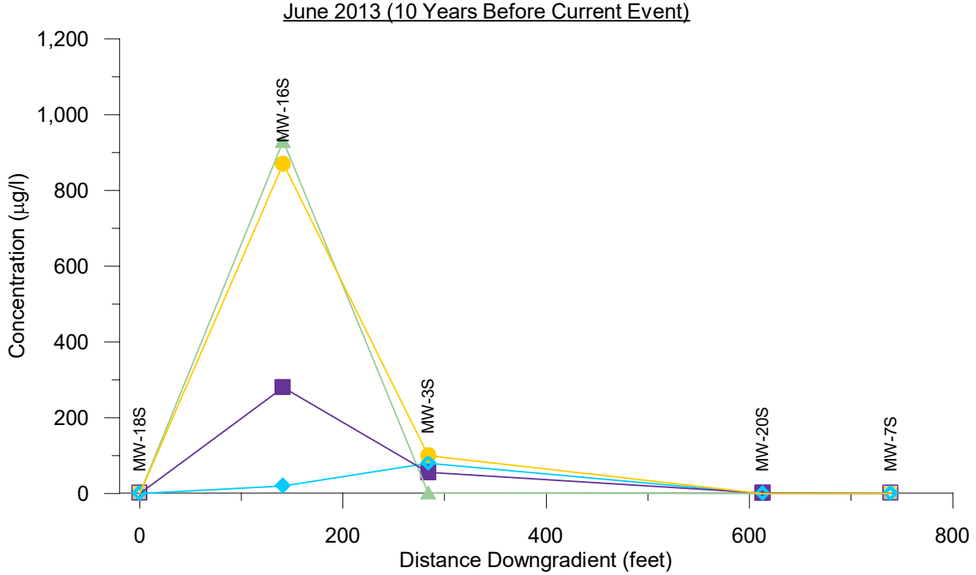

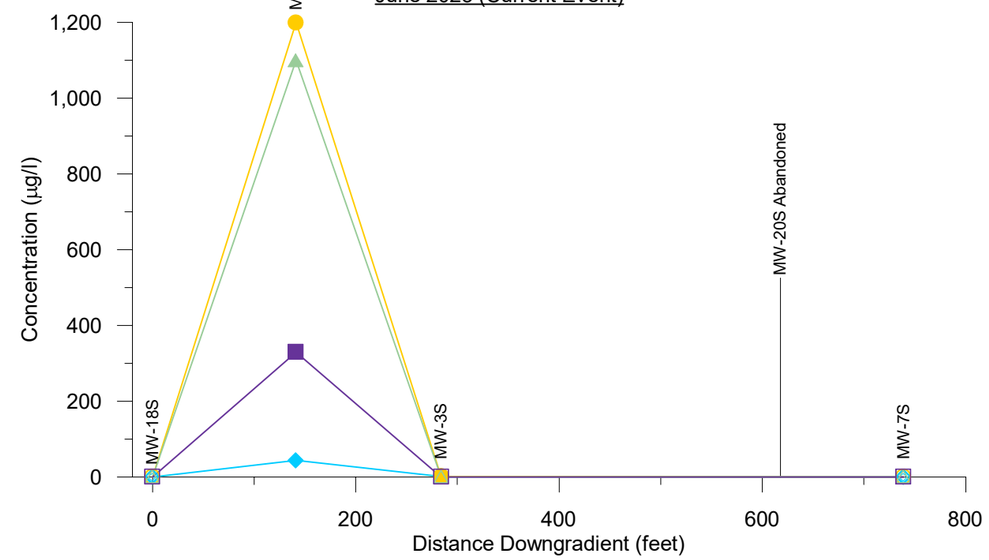

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Checked: DH 8/9/23
Approved: MB 8/11/23
DWG Name: 31406650_0623B

TRI-CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

PREPARED FOR
TRI-CITIES BARREL
SITE RESPONDENTS

FIGURE 5

PLUME CENTERLINE
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

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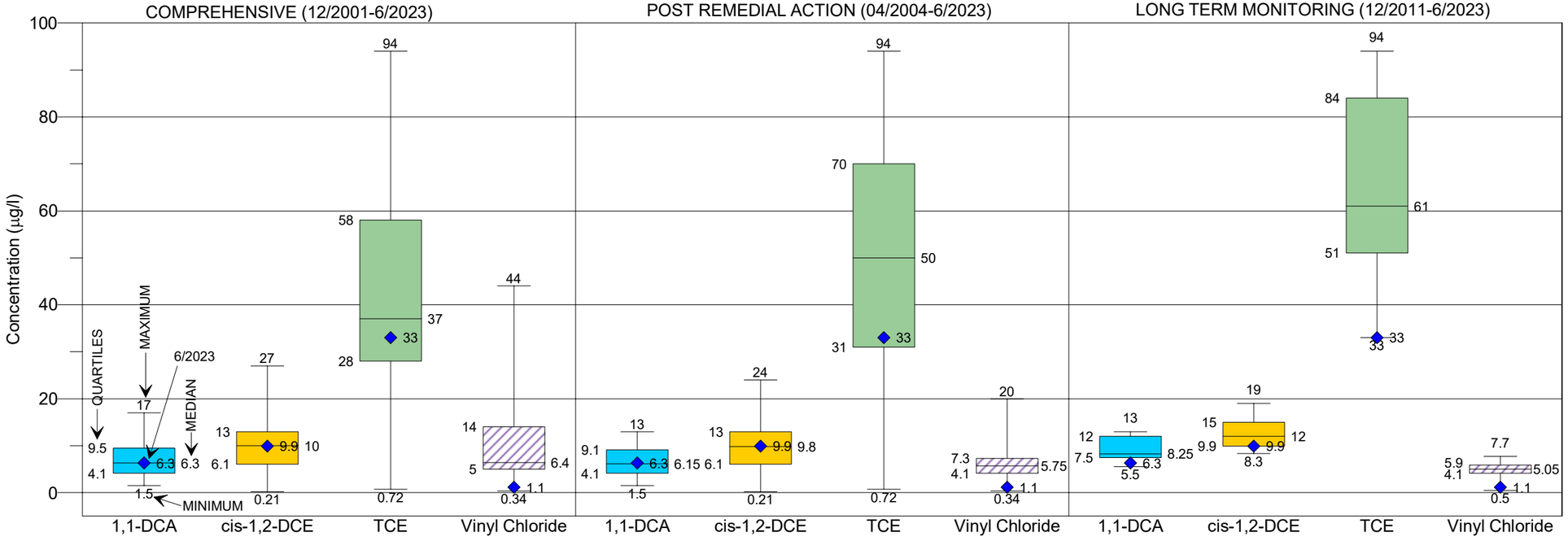
BOX-WHISKER
POST REMEDIAL ACTION (04/2004-6/2023)

COMPREHENSIVE (12/2001-6/2023)

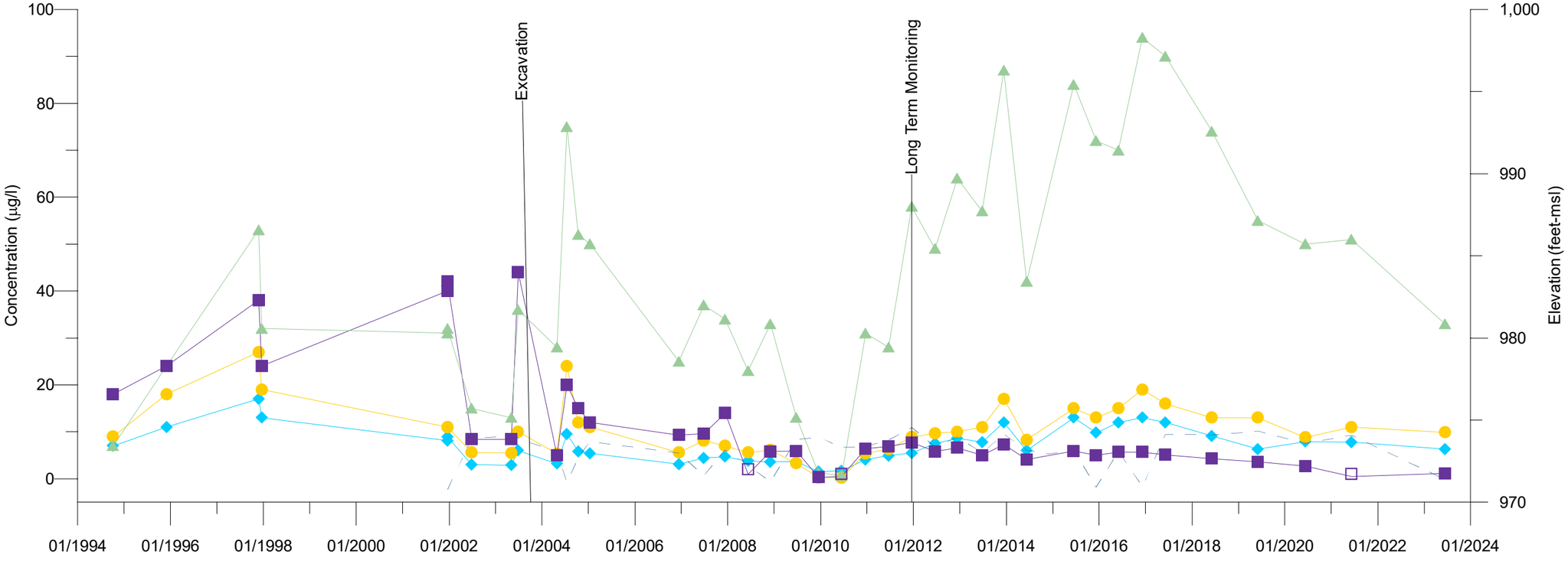
LONG TERM MONITORING (12/2011-6/2023)



Legend
- 1,1-DCA
- cis-1,2-DCE
- TCE
- Vinyl Chloride
- Water Level

Notes
a/ Cross hatch indicates data-set contains non-detect values. Non-detect values were substituted for half the reporting limit in the statistical evaluation.
b/ Open symbol indicates non-detect result at the reporting limit.

CONCENTRATION VERSUS TIME



B

Drawn By: EMH 8/3/23
Checked: DH 8/9/23
Approved: MB 8/11/23
DWG Name: 31406650_0623B

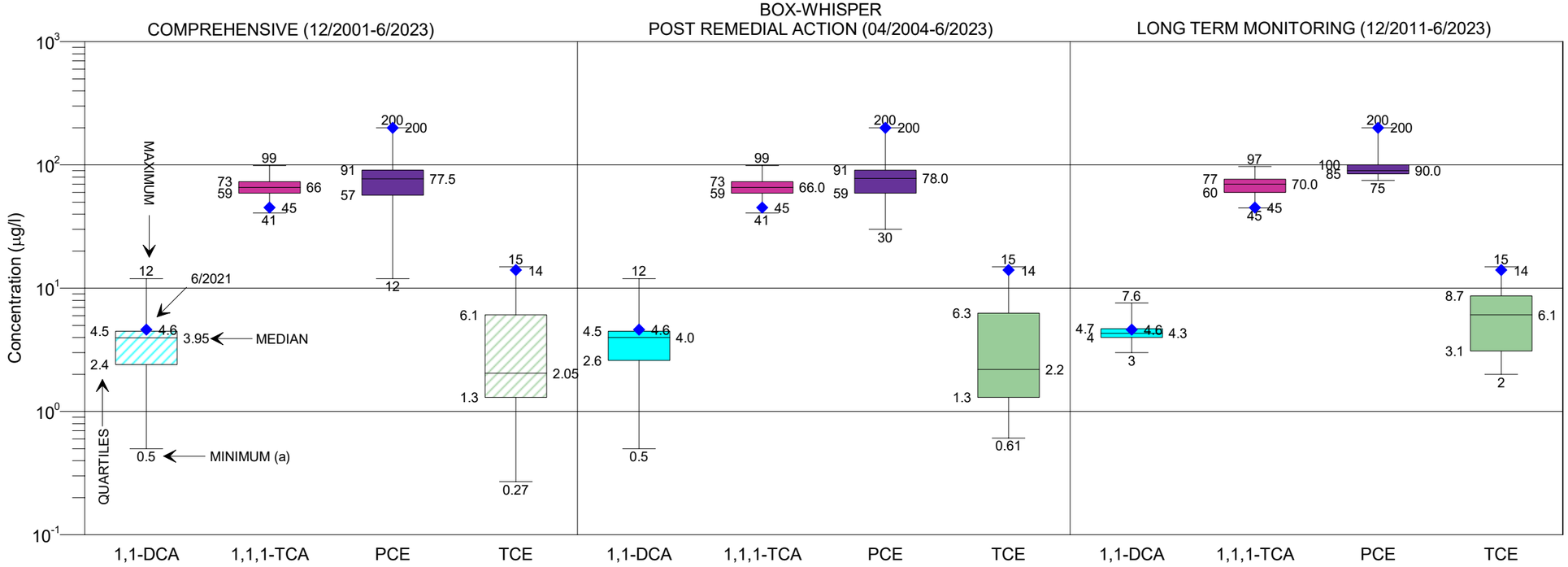
TRI-CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK
PREPARED FOR
TRI-CITIES BARREL
SITE RESPONDENTS

FIGURE 6

MW-2
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

WSP USA Inc.
11 STANWIX STREET
SUITE 950
PITTSBURGH, PA 15222
TEL: +1 412.604.1040

BOX-WHISPER



Legend

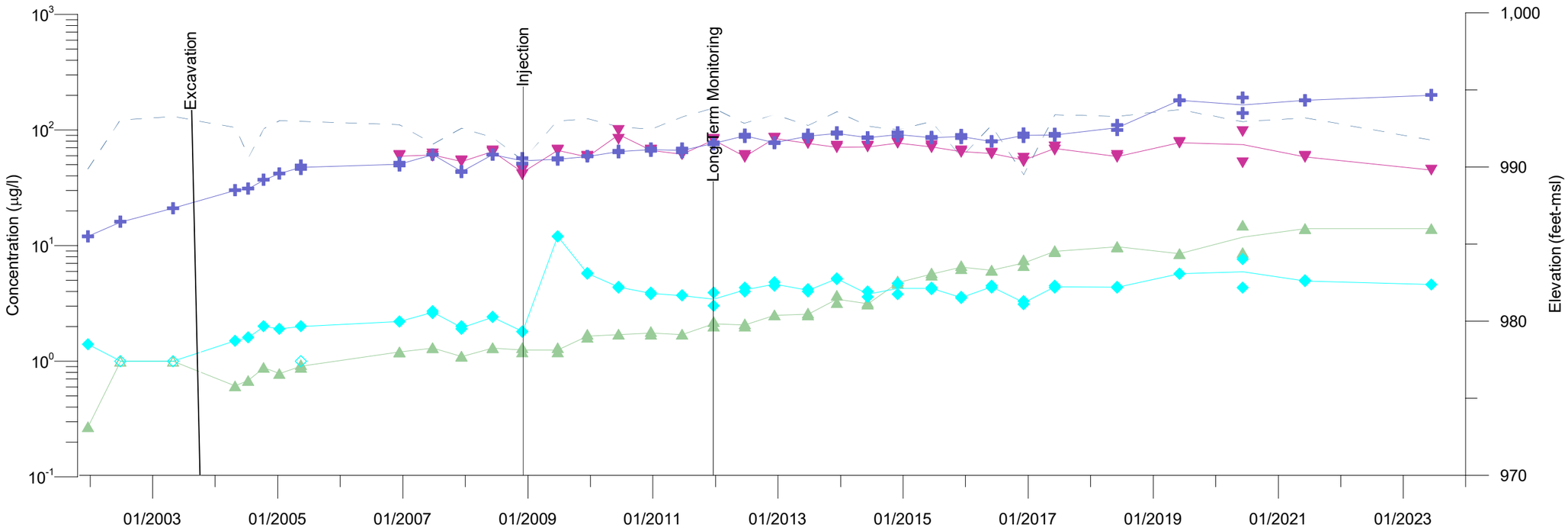
- 1,1-DCA
- 1,1,1-TCA
- PCE
- TCE
- Water Level

Notes

a/ Cross hatch indicates data-set contains non-detect values. Non-detect values were substituted for half the reporting limit in the statistical evaluation.

b/ Open symbol indicates non-detect result at the reporting limit.

CONCENTRATION VERSUS TIME



B

Drawn By:	EMH 8/3/23
Checked:	DH 8/9/23
Approved:	MB 8/11/23
DWG Name:	31406650_0623B

TRI-CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

PREPARED FOR
TRI-CITIES BARREL
SITE RESPONDENTS

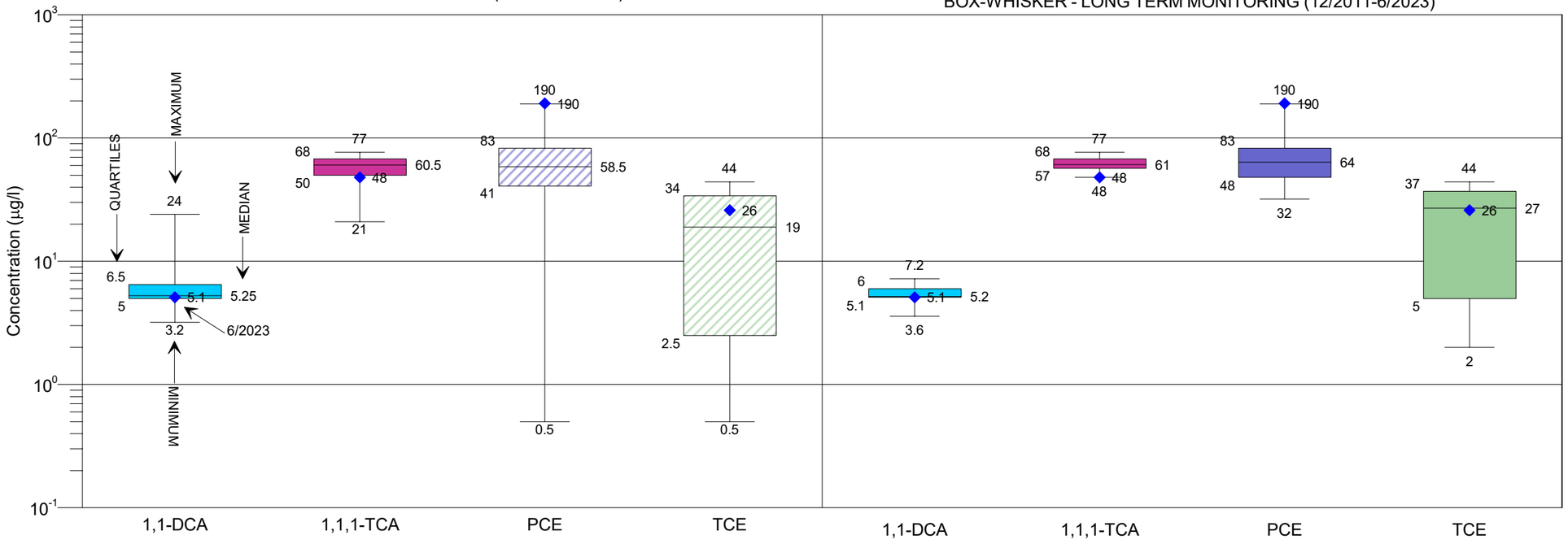
FIGURE 7

MW-19
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

WSP USA Inc.
11 STANWIX STREET
SUITE 950
PITTSBURGH, PA 15222
TEL: +1 412.604.1040

BOX-WHISKER - COMPREHENSIVE (12/2008-6/2023)

BOX-WHISKER - LONG TERM MONITORING (12/2011-6/2023)



Legend

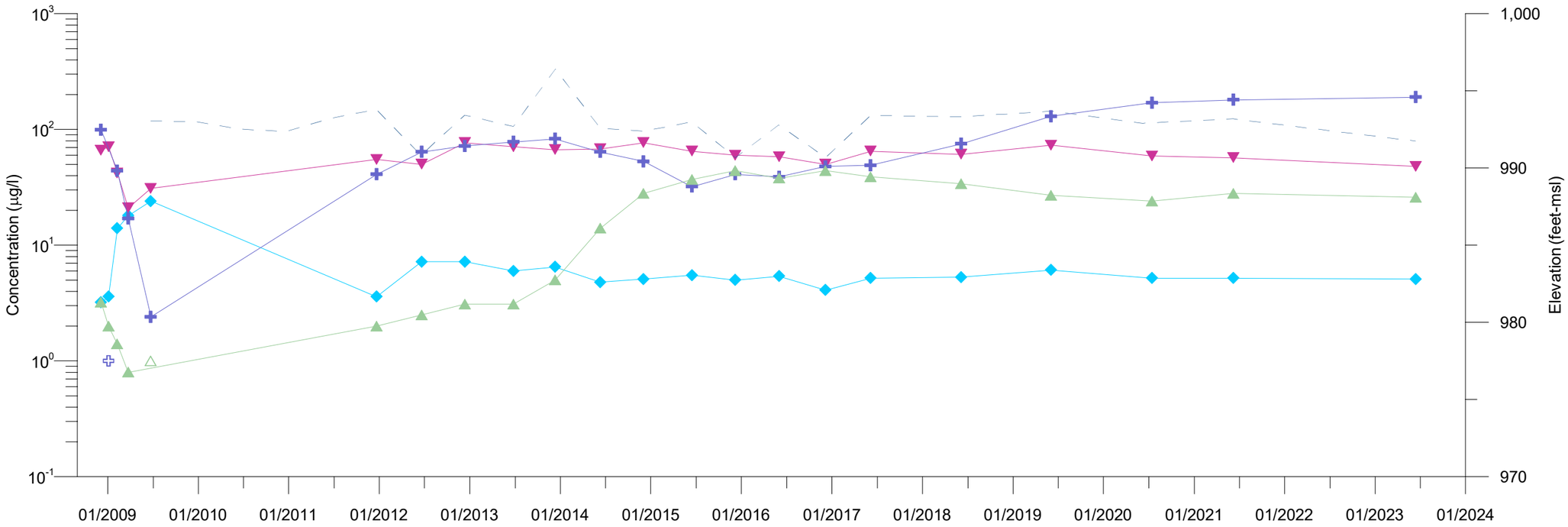
- 1,1-DCA
- 1,1,1-TCA
- PCE
- TCE
- Water Level

Notes

a/ Cross hatch indicates data-set contains non-detect values. Non-detect values were substituted for half the reporting limit in the statistical evaluation.

b/ Open symbol indicates non-detect result at the reporting limit.

CONCENTRATION VERSUS TIME



B

Drawn By: EMH 8/3/23
Checked: DH 8/9/23
Approved: MB 8/11/23
DWG Name: 31406650_0623B

TRI-CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

PREPARED FOR
TRI-CITIES BARREL
SITE RESPONDENTS

FIGURE 8

PMW-1
GROUNDWATER SAMPLING RESULTS
TREND PLOTS

WSP USA Inc.
11 STANWIX STREET
SUITE 950
PITTSBURGH, PA 15222
TEL: +1 412.604.1040

TABLES

Table 1

Well Construction and Water Level Elevations
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Location		New York State Plane Coordinates Easting	Northing	Ground Surface Elevation (ft-msl)	Top-of-Casing Elevation (ft-msl)	Screened Interval ft-bgs	ft-msl	Monitored Zone	12/2001 Depth to Water (ft)	12/2001 Elevation (ft-msl)	6/2002 Depth to Water (ft)	6/2002 Elevation (ft-msl)	5/2003 Depth to Water (ft)	5/2003 Elevation (ft-msl)
MW-1S	(b)	1029414.61	786884.85	1,021.07	1,025.16	13.5 - 23.5	997.6 - 1,007.6	shallow	10.10	1,013.53	6.04	1,017.59	6.98	1,016.65
MW-1SA		1029506.11	786951.65	1,022.18	1,024.68	12.0 - 22.0	1,000.2 - 1,010.2	shallow	-	- (c)	-	- (c)	-	- (c)
MW-1B		1029523.63	786942.53	1,023.09	1,024.61	109.0 - 119.0	904.1 - 914.1	bedrock	74.75	949.86	70.50	954.11	70.31	954.30
MW-2S	(d)	1029425.7	787465.5	993.40	995.80	8.0 - 18.0	973.0 - 983.0	shallow	20.71	982.06	14.33	988.44	13.68	989.09
MW-2	(d)	1029428	787466.5	993.30	995.80	32.0 - 42.0	951.3 - 961.3	deep	30.95	970.78	27.85	973.88	27.70	974.03
MW-2B	(d)	1029437	787470.1	993.20	995.50	80.0 - 90.0	910.2 - 920.2	bedrock	37.90	963.18	46.02	955.06	44.77	956.31
MW-3S	(d)	1029558.5	787415.5	995.00	997.60	4.0 - 14.0	981.0 - 991.0	shallow	11.24	992.09	10.10	993.23	10.52	992.81
MW-3	(d)	1029553.9	787417.7	995.10	997.50	32.7 - 42.7	952.4 - 962.4	deep	27.43	974.90	24.20	978.13	23.83	978.50
MW-7S		1029579.97	787882.57	964.32	966.32	24.0 - 34.0	930.3 - 940.3	shallow	31.08	935.24	30.26	936.06	30.36	935.96
MW-7		1029579.4	787879.12	964.81	966.81	44.5 - 54.5	910.3 - 920.3	deep	32.04	934.77	31.26	935.55	31.32	935.49
MW-8S		1029558.83	786921.71	1,024.85	1,026.85	15.0 - 25.0	999.9 - 1,009.9	shallow	16.09	1,010.76	13.83	1,013.02	13.45	1,013.40
MW-8		1029563.18	786920.9	1,024.88	1,026.88	34.0 - 44.0	980.9 - 990.9	deep	16.24	1,010.64	13.90	1,012.98	13.85	1,013.03
MW-11S		1029980.14	787463.11	979.70	982.06	7.0 - 17.0	962.7 - 972.7	shallow	8.37	973.69	7.23	974.83	6.99	975.07
MW-12S		1029400.13	787816.45	968.70	970.92	11.0 - 21.0	947.7 - 957.7	shallow	-	- (f)	13.05	957.87	12.16	958.76
MW-14		1029780.59	787284.21	1,002.80	1,004.49	39.0 - 49.0	953.8 - 963.8	deep	18.33	986.16	15.02	989.47	14.83	989.66
MW-14B		1029771.61	787284.45	1,003.01	1,004.47	81.5 - 91.5	911.5 - 921.5	bedrock	50.58	953.89	48.91	955.56	47.71	956.76
MW-16S	(e)	1029558.7	787280.3	1,000.70	1,002.70	14.7 - 24.7	976.0 986.0	shallow	13.88	994.68	10.03	998.53	9.54	999.02
MW-16	(e)	1029561.3	787274.6	1,000.80	1,002.90	34.8 - 44.8	956.0 966.0	deep	23.09	985.27	18.00	990.36	17.82	990.54
MW-18S		1029594.7	787138.2	1,006.40	1,008.69	20.0 - 30.0	976.4 - 986.4	shallow	19.93	988.76	13.49	995.20	13.25	995.44
MW-18		1029589.7	787145.6	1,006.40	1,008.53	35.0 - 40.0	966.4 - 971.4	deep	20.10	988.43	13.76	994.77	13.53	995.00
MW-19		1029799.24	787278.642	1,003.29	1,005.65	20.0 - 30.0	973.3 - 983.3	shallow	15.78	989.87	12.58	993.07	12.37	993.28
P-2		1029783.72	787288.82	1,002.54	1,004.42	18.5 - 28.5	974.0 - 984.0	shallow	14.78	989.64	11.36	993.06	11.15	993.27
PMW-1		1029801.32	787297.51	1,000.25	1,002.64	18.0 - 28.0	972.3 - 982.3	shallow	-	- (f)	-	- (f)	-	- (f)

Table 1

Well Construction and Water Level Elevations
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Location	4/2004		7/2004		10/2004		1/2005		12/2006		06/2007		12/2007	
	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)
MW-1S (b)	6.73	1,016.90	7.20	1,016.43	5.88	1,017.75	6.66	1,016.97	5.83	1,017.80 (c)	4.98	1,018.65 (c)	4.65	1,018.98 (c)
MW-1SA	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)
MW-1B	70.11	954.50	-	-	69.92	954.69	69.61	955.00	68.14	956.47	69.98	954.63	69.69	954.92
MW-2S (d)	9.36	986.44	12.56	983.24	9.91	985.89	9.20	986.60	8.33	987.47	9.73	986.07	6.79	989.01
MW-2 (d)	22.74	973.06	24.57	971.23	23.07	972.73	22.10	973.70	22.81	972.99	24.18	971.62	22.62	973.18
MW-2B (d)	37.21	958.29	-	-	36.70	958.80	36.40	959.10	35.99	959.51	37.37	958.13	37.14	958.36
MW-3S (d)	7.51	990.09	8.69	988.91	8.49	989.11	7.35	990.25	6.36	991.24	6.78	990.82	6.21	991.39
MW-3 (d)	20.91	976.59	22.59	974.91	20.69	976.81	19.74	977.76	13.96	983.54	21.28	976.22	19.79	977.71
MW-7S	30.85	935.47	31.75	934.57	31.90	934.42	30.31	936.01	31.76	934.56	32.21	934.11	30.48	935.84
MW-7	31.46	935.35	32.32	934.49	31.80	935.01	31.50	935.31	32.51	934.30	32.09	934.72	39.51	927.30
MW-8S	13.42	1,013.43	15.30	1,011.55	13.95	1,012.90	13.39	1,013.46	14.11	1,012.74	15.06	1,011.79	18.31	1,008.54
MW-8	15.31	1,011.57	15.38	1,011.50	14.00	1,012.88	13.51	1,013.37	14.17	1,012.71	15.38	1,011.50	14.29	1,012.59
MW-11S	6.76	975.30	-	-	7.66	974.40	6.68	975.38	7.44	974.62	8.34	973.72	7.46	974.60
MW-12S	11.62	959.30	-	-	-	-	-	-	13.20	957.72	13.67	957.25	12.36	958.56
MW-14	15.53	988.96	17.20	987.29	14.90	989.59	14.99	989.50	13.11	991.38	16.24	988.25	15.49	989.00
MW-14B	47.54	956.93	48.75	955.72	47.20	957.27	46.81	957.66	46.35	958.12	43.76	960.71	47.65	956.82
MW-16S (e)	10.63	992.07	16.10	986.60	9.91	992.79	9.06	993.64	9.52	993.18	9.02	993.68	10.07	992.63
MW-16 (e)	14.42	988.48	10.95	991.95	13.90	989.00	13.33	989.57	13.51	989.39	15.16	987.74	14.03	988.87
MW-18S	15.21	993.48	17.02	991.67	14.59	994.10	14.04	994.65	13.83	994.86	15.41	993.28	14.16	994.53
MW-18	15.53	993.00	17.41	991.12	14.90	993.63	14.36	994.17	14.10	994.43	15.71	992.82	14.48	994.05
MW-19	13.08	992.57	15.00	990.65	13.15	992.50	12.63	993.02	12.89	992.76	14.14	991.51	13.12	992.53
P-2	11.87	992.55	14.11	990.31	11.97	992.45	11.42	993.00	11.68	992.74	12.93	991.49	11.49	992.93
PMW-1	-	- (f)	-	- (f)	-	- (f)	-	- (f)	-	- (f)	-	- (f)	-	- (f)

Table 1

Well Construction and Water Level Elevations
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Location	06/2008		12/2008		06/2009		12/2009		06/2010		12/2010		06/2011	
	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)
MW-1S (b)	4.92	1,018.71 (c)	4.09	1,019.54 (c)	4.28	1,019.35 (c)	4.22	1,019.41 (c)	4.23	1,019.40 (c)	4.15	1,019.48 (c)	4.50	1,019.13 (c)
MW-1SA	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)
MW-1B	70.90	953.71	70.94	953.67	70.18	954.43	70.32	954.29	71.48	953.13	70.61	954.00	70.20	954.41
MW-2S (d)	7.61	988.19	6.95	988.85	6.09	989.71	5.63	990.17	5.62	990.18	8.04	987.76	7.29	988.51
MW-2 (d)	23.56	972.24	24.54	971.26	22.00	973.80	21.82	973.98	22.47	973.33	22.41	973.39	22.01	973.79
MW-2B (d)	38.10	957.40	39.70	955.80	37.29	958.21	36.96	958.54	37.80	957.70	37.03	958.47	36.69	958.81
MW-3S (d)	5.67	991.93	10.11	987.49	4.40	993.20	5.88	991.72	4.99	992.61	7.02	990.58	4.32	993.28
MW-3 (d)	20.66	976.84	21.89	975.61	19.11	978.39	18.94	978.56	19.62	977.88	19.63	977.87	19.00	978.50
MW-7S	31.81	934.51	31.73	934.59	30.34	935.98	30.90	935.42	31.34	934.98	30.22	936.10	30.35	935.97
MW-7	32.63	934.18	32.48	934.33	31.35	935.46	31.82	934.99	32.24	934.57	31.52	935.29	31.52	935.29
MW-8S	14.81	1,012.04	14.83	1,012.02	13.34	1,013.51	13.71	1,013.14	13.73	1,013.12	14.39	1,012.46	13.54	1,013.31
MW-8	14.92	1,011.96	15.00	1,011.88	13.44	1,013.44	13.86	1,013.02	13.87	1,013.01	14.51	1,012.37	13.62	1,013.26
MW-11S	8.25	973.81	-	- (g)	7.13	974.93	6.89	975.17	7.38	974.68	7.43	974.63	7.43	974.63
MW-12S	13.91	957.01	13.97	956.95	11.40	959.52	12.34	958.58	12.57	958.35	12.41	958.51	12.34	958.58
MW-14	15.61	988.88	16.95	987.54	14.50	989.99	15.67	988.82	14.80	989.69	15.14	989.35	14.24	990.25
MW-14B	48.78	955.69	49.15	955.32	47.24	957.23	47.48	956.99	48.42	956.05	47.71	956.76	47.15	957.32
MW-16S (e)	8.03	994.67	12.78	989.92	7.36	995.34	8.49	994.21	7.51	995.19	9.08	993.62	6.77	995.93
MW-16 (e)	14.44	988.46	16.89	986.01	13.26	989.64	12.89	990.01	13.64	989.26	14.05	988.85	12.94	989.96
MW-18S	14.35	994.34	15.92	992.77	13.02	995.67	12.72	995.97	13.36	995.33	13.98	994.71	12.89	995.80
MW-18	14.73	993.80	18.10	990.43	13.39	995.14	13.09	995.44	13.78	994.75	14.37	994.16	12.43	996.10
MW-19	13.73	991.92	15.20	990.45	12.64	993.01	12.51	993.14	13.02	992.63	13.20	992.45	12.40	993.25
P-2	12.53	991.89	14.02	990.40	11.42	993.00	11.30	993.12	11.80	992.62	12.02	992.40	12.02	992.40
PMW-1	-	- (g)	-	- (g)	9.60	993.04	9.61	993.03	10.10	992.54	10.27	992.37	9.42	993.22

Table 1

Well Construction and Water Level Elevations
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Location	12/2011		6/2012		12/2012		06/2013		12/2013		06/2014		12/2014	
	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)
MW-1S (b)	4.49	1,019.14 (c)	4.56	1,019.07	3.98	1,019.65	4.52	1,019.11	-	- (c)	4.48	1,019.15 (c)	4.31	1,019.32 (c)
MW-1SA	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)		- (c)
MW-1B	69.45	955.16	70.54	954.07	71.23	953.38	71.88	952.73	70.80	953.81	71.95	952.66	72.63	951.98
MW-2S (d)	5.94	989.86	6.85	988.95	5.85	989.95	7.48	988.32	5.90	989.90	7.46	988.34	5.87	989.93
MW-2 (d)	21.26	974.54	22.43	973.37	21.85	973.95	22.78	973.02	21.65	974.15	22.64	973.16	22.86	972.94
MW-2B (d)	36.20	959.30	37.02	958.48	37.82	957.68	38.05	957.45	37.08	958.42	38.11	957.39	38.51	956.99
MW-3S (d)	4.69	992.91	4.80	992.80	4.32	993.28	5.10	992.50	4.62	992.98	5.14	992.46	3.22	994.38
MW-3 (d)	18.19	979.31	19.45	978.05	18.81	978.69	19.55	977.95	18.68	978.82	19.53	977.97	20.08	977.42
MW-7S	29.92	936.40	31.16	935.16	37.80	928.52	31.20	935.12	30.44	935.88	31.15	935.17	30.90	935.42
MW-7	31.11	935.70	32.06	934.75	31.70	935.11	32.10	934.71	31.34	935.47	31.95	934.86	31.72	935.09
MW-8S	13.32	1,013.53	14.04	1,012.81	13.43	1,013.42	14.01	1,012.84	13.21	1,013.64	14.18	1,012.67	14.16	1,012.69
MW-8	13.40	1,013.48	14.21	1,012.67	15.04	1,011.84	14.20	1,012.68	13.35	1,013.53	14.35	1,012.53	14.30	1,012.58
MW-11S	7.11	974.95	8.05	974.01	7.13	974.93	7.85	974.21	7.02	975.04	-	-	7.79	974.27
MW-12S	11.19	959.73	13.17	957.75	12.80	958.12	13.40	957.52	12.80	958.12	13.23	957.69	13.57	957.35
MW-14	13.85	990.64	14.66	989.83	14.35	990.14	14.85	989.64	11.09	993.40	14.42	990.07	14.84	989.65
MW-14B	36.81	967.66	47.60	956.87	48.42	956.05	14.72	989.75	47.71	956.76	48.87	955.60	49.55	954.92
MW-16S (e)	7.21	995.49	6.98	995.72	7.49	995.21	7.20	995.50	8.05	994.65	7.09	995.61	8.60	994.10
MW-16 (e)	12.02	990.88	13.08	989.82	12.81	990.09	13.28	989.62	12.66	990.24	13.28	989.62	14.02	988.88
MW-18S	11.57	997.12	12.64	996.05	12.48	996.21	12.84	995.85	12.30	996.39	12.83	995.86	13.82	994.87
MW-18	12.02	996.51	13.11	995.42	12.90	995.63	13.27	995.26	12.65	995.88	13.25	995.28	14.17	994.36
MW-19	11.81	993.84	12.81	992.84	12.24	993.41	12.94	992.71	12.06	993.59	12.99	992.66	13.23	992.42
P-2	10.60	993.82	11.81	992.61	11.05	993.37	11.20	993.22	10.95	993.47	11.77	992.65	12.02	992.40
PMW-1	8.84	993.80	11.80	990.84	9.21	993.43	9.95	992.69	6.22	996.42	10.06	992.58	10.24	992.40

Table 1

Well Construction and Water Level Elevations
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Location	06/2015		12/2015		6/2016		12/2016		06/2017		06/2018		06/2019	
	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)	Depth to Water (ft)	Elevation (ft-msl)
MW-1S (b)	4.22	1,019.41 (c)	4.26	1,019.37 (c)	6.74	1,018.42 (c)	4.23	1,020.93	4.55	1,020.61	5.11	1,020.05	4.56	1,020.60
MW-1SA		- (c)		- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)	-	- (c)
MW-1B	71.22	953.39	74.22	950.39	72.30	952.31	74.00	950.61	73.14	951.47	72.64	951.97	74.35	950.26
MW-2S (d)	5.44	990.36	10.40	985.40	9.30	986.50	9.06	986.74	7.20	988.60	6.34	989.46	5.78	990.02
MW-2 (d)	22.62	973.18	24.88	970.92	22.71	973.09	24.84	970.96	21.67	974.13	21.70	974.10	21.48	974.32
MW-2B (d)	37.68	957.82	39.54	955.96	37.72	957.78	37.88	957.62	36.75	958.75	36.70	958.80	38.04	957.46
MW-3S (d)	3.41	994.19	4.50	993.10	4.94	992.66	4.01	993.59	3.00	994.60	2.91	994.69	3.22	994.38
MW-3 (d)	19.35	978.15	21.75	975.75	19.39	978.11	21.90	975.60	18.54	978.96	18.68	978.82	19.12	978.38
MW-7S	30.67	935.65	31.61	934.71	31.08	935.24	31.40	934.92	30.34	935.98	30.90	935.42	30.60	935.72
MW-7	31.34	935.47	32.37	934.44	31.93	934.88	32.20	934.61	31.26	935.55	31.68	935.13	31.48	935.33
MW-8S	14.49	1,012.36	15.10	1,011.75	14.03	1,012.82	15.00	1,011.85	13.28	1,013.57	13.39	1,013.46	13.46	1,013.39
MW-8	13.75	1,013.13	15.24	1,011.64	14.18	1,012.70	15.20	1,011.68	13.46	1,013.42	13.54	1,013.34	13.59	1,013.29
MW-11S	7.13	974.93	8.88	973.18	7.80	974.26	8.70	973.36	7.06	975.00	7.25	974.81	7.10	974.96
MW-12S	12.11	958.81	13.71	957.21	13.15	957.77	13.70	957.22	11.27	959.65	12.00	958.92	11.80	959.12
MW-14	14.35	990.14	16.37	988.12	14.20	990.29	16.32	988.17	13.65	990.84	13.85	990.64	13.21	991.28
MW-14B	48.59	955.88	50.44	954.03	48.50	955.97	48.84	955.63	47.97	956.50	47.65	956.82	49.05	955.42
MW-16S (e)	7.52	995.18	13.07	989.63	7.64	995.06	12.10	990.60	6.80	995.90	6.42	996.28	5.97	996.73
MW-16 (e)	13.33	989.57	16.34	986.56	14.32	988.58	16.72	986.18	12.75	990.15	12.85	990.05	12.08	990.82
MW-18S	12.82	995.87	16.53	992.16	12.69	996.00	17.07	991.62	12.11	996.58	12.11	996.58	11.42	997.27
MW-18	13.30	995.23	16.91	991.62	13.16	995.37	17.39	991.14	12.55	995.98	12.56	995.97	11.91	996.62
MW-19	12.69	992.96	15.00	990.65	12.94	992.71	16.14	989.51	12.25	993.40	12.35	993.30	11.92	993.73
P-2	11.44	992.98	13.77	990.65	11.67	992.75	13.78	990.64	11.01	993.41	11.11	993.31	13.21	991.21
PMW-1	9.65	992.99	11.96	990.68	9.85	992.79	11.95	990.69	9.22	993.42	9.32	993.32	8.95	993.69

Table 1

Well Construction and Water Level Elevations
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Location	06/2020 Depth to Water (ft)	06/2020 Elevation (ft-msl)	06/2021 Depth to Water (ft)	06/2021 Elevation (ft-msl)	06/2023 Depth to Water (ft)	06/2023 Elevation (ft-msl)
MW-1S (b)	5.26	1,019.90	5.12	1,020.04	4.42	1,020.74
MW-1SA	-	- (c)	-	- (c)	-	- (c)
MW-1B	73.82	950.79	73.36	951.25	74.31	950.30
MW-2S (d)	6.67	989.13	6.06	989.56 (h)	11.81	983.81 (h)
MW-2 (d)	22.21	973.59	21.72	974.08	24.41	971.39
MW-2B (d)	36.98	958.52	37.07	958.43	37.21	958.29
MW-3S (d)	5.05	992.55	3.77	993.66 (h)	5.51	991.92 (h)
MW-3 (d)	18.96	978.54	18.61	978.89	21.24	976.26
MW-7S	31.02	935.30	30.50	935.82	30.93	935.39
MW-7	31.87	934.94	31.64	935.17	31.35	935.46
MW-8S	14.01	1,012.84	13.60	1,013.25	15.89	1,010.96
MW-8	14.15	1,012.73	13.80	1,013.08	16.06	1,010.82
MW-11S	7.85	974.21	7.16	974.90	8.50	973.56
MW-12S	12.82	958.10	11.71	959.21	13.26	957.66
MW-14	13.71	990.78	13.69	990.80	15.03	989.46
MW-14B	48.27	956.20	48.37	956.10	48.77	955.70
MW-16S (e)	6.68	996.02	6.98	995.72	9.61	993.09
MW-16 (e)	12.91	989.99	12.98	989.92	15.55	987.35
MW-18S	12.13	996.56	12.02	996.67	14.49	994.20
MW-18	12.58	995.95	12.54	995.99	15.02	993.51
MW-19	12.70	992.95	12.45	993.20	13.90	991.75
P-2	11.49	992.93	11.23	993.19	12.67	991.75
PMW-1	9.73	992.91	9.45	993.19	10.89	991.75

a/ ft-msl = feet mean sea level; "-" = no data.
b/ Well resurveyed in December 2016 due to frost heave. Historical survey data used to calculate elevations prior to December 2016.
c/ Well damaged.
d/ Casing retrofitted to adjust for post-excavation topography. Post-excavation elevation shown.
e/ Well abanonded and replaced due to excavation activities. Post-excavation elevation shown.
f/ Well not installed.
g/ Water level not measured.
h/ The polyvinyl chloride (PVC) well casing on MW-2S was cut down 0.18 feet, and MW-3S was cut down 0.17 feet in order to lock the protective casing. The groundwater elevations were corrected to account for the change to the top-of-casing elevation.

Table 2

Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards											
Monitored Zone:				**Shallow**								**Deep**
Well ID:				**MW-2S**	**MW-3S**	**MW-7S**	**MW-16S**	**MW-18S (b)**	**MW-0623 (b)**	**MW-19**	**PMW-1**	**MW-2**	**MW-3**
Sample Date:				**6/13/23**	**6/13/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/13/23**	**6/13/23**
	Federal MCL (c)	**GWQS (d)**	**State MCL (e)**										
Volatile Organic Compounds (µg/l)													
Acetone	-	50 *	50	20 U	20 U	10 UJ	100 UJ	10 UJ	10 UJ	10 UJ	10 UJ	20 U	20 UJ
Benzene	5	1	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromodichloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromoform	80 (f)	50 *	80 (f)	4 U	4 U	1 U	10 U	1 U	1 U	1 U	1 U	4 U	4 UJ
Bromomethane (Methyl bromide)	-	5	5	1 U	1 U	5 U	50 U	5 U	5 U	5 U	5 U	1 U	1 UJ
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	100 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Carbon disulfide	-	60	50	5 U	5 U	2 U	20 U	2 U	2 U	2 U	2 U	5 U	5 UJ
Carbon tetrachloride	5	5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chlorobenzene	100	5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chloroethane	-	5	5	0.75 J+	1 U	5 U	50 U	5 U	5 U	5 U	5 U	1.6 J+	1 UJ
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chloromethane	-	5	5	2 U	2 U	1 U	10 U	1 U	1 U	1 U	1 U	2 U	2 UJ
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloroethane	-	5	5	***16***	2	1 U	***44***	1 U	1 U	4.6	***5.1***	***6.3***	1 UJ
1,2-Dichloroethane	5	0.6	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloroethene	7	5	5	1 U	1 U	1 U	10 U	1 U	1 U	3.2	3.5	1 U	1 UJ
cis-1,2-Dichloroethene	70	5	5	***9.1***	2.1	1 U	***1,200***	1 U	1 U	0.75 J	0.33 J	***9.9***	1 UJ
trans-1,2-Dichloroethene	100	5	5	2 U	2 U	1 U	10 U	1 U	1 U	1 U	1 U	2 U	2 UJ
1,2-Dichloroethene, Total	-	-	-	9.1	2.1	2 U	1,200	2 U	2 U	0.75 J	2 U	9.9	1 UJ
1,2-Dichloropropane	5	1	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloropropene	-	5 *	5	5 U	5 U	1 U	10 U	1 U	1 U	1 U	1 U	5 U	5 UJ
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Ethylbenzene	700	5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
2-Hexanone	-	50 *	50	10 U	10 U	10 U	100 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Methylene chloride	5	5	5	1 U	1 U	5 U	50 U	5 U	5 U	5 U	5 U	1 U	1 UJ
4-Methyl-2-pentanone (MIBK)	-	-	-	10 U	10 U	10 U	100 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Styrene	100	5	5	5 U	5 U	1 UJ	10 UJ	1 UJ	1 UJ	1 UJ	1 UJ	5 U	5 UJ
1,1,2,2-Tetrachloroethane	-	5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Tetrachloroethene	5	5	5	1 U	1 U	0.5 U	5 U	0.5 U	0.5 U	***200***	***190***	1 U	1 UJ
Toluene	1,000	5	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1,1-Trichloroethane	200	5	5	1 U	1 U	1 U	10 U	1 U	1 U	***45***	***48***	1 U	1 UJ
1,1,2-Trichloroethane	5	1	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Trichloroethene	5	5	5	1 U	1 U	1 U	***1,100***	1 U	1 U	***14***	***26***	***33***	1 UJ
Vinyl acetate	-	-	-	10 U	10 U	2 U	20 U	2 U	2 U	2 U	2 U	10 U	10 UJ
Vinyl chloride	2	2	2	0.85 J	1 U	1 U	***330***	1 U	1 U	1 U	1 U	1.1	1 UJ
Xylenes, Total	10,000	5 (h)	5	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 UJ

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

Table 2

Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Shallow								Deep	
Monitored Zone:													
Well ID:				**MW-2S**	**MW-3S**	**MW-7S**	**MW-16S**	**MW-18S (b)**	**MW-0623 (b)**	**MW-19**	**PMW-1**	**MW-2**	**MW-3**
Sample Date:				**6/13/23**	**6/13/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/14/23**	**6/13/23**	**6/13/23**
	Federal MCL (c)	**GWQS (d)**	**State MCL (e)**										
Field Measurements													
Temperature (^{o}C)	-	-	-	16	18.76	9.99	12.61	10.98	-	10.02	10.47	12.85	12.59
Conductance (mS/cm)	-	-	-	0.551	0.839	0.919	1.028	0.854	-	0.653	0.655	1.155	1.259
Dissolved Oxygen (mg/l)	-	-	-	4.13	0.54	0.37	0.18	0.16	-	0	0.13	0.03	0.01
pH (s.u.)	-	-	-	6.86	6.88	6.26	7.11	6.9	-	7.54	7.54	5.41	7.73
ORP (mV)	-	-	-	110.2	206.4	-7.3	-117.8	8.3	-	-251.5	-252.5	201.6	76.8
Turbidity (NTU)	-	-	-	106	164	10.5	50.6	6.83	-	5.77	2.14	115	19
General Chemistry (mg/l)													
Chloride	-	-	-	4.5 J	97	240	91	92	91	110	120	190	280 F
Nitrate-N	-	-	-	0.41 J	0.38 J	0.034 J	0.05 U	0.05 U	0.05 UF	0.05 U	0.05 U	0.55 U	0.55 U
Sulfate	-	-	-	2.5 J	3.1 J	6.3	53	10	9.9	13	14	21	24 F
Sulfide	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dissolved Organic Carbon	-	-	-	3.1	4.3	1.6	5.5	2.3	2.3	0.83 J	0.67 J	3.2	0.85 J
Ferrous Iron	-	-	-	0.1 U	0.1	0.1 U	0.3	0.1 U	-	0.4	0.2	0.1 U	0.1 U
Total Iron	-	-	-	0.01	0.3	0.3	0.7	0.2	-	1.1	0.7	0.3	0.2
Alkalinity (as $CaCO_3$)	-	-	-	330	270	72	380	300	300	140	130	300	240 F

a/ ID = identification; GWQS = groundwater quality standard; MCL = maximum contaminant level; µg/l = micrograms per liter; "*" = guidance value; "-" = indicates criterion; not developed or analysis not performed; ^{o}C = degrees Celsius; mS/cm = milliSiemens per centimeter; mg/l = milligrams per liter; s.u. = standard units; mV = millivolts; NTU = nephelometric turbidity unit.

b/ Sample and duplicate.

c/ National Primary Drinking Water Regulations, MCLs for organic contaminants (40 CFR 141.61). Accessed on December 4, 2019.

d/ New York State Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Division of Water Technical and Operational Guidance Series (1.1.1), Table 1. June 1998. January 1999 Errata Sheet. April 2000 Addendum. June 2004 Addendum.

e/ New York State Public Water Systems; MCLs; Monitoring Requirements; Notifications Required, Table 3 - Organic Chemicals MCL Determination, Table 9 D - Organic Chemicals-POCs Minimum Monitoring Requirements, Table 17 - Information Collection Rule Contaminant Reporting Requirements (10 CRR-NY 5-1). Accessed on December 4, 2019.

f/ Criteria for total trihalomethanes.

g/ Criteria for total 1,3-dichloropropene.

h/ Criteria for individual xylene isomers.

i/ Data Qualifiers:
U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.
J = Analyte present. Reported value may not be accurate or precise.
J+ = The result is an estimated quantity, but the result may be biased high.
F = Matrix spike recovery exceeds control limits.

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																		
Well ID:				MW-2S																		
Sample Date:				10/04/94	12/01/95	11/24/97	12/19/97	12/19/01	06/27/02	05/06/03	04/28/04	07/15/04	10/12/04 (b)	10/13/04 (b)	01/13/05	12/12/06	06/27/07	12/11/07	06/10/08	12/02/08	06/23/09	12/15/09	06/15/10
	Performance Standards																					
	Federal		State																			
	MCL (c)	GWQS (d)	MCL (e)																			
Volatile Organic Compounds (µg/l)																						
Acetone	-	50 *	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	50 *	50	ND	5 U (j)	5 U	-	10 U	10 UJ	13 J	20 U	20 U	10 U	10 U	10 U	10 U	10 U	0.89 UJ	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80 (f)	7	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	5	5	***380 D***	***340 D***	***260 D***	***190 D***	***280***	***350 J***	***340***	***160***	***120***	***54***	***76***	***80***	***60***	***39***	***17***	***9.7***	***13***	***13 J***	***7.2***	3.4
1,2-Dichloroethane	5	0.6	5	-	1	-	-	0.6 UJ	1.2	2.4 U	1.2 U	1.2 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	0.6 U	0.6 U	1 U
1,1-Dichloroethene	7	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	5	5	***48***	***58***	***31***	***40 D***	***31***	***68***	***79***	***38***	***28***	***17***	***18***	***22***	***22***	***17***	***7.2***	4.8	***6.3***	4.5	3.4	1.9
trans-1,2-Dichloroethene	100	5	5	3	4	2	1	-	-	4.8	2.8	1 J	1.2	0.85 J	1.4	1 U	1.2	0.51 J	0.36 J	0.42 J	1 U	0.22 J	1 U
1,2-Dichloroethene, Total	-	-	-	-	-	-	-	-	-	84	41	29	18	19	23	22	18	7.7	5.1	6.7	4.5	3.6	1.9 J
1,2-Dichloropropane	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	5 *	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	0.4 (g)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	0.4 (g)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	-	50 *	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	5	5	4	3 U	-	-	2.5 J	5 U	6.6 U	2.8 J	1.6 J	5 U	5 U	0.76 J	1 U	1 U	1 U	1 U	5 U	1 U	1 U	5 U
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	100	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	5	-	1	2	1	0.5 J	0.49 J	4 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5	-	1 U	-	0.6 J	1 U	1 U	1.2	2 U	2 U	1 U	1.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	-	-	-	-	-	-
1,1,2-Trichloroethane	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	5	1	2	1	1	3.3	***8.7***	5.1 U	1.5 J	2 U	0.68 J	2.3	0.71 J	1 U	0.68 J	1 U	1 U	1 U	1 U	0.15 J	0.22 J
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	2	2	***73***	***87***	***49***	***25***	***69***	***100***	***120***	***34***	***29***	***7.8***	***7.7***	***12***	***10***	***4.9***	***2.2***	2 U	1.1	1.2 J	2 U	0.21 J
Xylenes, Total	10,000	5 (h)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Measurements																							
Temperature (°C)	-	-	-	-	-	-	-	9.43	18.63	10.47	9.23	15.89	12.41	16.4	8.08	7.85	17.39	3.73	25.65	5.96	19.8	8.29	21.89
Conductance (mS/cm)	-	-	-	-	-	-	-	1.01	1.182	1.361	1.046	0.955	0.978	0.953	1.032	0.887	0.667	0.568	0.552	0.728	0.482	0.609	0.622
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	0	0.4	0.91	0.71	3.26	3.05	1.55	1.11	-	1.51	0.36	0.34	3.47	1.14	0.07	0.14
pH (s.u.)	-	-	-	-	-	-	-	7.58	5.97	6.33	6.35	6.47	6.38	6.36	7.01	6.62	6.26	6.65	6.72	6.85	6.7	6.92	6.72
ORP (mV)	-	-	-	-	-	-	-	-30	159	-50	165	82	-125	234	162	55.2	26.1	-53.5	16.9	136.8	-46	44	-52
Turbidity (NTU)	-	-	-	-	-	-	-	0.8	7.7	7.9	3.81	20	103.9	33	14	10.46	28	6.12	17.9	3.9	2.75	3.38	0.7
General Chemistry (mg/l)																							
Chloride	-	-	-	-	-	-	-	56	48	55	30	24	-	11	11	-	-	-	-	-	-	-	-
Nitrate-N (mg/l)	-	-	-	-	-	-	-	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	-	0.05 U	0.037 J	-	-	-	-	-	-	-	-
Sulfate	-	-	-	-	-	-	-	30	26 J	19 J	30	31	-	26	19	-	-	-	-	-	-	-	-
Sulfide	-	-	-	-	-	-	-	0.4 U	1 U	1 U	1 U	1 U	-	1 U	1 U	-	-	-	-	-	-	-	-
TOC / DOC (i)	-	-	-	-	-	-	-	18	15	20	25	13	-	6.8	7.7	-	-	-	-	-	-	-	-
Ferrous Iron	-	-	-	-	-	-	-	1.65	0.34	0.31	0.2	0	-	0.28	0.04	-	-	-	-	-	-	-	-
Total Iron	-	-	-	-	-	-	-	1.69	0.54	0.65	0.07	0.14	-	0.03	0.14	-	-	-	-	-	-	-	-
Alkalinity (as CaCO3)	-	-	-	-	-	-	-	517	623	840	554	579	-	561	565	-	-	-	-	-	-	-	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Shallow																	
Monitored Zone:																					
Well ID:				MW-2S (continued)																	
Sample Date:	**Federal MCL (c)**	**GWQS (d)**	**State MCL (e)**	**12/21/10**	**06/20/11**	**12/20/11**	**06/18/12**	**12/11/12**	**06/25/13**	**12/12/13**	**06/11/14**	**12/04/14**	**06/17/15**	**12/08/15**	**06/01/16**	**12/06/16**	**06/06/17**	**06/06/18**	**06/03/19**	**06/09/20**	**6/8/21**	**6/13/23**
Volatile Organic Compounds (µg/l)																					
Acetone	-	50 *	50	-	-	25 U	25 UJ	25 U	25 UJ	25 U	25 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	20 U
Benzene	5	1	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.12 J	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U
Bromomethane (Methyl bromide)	-	5	5	-	-	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	1 U	5 UJ	5 U	5 U	5 UR	5 U	1 U
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	5 U
Carbon tetrachloride	5	5	5	-	-	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	-	5	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	-	5	5	-	-	1.6 J	1 UJ	1.8	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.5 J	5 U	5 U	5 U	5 U	5 U	0.75 J+
Chloroform	80 (f)	7	80 (f)	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	-	5	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Dibromochloromethane	80 (f)	50 *	80 (f)	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5	***12***	***8.2***	***12***	***5.8***	***17 J***	***7***	***8.1***	4.3	4.9	3.5	***9.3***	***9.2***	***8.7***	***8.3***	4	1.9	1.4	2.2	***16***
1,2-Dichloroethane	5	0.6	5	1 U	1 U	0.6 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	5	5	-	-	1 U	1 U	1 U	1 U	1 U	0.12 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	5	5	***5.8***	4.2	***7.5***	2.9	***8.4***	4.2	4.3	2.6	2.7	1.9	4.8	4.7	5	4.9	2.3	1.9	0.78 J	1.5	***9.1***
trans-1,2-Dichloroethene	100	5	5	0.34 J	0.33 J	0.49 J	1 U	0.5 J	1 U	0.27 J	1 U	1 U	1 U	1 U	1 U	0.26 J	1 U	1 U	1 U	1 U	1 U	2 U
1,2-Dichloroethene, Total	-	-	-	6.2	4.6	7.9	2.9	8.9	4.2	4.6	2.6	2.7	1.9 J	5	4.7	5.3	5.1	2.3	1.9 J	0.78 J	1.5 J	9.1
1,2-Dichloropropane	5	1	5	-	-	0.16	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U
cis-1,3-Dichloropropene	-	0.4 (g)	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	5	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50	-	-	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	5	5	5 U	5 U	1 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	100	5	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U
1,1,2,2-Tetrachloroethane	-	5	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	-	-	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	1	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	0.21 J	0.2 J	0.25 J	0.15 J	0.26 J	1 U	1 U	0.19 J	1 U	1 U	0.55 J	1 U	0.44 J	0.68 J	1 U	1 U	1 U	1 U	1 U
Vinyl acetate	-	-	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U	2 U	2 U	2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	10 U
Vinyl chloride	2	2	2	1.2	0.89 J	1.7 J	0.44 J	***2.3 J***	0.65 J	0.89 J	0.62 J	1 U	1 U	0.64 J	1 U	1	1.3	1 U	1 U	1 U	1 U	0.85 J
Xylenes, Total	10,000	5 (h)	5	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Field Measurements																						
Temperature (°C)	-	-	-	1.32	27.74	8.54	16.03	9.77	16.77	11	17.25	5.08	24.91	9.01	30.8	4.48	14.17	15.55	14.66	26.59	19.93	16
Conductance (mS/cm)	-	-	-	0.646	0.486	0.497	0.446	0.647	0.551	0.457	0.502	0.36	0.566	0.441	0.648	0.56	0.235	0.629	0.422	0.533	0.546	0.551
Dissolved Oxygen (mg/l)	-	-	-	0.79	0	2.91	0.59	0.22	0.4	2.22	3.07	1.83	0.49	2.99	2.01	0.87	0.53	0.3	0.2	0.29	0.25	4.13
pH (s.u.)	-	-	-	5.47	6.65	6.46	6.84	6.57	6.89	6.78	6.8	6.86	6.79	6.78	6.61	6.4	6.87	6.78	6.96	6.47	6.59	6.86
ORP (mV)	-	-	-	160	105	47	30	42.1	129.6	120	50	118	-304	221	117	212	225.7	89.5	-72.6	115	103.1	110.2
Turbidity (NTU)	-	-	-	5.2	9.8	6.8	9.7	4.35	7.79	54.4	11.28	8.12	25.8	48.4	24.1	17.3	29.2	15.2	70.2	24.2	4.49	106
General Chemistry (mg/l)																						
Chloride	-	-	-	-	-	-	5 U	-	-	1.2	-	-	2.5	-	-	5.3	-	2.5	-	3.3	-	4.5 J
Nitrate-N (mg/l)	-	-	-	-	-	-	0.02 U	-	-	0.02 U	-	-	0.043 J	-	-	0.02 U	-	0.05 U	-	0.05 U	-	0.41 J
Sulfate	-	-	-	-	-	-	5 U	-	-	0.76	-	-	0.72 J	-	-	2.2	-	2.4	-	0.7 J	-	2.5 J
Sulfide	-	-	-	-	-	-	10 U	-	-	10 U	-	-	10 U	-	-	10 U	-	10 U	-	10 U	-	2 U
TOC / DOC (i)	-	-	-	-	-	-	3.8	-	-	3.5	-	-	6.4 B	-	-	2.7	-	2.1	-	3	-	3.1
Ferrous Iron	-	-	-	-	-	-	0.2	-	-	0.2 U	-	-	0.2 U	-	-	0.2 U	-	0.2 U	-	0.2 U	-	0.1 U
Total Iron	-	-	-	-	-	-	2.1	-	-	0.2 U	-	-	0.2	-	-	0.2 U	-	0.2 U	-	0.3	-	0.01
Alkalinity (as CaCO3)	-	-	-	-	-	-	280	-	-	350	-	-	300	-	-	330	-	290	-	300	-	330

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Monitored Zone:	Shallow																	
				Well ID:	MW-3S																	
	Federal MCL (c)	GWQS (d)	State MCL (e)	Sample Date:	10/06/94	12/14/95	12/18/01	06/27/02	05/06/03	04/28/04	07/15/04	10/12/04 (b)	10/14/04 (b)	01/13/05	12/12/06	06/26/07	12/12/07	06/10/08	12/02/08	06/24/09	12/16/09	06/16/10	12/21/10	06/21/11
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	5	1	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	50 *	50		ND	***5,300***	***650***	***520***	880 U	500 U	500 U	500 U	1,000 U	500 U	10 U	10 U	0.9 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80 (f)	7	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	5	5		1,000 U	***4,700***	***880***	***1,800***	***1,400***	***660***	***790***	***950***	***1,100***	***580***	***200***	***410***	***160***	***190***	***240***	***310 J***	***150***	***200***	***160***	***200***
1,2-Dichloroethane	5	0.6	5		ND	250 U	***57***	***68***	***47***	30 U	***19 J***	***37***	***39 J***	***14 J***	0.6 U	***5.9***	2	2.1	4.3	2.1	2.1	3.7	2.5	1.8
1,1-Dichloroethene	7	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	5	5		***8,400***	***12,000***	***1,500***	***5,600***	***1,700***	***5,200***	***5,500***	***6,800***	***9,000***	***3,000***	***600***	***1,100***	***440***	***670***	***350***	***480***	***300***	***270***	***130***	***310***
trans-1,2-Dichloroethene	100	5	5		1,000 U	250 U	-	-	***51***	***37 J***	50 U	***62***	***14 J***	***19 J***	3.6	***11***	1.9	4.5	3	3.3	2.1	2.7	2	3.2
1,2-Dichloroethene, Total	-	-	-		-	-	-	-	1,800	5,300	5,500	6,800	9,000	3,100	600	1,300	470	580	420	390	300	270	130	330
1,2-Dichloropropane	5	1	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	5 *	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	-	50 *	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	5	5		***1,600 J***	250 U	***340***	***710***	***530***	***35 J***	250 U	***59 J***	500 U	50 U	2.3	***11***	2.6	2.4	***5.6***	4.3	2.3	3.8 J	4 J	6.7 U
4-Methyl-2-pentanone (MIBK)	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	100	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	5		ND	250 U	50 UJ	***29 J***	50 U	50 U	50 U	50 U	100 U	50 U	1.5	2.9	1.3	1.4	1.7	0.78 J	1.4	1.5	1.1	1.8
Toluene	1,000	5	5		ND	***7,500***	***5,200***	***4,700***	***4,800***	***27 J***	***190***	50 U	***26 J***	***9.2 J***	1 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U	1 U	0.62 J
1,1,1-Trichloroethane	200	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	1	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	5		1,000 U	250 U	50 U	***30 J***	50 U	50 U	50 U	***34 J***	***38 J***	***13 J***	2.5	***6.2***	2.1	2.2	2.9	2.5	2.2	1.9	1.1	2.2
Vinyl acetate	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	2	2		1,000 U	***21,000***	***1,800***	***6,600***	***2,000***	***1,200***	***1,700***	***2,000***	***2,600***	***120***	***54***	***170***	***61***	***110***	***44***	***51***	***32***	***68***	***6.9***	***150***
Xylenes, Total	10,000	5 (h)	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Measurements																								
Temperature (^{0}C)	-	-	-		-	-	8.65	17.77	9.21	9.6	16.55	14.66	-	4.6	6.84	25.11	3.74	21	7.34	22.6	8.47	17.79	3.73	15.23
Conductance (mS/cm)	-	-	-		-	-	4.73	4.23	4.27	1.484	1.99	2.01	-	1.452	1.153	1.421	1.155	1.071	0.588	1.142	1.13	1.27	1.25	1.15
Dissolved Oxygen (mg/l)	-	-	-		-	-	0	0.39	0.37	5.78	0.82	0.71	-	1.76	2.89	0.63	2.62	0.83	7.36	1.21	1.64	0.25	0.9	0
pH (s.u.)	-	-	-		-	-	7.93	6.44	6.44	7.47	6.72	6.74	-	6.59	6.83	6.85	7.1	7.06	7.01	6.99	7.24	7.09	6.44	6.59
ORP (mV)	-	-	-		-	-	-104	-68	123	128	15	59	-	164	25.1	60.2	291	28.9	-162	42.5	66	129	205	127
Turbidity (NTU)	-	-	-		-	-	9.9	7.5	195	9.5	32	139	-	26	7	9	44.8	10.11	0	17	4.65	16	9.7	2
General Chemistry (mg/l)																								
Chloride	-	-	-		-	-	480	450	440	160	200	-	210	130	-	-	-	-	-	-	-	-	-	-
Nitrate-N (mg/l)	-	-	-		-	-	0.01 U	0.019 J	0.05 U	0.14	0.14	-	0.05 U	0.22	-	-	-	-	-	-	-	-	-	-
Sulfate	-	-	-		-	-	1.7 U	5 UJ	5 U	110	100	-	66	120	-	-	-	-	-	-	-	-	-	-
Sulfide	-	-	-		-	-	0.4 U	1 U	1 U	1 U	1 U	-	1 U	1 U	-	-	-	-	-	-	-	-	-	-
TOC / DOC (i)	-	-	-		-	-	940	760	720	23	34	-	48	49	-	-	-	-	-	-	-	-	-	-
Ferrous Iron	-	-	-		-	-	58	7	1.67	0.08	0.04	-	0.13	0.06	-	-	-	-	-	-	-	-	-	-
Total Iron	-	-	-		-	-	76	41.75	2.51	0.01	1.13	-	0.32	0.12	-	-	-	-	-	-	-	-	-	-
Alkalinity (as CaCO3)	-	-	-		-	-	144	1,491	1,360	532	624	-	711	528	-	-	-	-	-	-	-	-	-	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																				
Well ID:				MW-3S (continued)																		MW-7S		
Sample Date:	Performance Standards			12/20/11	06/18/12	12/11/12	06/26/13	12/12/13	06/11/14	12/04/14	06/17/15	12/08/15	06/02/16	12/06/16	06/06/17	06/06/18	06/03/19	07/15/20	06/08/21	06/13/23	12/20/01	06/29/02	05/06/03
	Federal MCL (c)	GWQS (d)	State MCL (e)																				
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	25 U	25 UJ	25 U	25 UJ	25 U	25 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	20 U	-	-	-
Benzene	5	1	5	0.26 J	0.82 J	1 U	0.77 J	0.41 J	0.27 J	1 U	3.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Bromodichloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Bromoform	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U	-	-	-
Bromomethane (Methyl bromide)	-	5	5	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	1 U	5 UJ	5 U	5 U	5 UR	5 U	1 U	-	-	-
2-Butanone (MEK)	-	50 *	50	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	5 U	-	-	-
Carbon tetrachloride	5	5	5	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Chlorobenzene	-	5	5	1.8	2.3	0.78 J	1.2	1	0.82 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Chloroethane	-	5	5	***59 J***	***16***	***18***	***10***	***7.9***	***5.5***	5 U	5 U	5 U	5 U	2.7 J	5 U	5 U	5 U	5 UR	5 U	1 U	-	-	-
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Chloromethane	-	5	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	2 U	-	-	-
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
1,1-Dichloroethane	-	5	5	***110***	***130***	***100 J***	***80***	***52***	***47***	***11***	***17***	***7.2***	***25***	***5.5***	***8.2***	***10***	2.4	4.2	2.5	2	1 U	1 UJ	1 U
1,2-Dichloroethane	5	0.6	5	1.8	1.1	1.1	0.73 J	1.1	0.93 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.6 UJ	0.6 UJ	0.6 U
1,1-Dichloroethene	7	5	5	0.69 J	0.54 J	0.85 J	0.38 J	0.88 J	0.9 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
cis-1,2-Dichloroethene	70	5	5	***160***	***160***	***130***	***100***	***94***	***99***	***24***	***22***	***15***	***33***	***11***	***11***	***11***	***7.5***	***5.6***	4.8	2.1	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	5	5	1.7	1.9	1.6 J	1.6	0.75 J	0.69 J	0.26 J	1 U	1 U	0.48 J	1 U	1 U	1 U	1 U	1 U	1 U	2 U	-	-	1 U
1,2-Dichloroethene, Total	-	-	-	160	170	130	100	95	99	25	22	15	33	11	11	11	7.5	5.6	4.8	2.1	-	-	2 U
1,2-Dichloropropane	5	1	5	0.74 J	0.54 J	0.38 J	0.26 J	1 U	0.23 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
1,1-Dichloropropene	-	5 *	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	-	-	-
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Ethylbenzene	700	5	5	1 U	0.45 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
2-Hexanone	-	50 *	50	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-
Methylene chloride	5	5	5	2.4 J	2 J	1.7 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	-	-	-	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-
Styrene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	-	-	-
1,1,2,2-Tetrachloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	-	-	-
Tetrachloroethene	5	5	5	1.2	1.2	0.77 J	0.85 J	0.81 J	0.37 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	0.75 J	1 UJ	0.92 J	1 UJ	1 U	0.96 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
1,1,2-Trichloroethane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Trichloroethene	5	5	5	1.5	1.6	1.6	1.3	1.3	0.89 J	0.8 J	1 U	1 U	0.51 J	0.3 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl acetate	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U	2 U	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	-	-	-
Vinyl chloride	2	2	2	***21***	***42***	***28 J***	***55***	***29***	***34***	***2.2***	***3.8***	1.4	***10***	0.67 J	***2.5***	***2.3***	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	10,000	5 (h)	5	2 U	1.7 J	2 U	0.76 J	2 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-
Field Measurements																							
Temperature (°C)	-	-	-	7.72	16.12	5.2	16.75	5.86	17.71	1.92	22.73	6.97	22.21	9.26	13.7	15	20.46	23.26 (n)	24.44 (j)	18.76	8.22	13.01	8.56
Conductance (mS/cm)	-	-	-	1.06	0.874	1.033	0.949	0.63442	0.864	0.518	0.903	0.565	0.896	0.860	0.579	1.114	0.947	1.11 (n)	0.000056 (j)	0.84	1.14	1.16	1.166
Dissolved Oxygen (mg/l)	-	-	-	2.64	1.14	1.11	0.42	0.87	2.89	3.18	0.38	6.88 (m)	1.13	5.22	0.85	2.25	6.55	1.22 (n)	8.23 (j)	0.54	-	0.24	1.09
pH (s.u.)	-	-	-	7.01	6.99	7.09	6.92	7.14	6.97	7.1	6.9	7.3	6.68	6.76	6.63	6.87	7.04	6.94 (n)	7.48 (j)	6.88	6.14	6.02	6.39
ORP (mV)	-	-	-	141	50	87.5	126.9	40	21	98	-257	131	91.8	205.3	217	229.6	187.3	288.7 (n)	156.3 (j)	206.4	-115	82	-199
Turbidity (NTU)	-	-	-	4.7	9.5	5.21	4.88	252.2	21.4	34.6	20.7	17.6	61.5	16.5	62	25.8	204	46.7 (n)	77.8	164	4.5	17	4.43
General Chemistry (mg/l)																							
Chloride	-	-	-	-	43	-	-	41	-	-	40	-	-	76	-	89	-	62 (n)	-	97	-	300 J	310
Nitrate-N (mg/l)	-	-	-	-	0.02 U	-	-	0.02 U	-	-	0.037 J	-	-	0.02 U	-	0.091	-	0.092 (n)	-	0.38 J	-	-	0.05 U
Sulfate	-	-	-	-	9.5	-	-	9.4	-	-	11	-	-	5.7	-	6.7	-	4.8 (n)	-	3.1 J	-	20	16 J
Sulfide	-	-	-	-	10 U	-	-	10 U	-	-	10 U	-	-	15	-	10 U	-	10 U (n)	-	2 U	-	-	1 U
TOC / DOC (i)	-	-	-	-	7.9	-	-	6.3	-	-	8.6 B	-	-	2.4	-	2.7	-	2.9 (n)	-	4.3	-	2.2	1.2
Ferrous Iron	-	-	-	-	0.2 U	-	-	0.2 U	-	-	0.2 U	-	-	0.2 U	-	0.2 U	-	0.1 (n)	-	0.1	-	-	2.83
Total Iron	-	-	-	-	0.9	-	-	0.2 U	-	-	0.2 U	-	-	0.2 U	-	0.2 U	-	0.4 (n)	-	0.3	-	-	2.53
Alkalinity (as CaCO3)	-	-	-	-	520	-	-	460	-	-	440	-	-	340	-	440	-	410 (n)	-	270	-	-	52

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																		
Well ID:				MW-7S (continued)																		
Sample Date:	Performance Standards Federal MCL (c)	GWQS (d)	State MCL (e)	04/29/04	07/14/04	10/14/04	01/11/05	12/12/06	06/26/07	12/12/07	06/11/08	12/02/08	06/23/09	12/15/09	06/15/10	12/21/10	06/21/11	12/21/11	06/18/12	12/11/12	06/25/13	12/10/13	06/10/14
Volatile Organic Compounds (µg/l)																						
Acetone	-	50 *	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25 U	25 UJ	25 U	25 UJ	25 U	25 U
Benzene	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U
Bromomethane (Methyl bromide)	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ	5 U
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 UJ	1 U	1 U	1 U	1 U
Chlorobenzene	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 U	1 U	5 U	5 U	5 U
Chloroform	80 (f)	7	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	0.6	5	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	0.6 U	0.6 U	1 U	1 U	1 U	0.6 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	1 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	0.4 (g)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 UJ	1 U	1 U
Ethylbenzene	700	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	5	5	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 U	10 UJ	10 U	10 U	10 U
Styrene	100	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	-	-	-	-	-	1 U	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1,2-Trichloroethane	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	0.74 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U	2 U
Vinyl chloride	2	2	2	1 U	1 U	1 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	10,000	5 (h)	5	-	-	-	-	-		-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Field Measurements																							
Temperature (^{o}C)	-	-	-	10.88	9.62	9.75	8.29	9.82	13.31	8.15	11.96	10.09	10.77	8.95	10.19	7.45	13.59	7.85	12.09	9.42	11.89	8.63	11.86
Conductance (mS/cm)	-	-	-	1.26	1.262	1.207	1.169	0.915	0.667	0.832	0.615	0.48	0.622	0.764	0.805	0.688	0.241	0.481	0.4	0.407	0.497	0.454	0.407
Dissolved Oxygen (mg/l)	-	-	-	0.93	0.13	0.69	5.62	2.1	0.55	3.05	2.03	0.2	0.5	0.78	9.09	0.19	1.5	0	0.18	2.25	0.97	0.05	0.22
pH (s.u.)	-	-	-	6.08	6.4	6.66	6.29	6.37	6.18	6.25	6.46	6.32	6.19	6.27	6.31	5.74	6.86	6.41	6.49	6.23	6.29	5.51	6.32
ORP (mV)	-	-	-	83	-45	152	25	-12.6	41.3	226.3	4.8	-155.6	10.3	-53	-3	63	81	82	30	60.4	54.4	100	60
Turbidity (NTU)	-	-	-	8.88	3.79	4.19	7.4	5.2	11	35.1	25.9	1.5	3.77	3.9	0.8	3.7	219	1.6	2.2	1.56	9.72	1.6	2.48
General Chemistry (mg/l)																							
Chloride	-	-	-	330	330	330 J	330	-	-	-	-	-	-	-	-	-	-	-	100	-	-	150	-
Nitrate-N (mg/l)	-	-	-	0.05 U	0.05 U	0.05 U	0.05 U	-	-	-	-	-	-	-	-	-	-	-	0.02 U	-	-	0.02 U	-
Sulfate	-	-	-	19	19	19	21	-	-	-	-	-	-	-	-	-	-	-	17	-	-	19	-
Sulfide	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	10 U	-	-	10 U	-
TOC / DOC (i)	-	-	-	0.76 J	1.9	2.8	1.9	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	1.9	-
Ferrous Iron	-	-	-	1.84	1.47	2.09	1.74	-	-	-	-	-	-	-	-	-	-	-	0.2 U	-	-	0.6	-
Total Iron	-	-	-	1.79	1.7	1.99	1.98	-	-	-	-	-	-	-	-	-	-	-	0.2 U	-	-	1	-
Alkalinity (as CaCO3)	-	-	-	62	56	59	57	-	-	-	-	-	-	-	-	-	-	-	77	-	-	73	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																			
Well ID:				MW-7S (continued)										MW-16S									
Sample Date:				12/03/14	06/16/15	12/08/15	06/01/16	12/06/16	06/05/17	06/05/18	06/09/20	06/14/23	12/27/01	06/25/02	05/01/03	04/28/04	07/13/04	10/12/04 (b)	10/14/04 (b)	01/13/05	12/13/06	06/26/07	12/11/07
	Performance Standards																						
	Federal MCL (c)	GWQS (d)	State MCL (e)																				
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 UJ	-	-	-	-	-	-	-	-	-	-	-
Benzene	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80 (f)	50 *	80 (f)	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	-	5	5	5 U	5 U	5 U	5 U	1 U	5 UJ	5 UJ	5 UR	5 U	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	50 U	3.9 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.76 UJ
Carbon disulfide	-	60	50	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	-	5	5	5 U	5 U	5 U	5 U	1 UJ	5 U	5 UR	5 U	5 U	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	***17 D***	***34***	***110***	0.63 J	2.1	2.8	2.3	2.2	4.5	***7.9***	***5.6***
1,2-Dichloroethane	5	0.6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.6 UJ	3 UJ	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,1-Dichloroethene	7	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	***420 D***	***1,400***	***1,900***	***24***	***100***	***120***	***56***	***97***	***290***	***480***	***360***
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	***11***	0.43 J	0.62 J	0.94 J	4.5	0.44 J	0.95 J	2.7	0.67 J
1,2-Dichloroethene, Total	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	1,900	24	100	120	61 J	98	290	600	410
1,2-Dichloropropane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	5 *	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	-	-	-	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-	-	-
Styrene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	5	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	0.75 J	-
1,1,2-Trichloroethane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	***120 D***	***540***	***1,000***	***8***	***72***	***100***	***52***	***110***	***360***	***480***	***460***
Vinyl acetate	-	-	-	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	***83 D***	***460***	***770***	***3***	***3.8***	***4.3***	***2.7***	2 U	***52***	***190***	***83***
Xylenes, Total	10,000	5 (h)	5	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-
Field Measurements																							
Temperature (°C)	-	-	-	9.57	10.99	9.28	11.51	9.31	10.7	9.8	10.7	9.99	9.02	18.9	28.04	5.03	18.94	12.42	-	8.82	9.04	20.52	6.78
Conductance (mS/cm)	-	-	-	0.449	0.379	0.467	0.473	0.71	0.507	0.508	0.485	0.919	0.67	0.95	1.224	0.863	0.985	0.967	-	0.956	1.037	0.859	1.018
Dissolved Oxygen (mg/l)	-	-	-	0.76	0.24	0.07	0.22	0.15	0.31	0.36	0.46	0.37	6.34	0.34	0.93	2.91	0.7	0.82	-	7.21	1.28	0.23	1.64
pH (s.u.)	-	-	-	6.04	6.29	6.37	6.46	6.49	6.38	6.29	6.02	6.26	7.36	5.1	7.08	7.47	7.21	7.23	-	7.12	8.82	7.03	7.23
ORP (mV)	-	-	-	-211	-314	37	46.9	67.3	30.1	57.4	148.9	-7.3	236	83	-94	118	79	180	-	151	-3.6	42	188.5
Turbidity (NTU)	-	-	-	0.62	2.96	5.18	3.64	1.94	1.89	0.93	3.06	10.5	971	220	34.8	16	9.69	22	-	6.5	0.5	30	18
General Chemistry (mg/l)																							
Chloride	-	-	-	-	99	-	-	160	-	97	78	240	120	120	130	87	96	-	88	100	-	-	-
Nitrate-N (mg/l)	-	-	-	-	0.024 J	-	-	0.02 U	-	0.05 U	0.026 J	0.034 J	0.01 U	0.05 U	0.05 U	0.05 U	0.047 J	-	0.05 U	0.15	-	-	-
Sulfate	-	-	-	-	15	-	-	13	-	12	9.2	6.3	53	49	47 J	78	73	-	61	100	-	-	-
Sulfide	-	-	-	-	10 U	-	-	10 U	-	10 U	10 U	2 U	0.4 U	1 U	1 U	1 U	1 U	-	1 U	1 U	-	-	-
TOC / DOC (i)	-	-	-	-	4 B	-	-	1.2	-	1.3	1.6	1.6	13	9	8.9	2.9	6.2	-	24	2.5	-	-	-
Ferrous Iron	-	-	-	-	0.4	-	-	1.1	-	0.5	0.9	0.1 U	0	0.16	0.01	0	0.03	-	0.18	0	-	-	-
Total Iron	-	-	-	-	0.7	-	-	1.5	-	0.8	1.2	0.3	0	0.19	0.06	0.01	0.03	-	0.85	0	-	-	-
Alkalinity (as CaCO3)	-	-	-	-	90	-	-	92	-	90	93	72	-	224	404	238	253	-	277	497	-	-	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Monitored Zone:	Shallow																	
				Well ID:	MW-16S (continued)																	
	Federal MCL (c)	GWQS (d)	State MCL (e)	Sample Date:	06/10/08	12/05/08	06/23/09	12/15/09	06/15/10	12/21/10	06/21/11	12/21/11	06/19/12	12/12/12	06/26/13	12/11/13	06/10/14	12/04/14	06/16/15	12/08/15	06/02/16	12/06/16	06/06/17	06/07/18
Volatile Organic Compounds (µg/l)																						
Acetone	-	50 *	50		-	-	-	-	-	-	-	250 U	25 UJ	25 U	25 UJ	250 U	250 U	100 U	100 U	100 U	100 U	10 U	100 U	100 U
Benzene	5	1	5		-	-	-	-	-	-	-	10 U	0.3 J	0.25 J	0.41 J	2.6 J	10 U	10 U	10 U	10 U	10 U	0.45 J	10 U	10 U
Bromodichloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Bromoform	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	10 U	1 U	1 U	1 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	2 U	10 U	10 U
Bromomethane (Methyl bromide)	-	5	5		-	-	-	-	-	-	-	10 UJ	1 UJ	1 UJ	5 UJ	50 U	50 U	50 U	50 U	50 U	50 U	2 U	50 U	50 U
2-Butanone (MEK)	-	50 *	50		10 U	10 U	10 U	10 U	10 U	100 U	100 U	100 U	10 UJ	10 U	10 U	100 U	100 U	100 U	100 U	100 U	100 U	10 U	100 U	100 U
Carbon disulfide	-	60	50		-	-	-	-	-	-	-	20 U	2 U	2 U	2 U	20 U	20 U	20 U	20 U	20 U	20 U	2 U	20 U	20 U
Carbon tetrachloride	5	5	5		-	-	-	-	-	-	-	10 UJ	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Chlorobenzene	-	5	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Chloroethane	-	5	5		-	-	-	-	-	-	-	1 UJ	1 U	1.3	2.9 J	50 U	50 U	50 U	50 U	50 U	50 U	3.3 J	50 U	50 U
Chloroform	80 (f)	7	80 (f)		-	-	-	-	-	-	-	10 U	1 U	0.39 J	0.63 J	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Chloromethane	-	5	5		-	-	-	-	-	-	-	10 U	1 U	1 U	2.1	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Dibromochloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
1,1-Dichloroethane	-	5	5		***7.2***	***6.7***	***15 J***	***7.8***	***10***	***8.8 J***	***15***	***6.6 J***	***15***	***12 J***	***20***	***20***	***19***	***18***	***22***	***16***	***20***	***15***	***22***	***26***
1,2-Dichloroethane	5	0.6	5		0.6 U	0.6 U	0.6 U	0.6 U	0.21 J	10 U	10 U	6 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
1,1-Dichloroethene	7	5	5		-	-	-	-	-	-	-	1.1 J	1.9 U	0.64 J	2.5	10 U	2.5 J	10 U	10 U	10 U	10 U	1.5 J	10 U	10 U
cis-1,2-Dichloroethene	70	5	5		***620***	***410***	***710***	***500***	***630***	***610***	***900***	***430***	***560***	***550 D***	***940 R***	***940***	***910***	***760***	***930***	***730***	***760***	***660***	***760***	***880***
trans-1,2-Dichloroethene	100	5	5		3.2	1.4	***6.4***	1.1	2.6	10 U	4 J	10 U	***37***	2.2 J	3.4	10 U	10 U	2.2 J	10 U	10 U	10 U	1.3 J	10 U	10 U
1,2-Dichloroethene, Total	-	-	-		580	480	730	500	550	610	900	430	610	520	940	940	910	760	930	730	760	660	770	880
1,2-Dichloropropane	5	1	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
1,1-Dichloropropene	-	5 *	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
cis-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
trans-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	2 U	10 U	10 U
Ethylbenzene	700	5	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
2-Hexanone	-	50 *	50		-	-	-	-	-	-	-	100 U	10 UJ	10 U	10 U	100 U	100 U	100 U	100 U	100 U	100 U	10 U	100 U	100 U
Methylene chloride	5	5	5		1.1	1 U	1.5	1 U	5 U	50 U	50 U	1 U	1.7 J	5 UJ	1.6 J	50 U	50 U	50 U	50 U	50 U	50 U	2 U	50 U	50 U
4-Methyl-2-pentanone (MIBK)	-	-	-		-	-	-	-	-	-	-	100 U	10 U	10 U	10 U	100 U	100 U	100 U	100 U	100 U	100 U	10 U	100 U	100 U
Styrene	100	5	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
1,1,2,2-Tetrachloroethane	-	5	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 UJ	10 U	10 U	10 U	2 U	10 U	10 U
Tetrachloroethene	5	5	5		1 U	1 U	1 U	1 U	1 U	10 U	10 U	10 U	1 UJ	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Toluene	1,000	5	5		1 U	1 U	1 U	1 U	1 U	10 U	10 U	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
1,1,1-Trichloroethane	200	5	5		-	-	-	0.75 J	-	-	-	10 U	0.63 J	0.63 J	1 UJ	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
1,1,2-Trichloroethane	5	1	5		-	-	-	-	-	-	-	10 U	1 U	1 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U
Trichloroethene	5	5	5		***640***	***480***	***720***	***710***	***720***	***680***	***940***	***590***	***550***	***650 D***	***890 R***	***940***	***940***	***830***	***780***	***670***	***590***	***540***	***690***	***770***
Vinyl acetate	-	-	-		-	-	-	-	-	-	-	20 U	2 UJ	2 U	2 UJ	20 U	20 U	20 U	20 UJ	20 U	20 U	4 U	20 U	20 U
Vinyl chloride	2	2	2		***190***	***190***	***280***	***60***	***270***	***170***	***340***	***43***	***200***	***23 J***	***330 R***	***200***	***330***	***220***	***360***	***320***	***380***	***280***	***340***	***340***
Xylenes, Total	10,000	5 (h)	5		-	-	-	-	-	-	-	20 U	2 U	2 U	2 U	20 U	3.2 J	20 U	10 U	10 U	10 U	4 U	10 U	10 U
Field Measurements																								
Temperature (°C)	-	-	-		23.57	8.3	20.18	7.01	15.66	6.83	26.24	9.08	13.17	11.45	17.95	5.3	29.21	4.07	25.29	5.98	28.65	7.39	12.95	19.4
Conductance (mS/cm)	-	-	-		0.961	0.566	0.953	1.04	1.06	1.11	1.07	0.923	0.81	1.067	1.035	0.662	1.264	0.6394	1.136	0.647	0.936	0.85	1.015	1.208
Dissolved Oxygen (mg/l)	-	-	-		1.34	0.93	1.07	0.08	0	0	0	8.87	0.46	0.52	0.21	0.91	3.1	3.49	0.18	0.37	0.62	0.43	0.25	0.32
pH (s.u.)	-	-	-		7.32	7.27	7.2	7.53	7.46	6.44	7.12	7.75	7.41	7.37	7.29	7.38	7.26	7.4	7.16	7.45	7.18	7.34	7.29	7.25
ORP (mV)	-	-	-		-60.3	-279.5	-10.9	76	-29	-20	-67	69	-90	88.6	-10.1	60	-110	-220	-144	-114	-88.6	-183.8	-46.5	-75.4
Turbidity (NTU)	-	-	-		21.1	6.4	4.89	2	3.8	4	9.3	1.6	9.2	5.78	6.23	9.7	5.54	2.83	9.3	6.56	7.57	42.6	7.16	23.6
General Chemistry (mg/l)																								
Chloride	-	-	-		-	-	-	-	-	-	-	-	110	-	-	120	-	-	110	-	-	110	-	100
Nitrate-N (mg/l)	-	-	-		-	-	-	-	-	-	-	-	0.02 U	-	-	0.02 U	-	-	0.03 J	-	-	0.02 U	-	0.05 U
Sulfate	-	-	-		-	-	-	-	-	-	-	-	59	-	-	60	-	-	59	-	-	55	-	56
Sulfide	-	-	-		-	-	-	-	-	-	-	-	10 U	-	-	10 U	-	-	10 U	-	-	10	-	10 U
TOC / DOC (i)	-	-	-		-	-	-	-	-	-	-	-	6.9	-	-	13	-	-	17 B	-	-	7.5	-	5.6 B
Ferrous Iron	-	-	-		-	-	-	-	-	-	-	-	0.9	-	-	0.2 U	-	-	1.4	-	-	0.2	-	1.3
Total Iron	-	-	-		-	-	-	-	-	-	-	-	1.9	-	-	0.2 U	-	-	1.2	-	-	0.35	-	1.8
Alkalinity (as CaCO3)	-	-	-		-	-	-	-	-	-	-	-	280	-	-	310	-	-	360	-	-	340	-	330

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:	Performance Standards			Shallow																	
Well ID:				MW-16S (continued)				MW-18S													
Sample Date:	Federal MCL (c)	GWQS (d)	State MCL (e)	06/04/19	06/08/20	06/08/21	06/14/23	12/21/01	06/25/02	04/30/03	04/27/04	07/15/04	10/13/04	01/12/05	12/20/11	06/20/12	12/12/12	06/26/13	12/12/13	06/10/14	12/03/14	06/16/15	12/07/15
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	100 UJ	100 U	10 U	100 UJ	-	-	-	-	-	-	-	25 U	25 U	25 U	25 UJ	25 U	25 U	10 U	10 U	10 U
Benzene	5	1	5	10 U	10 U	0.62 J	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 U
Bromomethane (Methyl bromide)	-	5	5	50 U	50 UR	5 UJ	50 U	-	-	-	-	-	-	-	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U
2-Butanone (MEK)	-	50 *	50	100 U	100 U	10 U	100 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	20 U	20 U	2 U	20 U	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	5	5	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	-	5	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	-	5	5	50 U	50 U	5 UJ	50 U	-	-	-	-	-	-	-	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	80 (f)	7	80 (f)	10 U	10 U	0.92 J	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	-	5	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	80 (f)	50 *	80 (f)	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5	***32***	***27***	***32***	***44***	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	0.6	5	10 U	10 U	1 U	10 U	0.6 UJ	1 UJ	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	5	5	10 U	10 U	2.8	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	5	5	***970***	***710***	***870***	***1,200***	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	5	5	10 U	10 U	3.3	10 U	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	-	-	-	970	710	870	1,200	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	5	1	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	0.4 (g)	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 UJ	1 U	1 U
Ethylbenzene	700	5	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50	100 U	100 U	10 U	100 U	-	-	-	-	-	-	-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	5	5	50 U	50 U	5 U	50 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	-	-	-	100 U	100 U	10 U	100 U	-	-	-	-	-	-	-	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	100	5	5	10 U	10 U	1 U	10 UJ	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	5	5	10 UJ	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
Tetrachloroethene	5	5	5	10 U	10 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5	10 U	10 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	10 U	10 U	1.8	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	1	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	***650***	***930***	***830***	***1,100***	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl acetate	-	-	-	20 U	20 U	2 UJ	20 U	-	-	-	-	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U	2 U	2 U	2 UJ	2 U
Vinyl chloride	2	2	2	***190***	***150***	***240***	***330***	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	10,000	5 (h)	5	10 U	10 U	1 U	10 U	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
Field Measurements																							
Temperature (^{o}C)	-	-	-	16.84	21.46	23.63	12.61	9.76	12.45	11.05	9.83	12.78	12.47	9.3	7.03	13.46	8.47	11.06	8.49	15.17	9.31	13.73	9.47
Conductance (mS/cm)	-	-	-	0.924	1.114	1.143	1.0283	0.888	0.792	0.812	0.897	0.848	0.868	0.748	0.862	0.69	0.526	0.77	0.55745	0.724	0.5904	0.63	0.595
Dissolved Oxygen (mg/l)	-	-	-	4.58	0.29	0.26	0.18	-	0.27	0.4	0.24	0.18	1.78	1.4	0	0.02	0.65	0.11	0.09	0.7	0.36	0.03	0.02
pH (s.u.)	-	-	-	7.13	7.14	7.00	7.11	7.3	5.88	7.07	6.95	6.99	6.88	6.94	7.23	7.19	6.97	6.97	6.37	7.05	7.04	7.07	7.24
ORP (mV)	-	-	-	243.3	130.8	-50	-117.8	-37	205	-29	170	115	-181	-9	37	-20	56	-18.9	79.27	20	-238	-32	-51
Turbidity (NTU)	-	-	-	490	19.3	11	50.6	14.7	18	15	52	59.7	30.4	240	53.6	8.9	10.32	9.59	50.08	5	8.03	9.9	8.71
General Chemistry (mg/l)																							
Chloride	-	-	-	-	97	-	91	72	72	-	81	79	83	200	-	82	-	-	85	-	-	94	-
Nitrate-N (mg/l)	-	-	-	-	0.05 UH	-	0.05 U	0.033	0.13	-	0.06	0.027 J	0.05 U	0.12	-	0.02 U	-	-	0.02 U	-	-	0.023 U	-
Sulfate	-	-	-	-	55	-	53	30	27	-	21	21	22	28	-	12	-	-	11	-	-	15	-
Sulfide	-	-	-	-	10 U	-	2 U	0.4 U	1 U	-	1 U	1 U	1 U	1 U	-	10 U	-	-	10 U	-	-	10 U	-
TOC / DOC (i)	-	-	-	-	12	-	5.5	3.6	1.7	-	8.9	2.1	2.1	2.1	-	2.1	-	-	2.5	-	-	8.2 B	-
Ferrous Iron	-	-	-	-	0.2 U	-	0.3	0.01	0.01	-	0.01	0.06	0.29	0	-	0.2 U	-	-	0.2 U	-	-	0.2 U	-
Total Iron	-	-	-	-	0.2	-	0.7	0.08	0.1	-	0	0.04	0.11	0	-	0.5	-	-	0.2 U	-	-	0.4	-
Alkalinity (as CaCO3)	-	-	-	-	370	-	380	250	341	-	296	307	323	309	-	270	-	-	250	-	-	290	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																				
Well ID:				MW-18S (continued)							MW-19													
Sample Date:	Performance Standards			06/01/16	12/05/16	06/05/17	06/05/18	06/08/20	06/14/23(k)	06/14/23(k)	12/20/01	06/28/02	05/01/03	04/27/04	07/13/04	10/12/04	01/12/05	5/16/05(k)	5/16/05(k)	12/13/06(k)	12/13/06(k)	06/26/07(k)	06/26/07(k)
	Federal MCL (c)	GWQS (d)	State MCL (e)																				
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	10 U	5 U	10 U	10 U	10 U	10 UJ	10 UJ	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	-	5	5	5 U	1 U	5 UJ	5 UJ	5 UR	5 U	5 U	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	50 *	50	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.91 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	2 U	1 U	2 U	2 U	2 U	2 U	2 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	-	5	5	5 U	1 U	5 U	5 UR	5 U	5 U	5 U	-	-	-	-	-	-	-	-	-	1 U	1 U	-	-
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	-	5	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.4	1 U	1 U	1.5	1.6	2	1.9	2	1 U	2.2	2.2	2.6	2.7
1,2-Dichloroethane	5	0.6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.6 UJ	1 UJ	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	1 U	0.6 U	0.6 U
1,1-Dichloroethene	7	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	5 *	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	-	50 *	50	10 U	5 U	10 U	10 U	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	5	5	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 UJ	1 U	5 U	5 U	1 U	1 U
4-Methyl-2-pentanone (MIBK)	-	-	-	10 U	5 U	10 U	10 U	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	***12***	***16***	***21***	***30***	***31***	***37***	***42***	***49***	***46***	***52***	***49***	***61***	***61***
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	***60***	***59***	***59***	***62***
1,1,2-Trichloroethane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.27 J	1 U	1 U	0.61 J	0.68 J	0.88 J	0.78 J	0.93 J	0.88 J	1.2	1.2	1.3	1.3
Vinyl acetate	-	-	-	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	1 U	1 U	2 U	2 U
Xylenes, Total	10,000	5 (h)	5	1 U	2 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Measurements																							
Temperature (°C)	-	-	-	13.21	9.62	12.34	10.3	10.84	10.98	-	9.36	15.58	10.3	9.06	10.54	11.94	9.25	9.51	-	-	-	-	-
Conductance (mS/cm)	-	-	-	0.798	0.805	0.763	0.768	0.812	0.85357	-	0.423	0.442	0.457	0.475	0.493	0.484	0.445	0.477	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	0.1	0.09	0.07	0.05	0	0.16	-	0	0.82	0.3	0.2	0.15	0.17	0.16	0.17	-	-	-	-	-
pH (s.u.)	-	-	-	6.66	7.07	6.81	7	6.82	6.9	-	8.47	8.79	7.57	7.35	7.55	7.35	7.07	7.47	-	-	-	-	-
ORP (mV)	-	-	-	49.7	-167.9	103.1	44.5	158.2	8.3	-	-48	56	159	157	105	177	198	192	-	-	-	-	-
Turbidity (NTU)	-	-	-	67.7	10.8	8.62	74.3	13.7	6.83	-	37.9	890	120	60	9.73	24	50	Clear (m)	-	-	-	-	-
General Chemistry (mg/l)																							
Chloride	-	-	-	-	120	-	86	88	92	-	60	55	58	62	62	66	66	66	66	-	-	-	-
Nitrate-N (mg/l)	-	-	-	-	0.02 U	-	0.05 U	0.05 UH	0.05 U	-	0.01 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.03 J	0.05 U	-	-	-	-
Sulfate	-	-	-	-	19	-	16	10	10	-	15	15	13 J	14	12	11	13	14	14	-	-	-	-
Sulfide	-	-	-	-	10 U	-	10 U	10 U	2 U	-	0.4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-
TOC / DOC (i)	-	-	-	-	1.7	-	1.6	4.8	2.3	-	0.82	1 U	1 U	1 U	0.62 J	1.9	2.1	1 U	1 U	-	-	-	-
Ferrous Iron	-	-	-	-	0.2 U	-	0.2 U	0.2 U	0.1 U	-	0	0	0.03	0	0	0.06	0	0.02	-	-	-	-	-
Total Iron	-	-	-	-	0.2 U	-	0.2 U	0.2 U	0.2	-	0.02	0.01	0.05	0	0.02	0.01	0	0.09	-	-	-	-	-
Alkalinity (as CaCO3)	-	-	-	-	290	-	310	310	300	-	160	125	164	121	126	129	127	119	-	-	-	-	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																			
Well ID:				MW-19 (continued)																			
Sample Date:				12/11/07(k)	12/11/07(k)	06/10/08(k)	06/10/08(k)	12/01/08(k)	12/01/08(k)	06/24/09(k)	06/24/09(k)	12/15/09(k)	12/15/09(k)	06/16/10(k)	06/16/10(k)	12/22/10(k)	12/22/10(k)	06/21/11(k)	06/21/11(k)	12/22/11(k)	12/22/11(k)	06/21/12(k)	06/21/12(k)
	Performance Standards																						
	Federal MCL (c)	GWQS (d)	State MCL (e)																				
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25 U	25 U	25 U	25 U
Benzene	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 UJ	1 UJ	1 UJ
2-Butanone (MEK)	-	50 *	50	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	-	60	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U
Carbon tetrachloride	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 UJ	1 UJ	1 UJ
Chlorobenzene	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Chloroethane	-	5	5	-	-	-	-	1 U	1 U	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ
Chloroform	80 (f)	7	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Chloromethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Dibromochloromethane	80 (f)	50 *	80 (f)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5	1.9	2	2.4	2.4	1.8	1.8	***12 J***	***12***	***5.7***	***5.8***	4.4	4.3	3.9	3.8	3.7	3.7	3	3.9	4.3	4
1,2-Dichloroethane	5	0.6	5	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 J	0.6 U	0.6 U	0.6 U	0.6 U	1 U	1 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	1 U
1,1-Dichloroethene	7	5	5	-	-	-	-	-	-	-	-	-	-	0.68 J	0.76 J	0.98 J	0.98 J	1.1 J	1.1 J	1.2	0.86 J	1.4	1.3
cis-1,2-Dichloroethene	70	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.2 J	0.29 J	0.27 J	0.44 J	0.25 J	0.21 J	0.24 J	0.22 J	0.21 J
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.29 J	2 U	0.44 J	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	0.4 (g)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Ethylbenzene	700	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 U	10 U	10 U
Methylene chloride	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 U	10 U	10 U
Styrene	100	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	***43***	***44***	***61***	***61***	***51***	***57***	***57***	***55***	***59***	***59***	***64***	***66***	***66***	***69***	***64 J***	***69 J***	***75***	***78***	***91***	***87***
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	***53***	***54***	***66***	***64***	***41***	***45***	***67***	***66***	***58***	***59***	***83***	***99***	***66***	***67***	***61***	***62***	***81***	***83***	***60***	***58***
1,1,2-Trichloroethane	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	1.1	1.1	1.3	1.3	1.2	1.3	1.2	1.3	1.7	1.6	1.7	1.7	1.8	1.7	1.7	1.7	2.2	2	2.1	2
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 U	2 UJ	2 UJ
Vinyl chloride	2	2	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	1 U
Xylenes, Total	10,000	5 (h)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U
Field Measurements																							
Temperature (°C)	-	-	-	-	-	11.3	-	-	-	11.04	-	9.21	-	9.96	-	8.82	-	19.82	-	8.87	-	10.78	-
Conductance (mS/cm)	-	-	-	-	-	0.458	-	-	-	0.571	-	0.561	-	0.563	-	0.62	-	0.479	-	0.483	-	0.552	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	0.3	-	-	-	0.47	-	0	-	0	-	0	-	0	-	8.12	-	0.07	-
pH (s.u.)	-	-	-	-	-	6.79	-	-	-	7.28	-	7.44	-	6.75	-	6.66	-	7.38	-	7.46	-	7.77	-
ORP (mV)	-	-	-	-	-	67.2	-	-	-	-165.5	-	-182	-	-91	-	-104	-	-122	-	-88	-	-119	-
Turbidity (NTU)	-	-	-	-	-	38.6	-	-	-	15.4	-	6	-	34.3	-	21.3	-	77.3	-	43.2	-	6.8	-
General Chemistry (mg/l)																							
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	83
Nitrate-N (mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02 U	-
Sulfate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	11
Sulfide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 U
TOC / DOC (i)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55 J	0.56 J
Ferrous Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-
Total Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-
Alkalinity (as CaCO3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	120

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Shallow																			
Well ID:				MW-19 (continued)																			
Sample Date:				12/12/12(k)	12/12/12(k)	06/26/13(k)	06/26/13(k)	12/11/13(k)	12/11/13(k)	06/10/14(k)	06/10/14(k)	12/03/14(k)	12/03/14(k)	06/17/15(k)	06/17/15(k)	12/8/15(k)	12/8/15(k)	06/2/16(k)	06/2/16(k)	12/7/16(k)	12/7/16(k)	06/6/17(k)	06/6/17(k)
	Performance Standards																						
	Federal MCL (c)	GWQS (d)	State MCL (e)																				
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	25 U	25 U	25 UJ	25 UJ	25 U	25 U	25 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 U	10 U	10 U
Benzene	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl bromide)	-	5	5	1 UJ	1 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 UJ	5 UJ
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 U	10 U	10 U
Carbon disulfide	-	60	50	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	2 U
Carbon tetrachloride	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	-	5	5	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 UJ	1 UJ	5 U	5 U
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5	4.8	4.5	4.2	4	***5.1***	***5.2***	3.6	4	3.8	4.7	4.2	4.3	3.5	3.6	4.5	4.3	3.1	3.3	4.3	4.5
1,2-Dichloroethane	5	0.6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	5	5	1.5	1.3	1.6	1.6	1.4	2.2	1 U	1 U	2	1.8	2.2	2.1	1.7	1.7	2	2	1.6	1.8	2	2.1
cis-1,2-Dichloroethene	70	5	5	0.2 J	0.29 J	1 U	0.33 J	1 U	1 U	0.37 J	0.45 J	1 U	1 U	1 U	1 U	1 U	1 U	0.45 J	1 U	0.33 J	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1.3	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	-	-	-	2 U	0.29 J	2 U	0.33 J	2 U	2 U	1.6 J	2	2 U	2 U	2 U	2 U	2 U	2 U	0.45 J	0.39 J	0.33 J	2 U	2 U	2 U
1,2-Dichloropropane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	700	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	-	-	-	10 UJ	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	5 U	10 U	10 U
Styrene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5	***77***	***78***	***91***	***86***	***95***	***92***	***86***	***85***	***95***	***88***	***87***	***85***	***85***	***90***	***80***	***79***	***87***	***93***	***89***	***92***
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5	***85***	***84***	***77 J***	***76 J***	***72***	***70***	***71***	***72***	***77***	***77***	***73***	***70***	***64***	***66***	***63***	***62***	***53 J***	***57***	***67***	***71***
1,1,2-Trichloroethane	5	1	5	1 U	1 U	2.1	2.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5	2.5	2.5	2.5	2.6	3.7	3.2	3.2	3.1	4.9	4.7	***5.8***	***5.5***	***6.3***	***6.7***	***6.1***	***6.1***	***6.7***	***7.5***	***9***	***8.8***
Vinyl acetate	-	-	-	2 U	2 U	2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	2	2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.097 J	1 U	1 U	1 U
Xylenes, Total	10,000	5 (h)	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U
Field Measurements																							
Temperature (°C)	-	-	-	9.88	9.88	10.67	10.67	9.19	-	9.93	-	9.16	-	9.84	-	9.21	-	11.2	-	9.01	-	9.6	-
Conductance (mS/cm)	-	-	-	0.382	0.382	0.53	0.53	0.3955	-	0.411	-	0.412	-	0.421	-	0.423	-	0.564	-	0.457	-	0.624	-
Dissolved Oxygen (mg/l)	-	-	-	0.29	0.29	0.43	0.43	0.04	-	0.16	-	0.29	-	-0.08 (m)	-	0	-	0.1	-	0.04	-	0.03	-
pH (s.u.)	-	-	-	7.44	7.44	7.32	7.32	7.56	-	7.61	-	7.54	-	7.55	-	7.49	-	7.19	-	7.63	-	7.08	-
ORP (mV)	-	-	-	-87.4	-87.4	-129.8	-129.8	-125.14	-	-100	-	-109	-	-147	-	-130	-	-122.8	-	-145.3	-	-80.7	-
Turbidity (NTU)	-	-	-	11.43	11.43	5.35	5.35	17.46	-	20.3	-	31.3	-	5.23	-	8.85	-	34.1	-	19.7	-	9.83	-
General Chemistry (mg/l)																						-	-
Chloride	-	-	-	-	-	-	-	94	93	-	-	-	-	94	95	-	-	-	-	110 F1	110	-	-
Nitrate-N (mg/l)	-	-	-	-	-	-	-	0.02 U	-	-	-	-	-	0.023 U	0.023 U	-	-	-	-	0.02 U	-	-	-
Sulfate	-	-	-	-	-	-	-	12	12	-	-	-	-	13	13	-	-	-	-	12	12	-	-
Sulfide	-	-	-	-	-	-	-	10 U	10 U	-	-	-	-	10 U	10 U	-	-	-	-	10 U	17	-	-
TOC / DOC (i)	-	-	-	-	-	-	-	0.89 J	0.99 J	-	-	-	-	0.95 JB	1.5 B	-	-	-	-	0.5 J	0.64 J	-	-
Ferrous Iron	-	-	-	-	-	-	-	0.25	-	-	-	-	-	0.3	-	-	-	-	-	0.2	-	-	-
Total Iron	-	-	-	-	-	-	-	0.8	-	-	-	-	-	0.7	-	-	-	-	-	0.3	-	-	-
Alkalinity (as CaCO3)	-	-	-	-	-	-	-	130	120	-	-	-	-	150	140	-	-	-	-	140	140	-	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Monitored Zone:	Shallow																	
				Well ID:	MW-19 (continued)									PMW-1								
	Federal MCL (c)	GWQS (d)	State MCL (e)	Sample Date:	06/6/18(k)	06/6/18(k)	06/4/19(k)	06/4/19(k)	06/8/20(k)	06/8/20(k)	06/8/21(k)	06/8/21(k)	06/14/23	12/05/08	01/05/09	02/09/09	03/25/09	06/24/09	12/22/11	06/21/12	12/12/12	06/26/13	12/11/13	06/11/14
Volatile Organic Compounds (µg/l)																						
Acetone	-	50 *	50		10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 UJ	-	-	-	-	-	25 U	25 U	25 R	25 UJ	25 U	25 U
Benzene	5	1	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U
Bromomethane (Methyl bromide)	-	5	5		5 UJ	5 U	5 U	5 UJ	5 UR	5 UR	5 UJ	5 U	5 U	-	-	-	-	-	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ	5 U
2-Butanone (MEK)	-	50 *	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	***180***	18	15	12	23	10 U	10 U	10 UJ	10 U	10 U	10 U
Carbon disulfide	-	60	50		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	5	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 UJ	1 UJ	1 U	1 U	1 U	1 U
Chlorobenzene	-	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	-	5	5		5 U	5 U	5 U	5 U	5 UR	5 U	5 UJ	5 UJ	5 U	1 U	-	-	-	-	1 UJ	1 U	1 UJ	5 U	5 U	5 U
Chloroform	80 (f)	7	80 (f)		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	-	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	80 (f)	50 *	80 (f)		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5		4.4	4.3	***5.7***	***5.7***	***7.6***	4.3	5	4.9	4.6	3.2	3.6	***14***	***18***	***24***	3.6	***7.2***	***7.2***	***6***	***6.5***	4.8
1,2-Dichloroethane	5	0.6	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	5	5		2.1	2.5	3.7	3.7	4.8	2.6	3.6	3.1	3.2	-	-	-	-	-	0.66 J	1.1	1.3	1.5	2.3	1 U
cis-1,2-Dichloroethene	70	5	5		1 U	1 U	1 U	1 U	0.74 J	1 U	1.7	1.5	0.75 J	1 U	1 U	1 U	1 U	***25***	2.7	4.1	2.9	2.3	1.6	1.1
trans-1,2-Dichloroethene	100	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3
1,2-Dichloroethene, Total	-	-	-		2 U	2 U	2 U	2 U	0.74 J	2 U	1.7 J	1.5 J	0.75 J	2 U	2 U	2 U	2 U	25	2.7	4.1	2.9	2.3	1.6 J	2.4
1,2-Dichloropropane	5	1	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	0.4 (g)	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U
Ethylbenzene	700	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-	-	-	10 U	10 U	10 UJ	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	-	-	-		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-	-	-	10 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	5	5		1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5		***110***	***100***	***180***	***180***	***140 J***	***190***	***180***	***180***	***200***	***99***	1 U	***44***	***17***	2.4	***41***	***64***	***72***	***78***	***83***	***64***
Toluene	1,000	5	5		1 U	1 U	1 U	1 U	1 U	1 UF	1 U	1 U	1 U	0.44 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5		***58***	***60***	***77***	***78***	***97 J***	***52***	***59***	***58***	***45***	***66***	***71***	***42***	***21***	***31***	***55***	***50***	***77***	***71 J***	***67***	***68***
1,1,2-Trichloroethane	5	1	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	1 U	1 U	1 U	1.8	1 U	1 U
Trichloroethene	5	5	5		***9.8***	***9.7***	***8.5***	***8.5***	***15***	***8.7***	***14***	***14***	***14***	3.2	2	1.4	0.8 J	1 U	2	2.5	3.1	3.1	5	***14***
Vinyl acetate	-	-	-		2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U	2 U	-	-	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U	2 U
Vinyl chloride	2	2	2		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	10,000	5 (h)	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Field Measurements																								
Temperature (°C)	-	-	-		10.34	-	8.79	-	10.69	-	10.93	-	10.02	-	-	-	-	-	8.85	13.89	9.88	12.41	6.04	12.97
Conductance (mS/cm)	-	-	-		0.651	-	0.63	-	0.645	-	0.572	-	0.65306	-	-	-	-	-	0.533	0.573	0.388	0.536	0.364	0.423
Dissolved Oxygen (mg/l)	-	-	-		0.04	-	0.03	-	0	-	0.03	-	0	-	-	-	-	-	2.61	0.12	0.26	0.21	0.2	1.08
pH (s.u.)	-	-	-		7.15	-	7.46	-	7.3	-	7.11	-	7.54	-	-	-	-	-	8.71	7.81	7.49	7.57	7.66	7.95
ORP (mV)	-	-	-		-25.7	-	-153.5	-	-38.5	-	-64.3	-	-251.5	-	-	-	-	-	-109	-144	-106.3	-138.1	-120	-145
Turbidity (NTU)	-	-	-		28.7	-	52.9	-	6.48	-	0.98	-	5.77	-	-	-	-	-	0	29.5	2.55	2.95	5.7	7.89
General Chemistry (mg/l)																								
Chloride	-	-	-		96	-	-	-	100	100	-	-	110	-	-	-	-	-	-	86	-	-	95	-
Nitrate-N (mg/l)	-	-	-		0.05 U	-	-	-	0.05 UH	0.05 U	-	-	0.05 U	-	-	-	-	-	-	0.02 U	-	-	-	-
Sulfate	-	-	-		13	-	-	-	13	13	-	-	13	-	-	-	-	-	-	11	-	-	12	-
Sulfide	-	-	-		10 U	-	-	-	10 U	10 U	-	-	2 U	-	-	-	-	-	-	10 U	-	-	10 U	-
TOC / DOC (i)	-	-	-		0.54 J	-	-	-	1.5	1.4	-	-	0.83 J	-	-	-	-	-	-	0.63 J	-	-	0.91 J	-
Ferrous Iron	-	-	-		0.2 U	-	-	-	0.2	-	-	-	0.4	-	-	-	-	-	-	1	-	-	-	-
Total Iron	-	-	-		0.8	-	-	-	0.5	-	-	-	1.1	-	-	-	-	-	-	1.2	-	-	-	-
Alkalinity (as CaCO3)	-	-	-		150	-	-	-	140	140	-	-	140	-	-	-	-	-	-	130	-	-	120	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

				Monitored Zone:	Shallow											Deep								
				Well ID:	PMW-1 (continued)											MW-2								
				Sample Date:	12/03/14	06/16/15	12/07/15	06/02/16	12/07/16	06/06/17	06/06/18	06/04/19	07/15/20	06/08/21	06/14/23	07/31/93	10/06/94	12/01/95	11/24/97	12/19/97	12/19/01(k)	12/19/01(k)	06/27/02(k)	06/27/02(k)
	Performance Standards																							
	Federal MCL (c)	GWQS (d)	State MCL (e)																					
Volatile Organic Compounds (µg/l)																								
Acetone	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 UJ	10 U	10 U	10 UJ	-	-	-	-	-	-	-	-	-	
Benzene	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Bromodichloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Bromoform	80 (f)	50 *	80 (f)	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Bromomethane (Methyl bromide)	-	5	5	5 U	5 U	5 U	5 U	1 U	5 UJ	5 U	5 U	5 UR	5 UJ	5 U	-	-	-	-	-	-	-	-	-	
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	5 U	5 U	-	10 U	10 U	10 UJ	10 UJ	
Carbon disulfide	-	60	50	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	-	-	-	-	-	-	
Carbon tetrachloride	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Chlorobenzene	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Chloroethane	-	5	5	5 U	5 U	5 U	5 U	1 UJ	5 U	5 U	5 U	5 UR	5 U	5 U	-	-	-	-	-	-	-	-	-	
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Chloromethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethane	-	5	5	***5.1***	***5.5***	5	***5.4***	4.1	***5.2***	***5.3***	***6.1***	***5.2***	***5.2***	***5.1***	5	***7***	***11***	***17***	***13***	***8.1***	***8.9***	3	2.9	
1,2-Dichloroethane	5	0.6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	1 U	-	-	0.6 UJ	0.6 UJ	1 UJ	1 UJ	
1,1-Dichloroethene	7	5	5	2.1	1.7	1.9	1.9	1.7	2	2.2	3.5	3.3	3.4	3.5	-	-	-	-	-	-	-	-	-	
cis-1,2-Dichloroethene	70	5	5	0.84 J	1.2	1.8	1.4	1.4	1.2	0.56 J	0.64 J	1 U	0.41 J	0.33 J	5	***9***	***18***	***27***	***19***	***11***	***11***	***5.6***	***5.5***	
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	1 U	1 U	1 U	0.9 J	-	-	-	-	
1,2-Dichloroethene, Total	-	-	-	0.84 J	1.2 J	1.8 J	1.4 J	1.4 J	1.2 J	0.56 J	0.64 J	0.38 J	0.41 J	2 U	-	-	-	-	-	-	-	-	-	
1,2-Dichloropropane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
1,1-Dichloropropene	-	5 *	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Ethylbenzene	700	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
2-Hexanone	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-	
4-Methyl-2-pentanone (MIBK)	-	-	-	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	2 U	-	-	0.63 J	0.66 J	5 U	5 U	
Styrene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.7 J	1 UJ	-	-	-	-	-	-	-	-	-	
1,1,2,2-Tetrachloroethane	-	5	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Tetrachloroethene	5	5	5	***53***	***32***	***41***	***39***	***48***	***49***	***75***	***130***	***170***	***180***	***190***	-	-	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	1 U	-	1 U	1 U	1 U	1 U	1 U	
1,1,1-Trichloroethane	200	5	5	***77***	***65***	***60***	***58***	***50***	***65***	***61***	***73***	***59***	***57***	***48***	-	-	-	-	-	-	-	-	-	
1,1,2-Trichloroethane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Trichloroethene	5	5	5	***28***	***37***	***44***	***38***	***44***	***39***	***34***	***27***	***24***	***28***	***26***	4	***7***	***24***	***53 D***	***32 D***	***31***	***32***	***15***	***13***	
Vinyl acetate	-	-	-	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	-	-	-	-	-	-	-	-	-	
Vinyl chloride	2	2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	***11***	***18***	***24***	***38 D***	***24 D***	***40***	***42***	***8.4***	***8.4***	
Xylenes, Total	10,000	5 (h)	5	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	
Field Measurements																								
Temperature (°C)	-	-	-	7.21	14.35	9.35	11.74	8.93	9.86	10.36	10.15	15.13 (n)	11.64	10.47	-	-	-	-	-	8.74	-	15.26	-	
Conductance (mS/cm)	-	-	-	0.391	0.466	0.417	0.596	0.47	0.617	0.696	0.618	0.571 (n)	0.693	0.65464	-	-	-	-	-	0.776	-	1.006	-	
Dissolved Oxygen (mg/l)	-	-	-	1.04	0.03	0.15	0.09	0.12	0.06	0.14	0.21	0.01 (n)	0	0.13	-	-	-	-	-	0	-	0.24	-	
pH (s.u.)	-	-	-	7.57	7	7.6	7.75	7.52	7.05	7.63	6.87	7.51 (n)	7.03	7.54	-	-	-	-	-	9.21	-	5.39	-	
ORP (mV)	-	-	-	-118	-427	-110	-161.3	-220.6	-109.4	-91.2	-127.9	-103.2 (n)	-89.9	-252.5	-	-	-	-	-	63	-	221	-	
Turbidity (NTU)	-	-	-	8.03	93.4	18.1	6.11	2.17	3.13	15.2	20	24 (n)	8.64	2.14	-	-	-	-	-	11.4	-	7.9	-	
General Chemistry (mg/l)																								
Chloride	-	-	-	-	97	-	-	110	-	100	-	110 (n)	-	120	-	-	-	-	-	140	-	140	140	
Nitrate-N (mg/l)	-	-	-	-	0.023 U	-	-	0.02 U	-	0.05 U	-	0.05 U (n)	-	0.05 U	-	-	-	-	-	0.01 U	-	0.05 U	0.05 U	
Sulfate	-	-	-	-	14	-	-	12	-	14	-	14 (n)	-	14	-	-	-	-	-	27	-	34 J	33 J	
Sulfide	-	-	-	-	10 U	-	-	11	-	10 U	-	10 U (n)	-	2 U	-	-	-	-	-	0.4 U	-	1 U	1 U	
TOC / DOC (i)	-	-	-	-	4.4 B	-	-	0.54 J	-	0.53 J	-	2.2 (n)	-	0.67 J	-	-	-	-	-	3.5	-	1.8	1.7	
Ferrous Iron	-	-	-	-	1	-	-	0.5	-	0.2	-	0.8 (n)	-	0.2	-	-	-	-	-	0	-	0	-	
Total Iron	-	-	-	-	1.2	-	-	0.9	-	0.8	-	1 (n)	-	0.7	-	-	-	-	-	0	-	0	-	
Alkalinity (as CaCO3)	-	-	-	-	140	-	-	140	-	97	-	130 (n)	-	130	-	-	-	-	-	171	-	362	-	

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Monitored Zone:	Deep																		
				Well ID:	MW-2 (continued)																		
	Federal MCL (c)	GWQS (d)	State MCL (e)	Sample Date:	05/05/03	04/28/04	07/15/04	10/13/04	01/13/05	12/13/06	06/27/07	12/12/07	06/10/08	12/02/08	06/24/09	12/15/09	06/15/10	12/21/10	06/20/11	12/20/11	06/19/12	12/11/12	06/25/13	12/12/13
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25 U	25 UJ	25 U	25 UJ	25 U
Benzene	5	1	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U
Bromoform	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U
Bromomethane (Methyl bromide)	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ
2-Butanone (MEK)	-	50 *	50		10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
Carbon disulfide	-	60	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	5	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 UJ	1 UJ	1 U	1 U	1 U
Chlorobenzene	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
Chloroethane	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	***5.5 J***	3	3.4	***5.5***	***7.5***
Chloroform	80 (f)	7	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
Chloromethane	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	-	5	5		***6***	3.2	***9.5***	***5.8***	***5.4***	3.1	4.4	4.7	3.8	3.6	3.7 J	1.5	1.7	4.1	4.9	***5.5***	***7.5***	***8.6***	***7.8***	***12***
1,2-Dichloroethane	5	0.6	5		0.6 U	0.6 UJ	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	0.6 U	0.6 U	1 U	1 U	1 U	0.6 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17 J	0.11 J	0.13 J	1 U	1 U
cis-1,2-Dichloroethene	70	5	5		***10***	***5.3***	***24***	***12***	***11***	***5.6***	***8.1***	***7***	***5.6***	***6.1***	3.3	0.23 J	0.21 J	***5.4***	***6.3***	***8.9***	***9.7***	***10***	***11***	***17***
trans-1,2-Dichloroethene	100	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	-	-	-		10	5.3	24	12	11	5.6	8.1	7	5.6	6.1	3.3	2 U	2 U	5.4	6.3	8.9	10	10	11	17
1,2-Dichloropropane	5	1	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	-	5 *	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U
trans-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 UJ	1 UJ	1 U
Ethylbenzene	700	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
2-Hexanone	-	50 *	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 UJ	10 U	10 U	10 U
Methylene chloride	5	5	5		5 U	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10 U	10 UJ	10 UJ	10 U	10 U
Styrene	100	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1,000	5	5		1 U	1 U	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	200	5	5		-	-	-	-	-	-	1 U	-	-	-	-	1 U	-	-	-	1 U	1 U	1 UJ	1 U	1 UJ	1 U
1,1,2-Trichloroethane	5	1	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	5	5		***36***	***28***	***75***	***52***	***50***	***25***	***37***	***34***	***23***	***33***	***13***	1.2	0.72 J	***31***	***28***	***58***	***49***	***64***	***57***	***87***
Vinyl acetate	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U
Vinyl chloride	2	2	2		***44***	***5***	***20***	***15***	***12***	***9.3***	***9.6***	***14***	2 U	***5.8***	***5.9***	0.34 J	1 U	***6.4***	***6.9***	***7.7***	***5.8***	***6.6***	***5***	***7.3***
Xylenes, Total	10,000	5 (h)	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U
Field Measurements																								
Temperature (^{o}C)	-	-	-		9	15.09	14.36	11.27	7.83	9.73	15.45	6.49	17.92	7.72	14.8	9.32	18.62	4.74	20.01	8.54	13.64	9.54	15.91	8.37
Conductance (mS/cm)	-	-	-		0.902	0.756	1.032	0.926	0.863	0.742	0.83	0.861	0.964	1.151	0.999	0.508	0.463	0.964	1.06	0.97	0.898	1.127	1.067	0.743
Dissolved Oxygen (mg/l)	-	-	-		0.5	1.44	1.5	0.69	0.65	0.34	0.29	1.3	0.27	1.97	0.75	7.04	5.39	2.31	0	2.24	0.35	0.27	0.36	0.09
pH (s.u.)	-	-	-		8.29	5.62	6.55	7.06	6.05	4.87	6.88	8.03	6.98	7.58	3.77	7.91	7.68	7.16	7.23	7.27	7.44	7.27	7.32	7.29
ORP (mV)	-	-	-		246	251	-33	85	-266	339.8	11	-291	36	143.8	-52	81	196	145	164	100	-50	35.7	133.6	160
Turbidity (NTU)	-	-	-		13	13.8	4.8	7.84	8	0.5	14	3.5	0.9	0.66	1.25	3.64	27	3	1	0	7.1	2.73	0.95	92.7
General Chemistry (mg/l)																								
Chloride	-	-	-		150	100	150	160	170	-	-	-	-	-	-	-	-	-	-	-	220	-	-	220
Nitrate-N (mg/l)	-	-	-		0.05 U	0.61	0.05 U	0.05 U	0.099	-	-	-	-	-	-	-	-	-	-	-	0.02 U	-	-	0.02 U
Sulfate	-	-	-		24	33	24	23	24	-	-	-	-	-	-	-	-	-	-	-	23	-	-	22
Sulfide	-	-	-		1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	-	-	10 U	-	-	10 U
TOC / DOC (i)	-	-	-		1	7.2	1.4	0.97 J	1.1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2.5
Ferrous Iron	-	-	-		0.01	0.02	0.01	0.12	0.11	-	-	-	-	-	-	-	-	-	-	-	0.2 U	-	-	0.2 U
Total Iron	-	-	-		0.01	0.01	0.15	0.02	0.1	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	0.2 U
Alkalinity (as CaCO3)	-	-	-		158	262	168	185	189	-	-	-	-	-	-	-	-	-	-	-	190	-	-	210

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

Monitored Zone:				Deep																			
Well ID:				MW-2 (continued)												MW-3							
Sample Date:				06/11/14	06/15/15	12/08/15	06/01/16	12/06/16	06/06/17	06/06/18	06/03/19	06/09/20	06/08/21	06/13/23	07/01/93	09/02/93	10/06/94	12/01/95	11/24/97	12/18/97	12/18/01	06/27/02(k)	06/27/02(k)
	Performance Standards																						
	Federal MCL (c)	GWQS (d)	State MCL (e)																				
Volatile Organic Compounds (µg/l)																							
Acetone	-	50 *	50	25 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	20 U	-	-	-	-	-	-	-	-	-
Benzene	5	1	5	1 U	1 U	1 U	1 U	0.23 J	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Bromodichloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Bromoform	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	-	5	5	5 U	5 U	5 U	5 U	1 U	5 UJ	5 U	5 U	5 UR	5 U	1 U	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	ND	ND	ND	5 U	5 U	-	10 U	10 U	10 U
Carbon disulfide	-	60	50	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	5 U	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Chloroethane	-	5	5	2.4 J	3.6 J	3.9 J	3.9 J	***14 J***	3.8 J	3.9 J	3 J	5 U	5 U	1.6 J+	-	-	-	-	-	-	-	-	-
Chloroform	80 (f)	7	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Chloromethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	2 U	-	-	-	-	-	-	-	-	-
Dibromochloromethane	80 (f)	50 *	80 (f)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	5	5	***6***	***13***	***9.8***	***12***	***13***	***12***	***9.1***	***6.3***	***7.9***	***7.8***	***6.3***	1 U	1 U	1 U	1 U	1 U	1 U	0.86 J	1 U	3.5
1,2-Dichloroethane	5	0.6	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	ND	ND	1 U	1 U	-	-	0.6 UJ	1 UJ	3.8
1,1-Dichloroethene	7	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	70	5	5	***8.3***	***15***	***13***	***15***	***19***	***16***	***13***	***13***	***8.8***	***11***	***9.9***	1 U	1 U	1 U	1 U	1 U	1 U	0.7 J	1 U	3.7
trans-1,2-Dichloroethene	100	5	5	1 U	1 U	1 U	1 U	0.19 J	1 U	1 U	1 U	1 U	1 U	2 U	ND	ND	1 U	1 U	1 U	1 U	-	-	-
1,2-Dichloroethene, Total	-	-	-	8.3	15	13	15	19	16	13	13	8.8	11	9.9	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
1,1-Dichloropropene	-	5 *	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	0.4 (g)	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
2-Hexanone	-	50 *	50	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	-	-	-	10 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	-	-	-	1 U	-	-	-	5 U	5 U
Styrene	100	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	ND	ND	1 U	1 U	1 U	1 U	1 UJ	1 U	3.7
Toluene	1,000	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	ND	ND	1 U	1 U	-	1 U	1 U	1 U	4.6
1,1,1-Trichloroethane	200	5	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	1	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	5	***42***	***84***	***72***	***70***	***94***	***90***	***74***	***55***	***50***	***51***	***33***	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4
Vinyl acetate	-	-	-	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	2	2	***4.1***	***5.9***	***5***	***5.7***	***5.7***	***5.1***	***4.3***	***3.6***	***2.7***	1 U	1.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	***2.6***
Xylenes, Total	10,000	5 (h)	5	2 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-
Field Measurements																							
Temperature (^{o}C)	-	-	-	11.74	13.05	10.25	17.42	8.82	10.92	11.31	13.57	13.2	12.71	12.85	-	-	-	-	-	-	8.83	12.57	-
Conductance (mS/cm)	-	-	-	0.761	0.91	0.895	1.172	0.839	0.799	1.289	1.127	1.157	1.144	1.1545	-	-	-	-	-	-	0.812	0.856	-
Dissolved Oxygen (mg/l)	-	-	-	0.48	0.09	0.07	0.22	0.13	0.21	0.16	0.19	1.15	5.7	0.03	-	-	-	-	-	-	0	0.51	-
pH (s.u.)	-	-	-	5.65	6.94	7.21	6.75	7.07	6.98	7.17	7.07	6.93	6.97	5.41	-	-	-	-	-	-	8.76	7.15	-
ORP (mV)	-	-	-	208	-288	102	117.8	170.5	167.6	82.6	177.8	248.1	125.1	201.6	-	-	-	-	-	-	-76	44	-
Turbidity (NTU)	-	-	-	1.99	9.7	3.32	2.37	6.21	91.3	16.2	4.3	6.5	2.88	115	-	-	-	-	-	-	47.4	31	-
General Chemistry (mg/l)																							
Chloride	-	-	-	-	240	-	-	230	-	180	-	210	-	190	-	-	-	-	-	-	120	140	140
Nitrate-N (mg/l)	-	-	-	-	0.023 U	-	-	0.02 U	-	0.05 U	-	0.029 J	-	0.55 U	-	-	-	-	-	-	0.026	0.05 U	0.05 U
Sulfate	-	-	-	-	23	-	-	23	-	24	-	21	-	21	-	-	-	-	-	-	33	33 J	32 J
Sulfide	-	-	-	-	10 U	-	-	10 U	-	10 U	-	10 U	-	2 U	-	-	-	-	-	-	0.4 U	1 U	1 U
TOC / DOC (i)	-	-	-	-	9.7 B	-	-	1.9	-	2	-	2.6	-	3.2	-	-	-	-	-	-	2.6	1 U	1.3
Ferrous Iron	-	-	-	-	0.2 U	-	-	0.2 U	-	0.2	-	0.2 U	-	0.1 U	-	-	-	-	-	-	0.06	0.01	-
Total Iron	-	-	-	-	0.2 U	-	-	0.2 U	-	1	-	0.2 U	-	0.3	-	-	-	-	-	-	0.12	0.03	-
Alkalinity (as CaCO3)	-	-	-	-	240	-	-	250	-	210	-	230	-	300	-	-	-	-	-	-	105	189	-

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

	Performance Standards			Monitored Zone:	Deep																	
				Well ID:	MW-3 (continued)																	
	Federal MCL (c)	GWQS (d)	State MCL (e)	Sample Date:	05/05/03	04/27/04	07/13/04	10/12/04	01/12/05	12/21/11	06/20/12	12/12/12	06/26/13	12/12/13	06/11/14	06/17/15	06/02/16	06/06/17	06/06/18	06/09/20	06/13/23
Volatile Organic Compounds (µg/l)																						
Acetone	-	50 *	50		-	-	-	-	-	25 U	25 U	25 U	25 UJ	25 U	25 U	10 U	10 U	10 U	10 U	10 U	20 UJ
Benzene	5	1	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromodichloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromoform	80 (f)	50 *	80 (f)		-	-	-	-	-	1 UJ	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 UJ
Bromomethane (Methyl bromide)	-	5	5		-	-	-	-	-	1 UJ	1 UJ	1 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 UJ	5 U	5 UR	1 UJ
2-Butanone (MEK)	-	50 *	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Carbon disulfide	-	60	50		-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 UJ
Carbon tetrachloride	5	5	5		-	-	-	-	-	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chlorobenzene	-	5	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chloroethane	-	5	5		-	-	-	-	-	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 UJ
Chloroform	80 (f)	7	80 (f)		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chloromethane	-	5	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 UJ
Dibromochloromethane	80 (f)	50 *	80 (f)		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloroethane	-	5	5		0.57 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,2-Dichloroethane	5	0.6	5		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloroethene	7	5	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
cis-1,2-Dichloroethene	70	5	5		1.7 U	1 U	0.84 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
trans-1,2-Dichloroethene	100	5	5		0.36 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 UJ
1,2-Dichloroethene, Total	-	-	-		2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 UJ
1,2-Dichloropropane	5	1	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloropropene	-	5 *	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ
cis-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
trans-1,3-Dichloropropene	-	0.4 (g)	5		-	-	-	-	-	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Ethylbenzene	700	5	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
2-Hexanone	-	50 *	50		-	-	-	-	-	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Methylene chloride	5	5	5		5 U	5 U	5 U	5 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 UJ
4-Methyl-2-pentanone (MIBK)	-	-	-		-	-	-	-	-	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ
Styrene	100	5	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ
1,1,2,2-Tetrachloroethane	-	5	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Tetrachloroethene	5	5	5		0.58 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Toluene	1,000	5	5		1.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1,1-Trichloroethane	200	5	5		-	-	-	-	-	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1,2-Trichloroethane	5	1	5		-	-	-	-	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Trichloroethene	5	5	5		3.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Vinyl acetate	-	-	-		-	-	-	-	-	2 U	2 UJ	2 U	2 UJ	2 U	2 U	2 UJ	2 U	2 U	2 U	2 U	10 UJ
Vinyl chloride	2	2	2		0.38 J	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Xylenes, Total	10,000	5 (h)	5		-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Field Measurements																						
Temperature (^{o}C)	-	-	-		10.1	10.2	13.32	12.21	8.27	7.91	13.83	8.92	12.2	9.54	13.86	11.85	13.57	11.56	11.46	15.35	12.59
Conductance (mS/cm)	-	-	-		1.1	1.006	0.991	1.03	0.931	0.993	0.917	1.204	1.168	0.884	0.986	0.994	1.231	0.16	1.476	1.368	1.2585
Dissolved Oxygen (mg/l)	-	-	-		0.24	0.2	0.15	0.19	0.54	7.1	0.09	0.33	0.26	0.19	0.97	0.04	0.17	0.05	0.12	0	0.01
pH (s.u.)	-	-	-		7.34	7.1	7.49	7.17	6.13	7.43	7.48	7.3	7.36	7.41	7.29	7.3	7.08	7.06	7.18	7.13	7.73
ORP (mV)	-	-	-		149	119	56	98	-212	54	-80	35.9	120.2	50	50	-422	122.1	127.9	224.3	122.1	76.8
Turbidity (NTU)	-	-	-		22	9	17.1	15.5	9.9	2.1	2.7	3.07	5.73	78.1	4.74	8.54	16	46.8	8.61	45.4	19
General Chemistry (mg/l)																						
Chloride	-	-	-		150	170	170	180	180	-	220	-	-	260	-	280	-	-	300	290	280 F
Nitrate-N (mg/l)	-	-	-		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	-	0.02 U	-	-	0.02 U	-	0.023 U	-	-	0.05 U	0.05 U	0.55 U
Sulfate	-	-	-		28	30	28	27	27	-	23	-	-	22	-	24	-	-	25	24	24 F
Sulfide	-	-	-		1 U	1 U	1 U	1 U	1 U	-	10 U	-	-	10 U	-	10 U	-	-	10 U	10 U	2 U
TOC / DOC (i)	-	-	-		1.2	1 U	0.75 J	1 U	1 U	-	0.72 J	-	-	1.1	-	2.2 B	-	-	0.64 JB	2.6	0.85 J
Ferrous Iron	-	-	-		0.03	0.03	0.01	0.09	0	-	0.2 U	-	-	0.2 U	-	0.2 U	-	-	0.2 U	0.2 U	0
Total Iron	-	-	-		0	0.01	0.03	0.07	0	-	1.6	-	-	0.2 U	-	0.2 U	-	-	0.2 U	0.2 U	0.2
Alkalinity (as CaCO3)	-	-	-		164	194	188	209	208	-	210	-	-	220	-	230	-	-	230	250	240 F

Shaded values greater than federal MCL
Boxed values greater than GWQS
Bold italic values greater than state MCL

WSP

Table 3

Historical Groundwater Results
Tri-Cities Barrel Superfund Site
Fenton, New York (a)

a/ ID = identification; µg/l = micrograms per liter; "*" = guidance value; "-" = indicates criterion not developed or analysis not performed; ND = not detected; ^{o}C = degrees Celsius; mS/cm = milliSiemens per centimeter; mg/l = milligrams per liter; s.u. = standard units; mV = millivolts; NTU = nephelometric turbidity unit; mg/l as $CaCO_3$ = milligrams per liter as calcium carbonate; TOC = total organic carbon; DOC = dissolved organic carbon; "-" indicates analysis not performed.

b/ Pursuant to a request from the EPA, field measurements were recorded both before purging and subsequent to purging and recovery, for the very low yield wells (MW-2S, MW-3S, and MW-16S).

c/ National Primary Drinking Water Regulations, MCLs for organic contaminants (40 CFR 141.61). Accessed on December 4, 2019.

d/ New York State Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Division of Water Technical and Operational Guidance Series (1.1.1), Tables 1-3. June 1998. January 1999 Errata Sheet. April 2000 Addendum. June 2004 Addendum.

e/ New York State Public Water Systems; MCLs; Monitoring Requirements; Notifications Required, Table 3 - Organic Chemicals MCL Determination, Table 9 D - Organic Chemicals-POCs Minimum Monitoring Requirements, Table 17 - Information Collection Rule Contaminant Reporting Requirements (10 CRR-NY 5-1). Accessed on December 4, 2019.

f/ Criteria for total trihalomethanes.

g/ Criteria for total 1,3-dichloropropene.

h/ Criteria for individual xylene isomers.

i/ Samples collected in December 2001 were analyzed for TOC; samples collected subsequent to December 2001 were analyzed for DOC with the exception of MW-2S, MW-2, MW-3S, MW-3, MW-16S, MW-16, MW-18S, MW-18, and PMW-1 during the June 2012 event.

j/ Data Qualifiers:
- U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.
- J = Analyte present. Reported value may not be accurate or precise.
- UJ = Not detected. Quantitation limit may be inaccurate or imprecise.
- R = Unusable result. Analyte may or may not be present in the sample.
- D = the reported concentration is from a diluted aliquot
- F = MS and/or MSD recovery is outside acceptable limits
- H = Sample was prepped or analyzed beyond the specified holding time.
- J+ = The result is an estimated quantity, but the result may be biased high.

k/ Sample and duplicate.

l/ Turbidity meters were not sent with equipment. Observations of turbidity were recorded in place of readings.

m/ Instrument error.

n/ Results reported for sample collected on June 10, 2020.

ENCLOSURE A

DATA VALIDATION

FOR

TRI CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

ORGANIC ANALYSIS DATA
June 2023 Water Samples

Laboratory Sample Delivery Group (SDG) No. 680-236256-1

Analyses Performed By:

Eurofins Savannah
Savannah, Georgia

For:

WSP USA Inc.
Pittsburgh, Pennsylvania

Data Validation By:

ddms, inc.
St. Paul, Minnesota

August 18, 2023

2125-0007/ekd/das
Tri Cities Barrel \680-236256-1.docx

EXECUTIVE SUMMARY

Validation of the organic analysis data (volatile organic compounds [VOCs]) prepared by Eurofins Lancaster Laboratories Environment Testing, LLC (ELLE), under subcontract from Eurofins Savannah for four ground water samples and one trip blank from the Tri Cities Barrel Superfund site has been completed by de maximis Data Management Solutions, Inc. (ddms). Stage 4 validation was performed on the samples. The data were reported by the laboratory under SDG No. 680-236256-1. The following samples were reported:

MW-2S	MW-3	MW-3S	MW-2
Trip Blank			

Based on professional judgment, results for non-detects should be considered to be "U," not detected, at the analyte-specific reporting limit (RL) to represent the lowest concentration at which the laboratory has demonstrated that it can detect and accurately quantitate sample concentrations based on the documentation provided. The laboratory reported results as not detected (ND) at the method detection limit (MDL). The MDL is an estimated value based on a statistical determination, not a quantitative measurement supported by the data provided, and it should not be used to report non-detect results.

Based on the validation effort, the following data qualifiers were applied:

- Results for all target compounds in MW-3 were qualified as estimated (UJ) due to analysis beyond the specified holding time for water samples that are not appropriately chemically preserved.

- Results for chloroethane in MW-2 and MW-2S were qualified as estimated with potential high bias (J+) due to the high response for this analyte in the associated continuing calibration (CC) standard.

- The result for acetone in MW-3S was qualified as not detected (U) at the RL due to trip blank contamination.

All other results were determined to be valid as reported by the laboratory.

This report should be considered part of the data package for all future distributions of the data.

INTRODUCTION

Analyses for volatile organic compounds were performed by the laboratory according to SW-486 Method 8260D. Results of sample analyses are reported by the laboratory as either flagged or unflagged; various codes are used to denote specific information regarding the analytical results.

ddms' validation was performed in conformance with the USEPA Region 2 standard operating procedure (SOP) HW-24, "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C," Revision 4, September 2014, and the requirements of the analytical method followed. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the Contract Laboratory Program (CLP). This requires that the data package be presented in accordance with the CLP requirements, so that sufficient supporting documentation is available to facilitate the validation effort. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by Region 2:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analysis indicates the presence of an analyte the has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control (QC) criteria. The analyte may or may not be present in the sample.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of June 13, 2023. The samples were received at the laboratory on June 14, 2023. A copy of the COC record documenting the transfer of the samples from Eurofins Savannah to ELLE was also included in the data package; the samples were received by ELLE on June 15, 2023.

The temperatures of the coolers upon receipt at Eurofins Savannah (1.2°C) and ELLE (1.3°C and 2.1°C) were acceptable (QC <6°C). Appropriate sample preservation was noted on the COC records. According to the batch worksheet, pH values were acceptable (QC <2) for all samples except MW-3 (pH = 6). MW-3 was analyzed on June 26, 2023, beyond the 7-day holding time for water samples that are not chemically preserved. Therefore, results for all target compounds in MW-3 were qualified as estimated (UJ).

All other samples were analyzed within 14-day holding time from collection to analysis specified by the method for chemically-preserved water samples.

II. Documentation

The following documentation issues were observed in the data package:

- The case narrative indicates that a chain of custody was not received for samples MW-2S and MW-3. However, entries for these samples were found on the COC record from the field included in the data package.

- Summary forms and raw data for an initial calibration performed on February 20, 2023, on instrument 9355 were included in the data package. This initial calibration is not associated with the site sample analyses, and the data were not reviewed as a part of the validation effort.

- The samples in this data set were also analyzed for alkalinity, anions, and dissolved organic carbon. At the request of the client, data for these analysis parameters were not reviewed.

The remainder of this report discusses the review effort for each of the parameters. The table below documents the quality control (QC) parameters reviewed for each analysis parameter. The following sections of this report detail the reasons for application of qualifiers to the sample results. Each parameter section discusses the QC excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	N
Laboratory and Field Blanks	N
Surrogates	Y
Laboratory Control Sample	Y
Field Duplicates	NA
MS/MSD	Y
Internal Standard Responses	Y
Compound Identification	Y
Compound Quantitation	Y
Tentatively Identified Compounds (TICs)	Y

NA = not analyzed or not applicable

A. Calibration

Two initial calibrations (ICs), performed on May 15, 2023, and May 15-16, 2023, were reported in support of the samples associated with this data set. The May 15, 2023, IC included target analyte vinyl acetate only, and the May 15-16, 2023, IC included all other target compounds. Documentation of all individual IC standards was present in the data package, and average relative response factor (RRF) as well as percent relative standard (%RSD) values were correctly calculated and accurately reported. All average RRF values were greater than the minimum acceptance limit of 0.05, and all %RSD values were below the maximum acceptance limit of 20%.

An IC verification (ICV) standard was analyzed after each IC. All RRFs were greater than 0.05, and all %Ds for the ICV standards were less than 20%.

Two CC standards were reported, one for vinyl acetate only, and one for all other target analytes. Results for the CC standards were acceptable (QC ≤20%D), with the following exceptions:

Analyte	%D	Associated Samples	Qualfier Applied
CC Standard 6/26/23 at 09:20			
Chloromethane	+23.9	All	None
Chloroethane	+23.6		J+
1,1-Dichloroethene	+22.2		None

Analyte	%D	Associated Samples	Qualfier Applied
Carbon disulfide	+36.0		
Methylene chloride	+21.5		
4-Methyl-2-pentanone	+21.4		

For all of the above compounds, the high %Ds resulted from an increase in instrument response, which suggests the potential for reporting false positives or for sample results that are biased high. Results for chloroethane in MW-2 and MW-2S were qualified as estimated with potential high bias (J+) due to the high response for this analyte in the associated CC standard. Since chloroethane was not detected in any other sample, and chloromethane, 1,1-dichloroethene, carbon disulfide, methylene chloride, and 4-methyl-2-pentanone were not detected in any of the samples, no additional action was necessary.

B. Blanks

One method blank was prepared and analyzed with the site samples. No target compounds were detected in the method blank. A trip blank (Trip Blank) was submitted with the field samples. The following analytes were detected in Trip Blank:

Analyte	Concentration (µg/L)	Affected Samples	Qualifier
Acetone	4.9 J	MW-3S	U
2-Butanone	1.6 J	None	None
Toluene	0.88 J		

The result for acetone in MW-3S was qualified as not detected (U) at the RL due to trip blank contamination. Acetone was not detected in any other field sample, and 2-butanone and toluene were not detected in any of the field samples. Therefore, no additional action was necessary.

DATA VALIDATION

FOR

TRI CITIES BARREL SUPERFUND SITE
FENTON, NEW YORK

ORGANIC ANALYSIS DATA
June 2023 Water Samples

Laboratory Sample Delivery Group (SDG) No. 680-236351-1

Analyses Performed By:

Eurofins Savannah
Savannah, Georgia

For:

WSP USA Inc.
Pittsburgh, Pennsylvania

Data Validation By:

ddms, inc.
St. Paul, Minnesota

August 18, 2023

2125-0007/ekd/das
Tri Cities Barrel \680-236351-1.docx

EXECUTIVE SUMMARY

Validation of the organic analysis data (volatile organic compounds [VOCs]) prepared by Eurofins Savannah for six ground water samples, one equipment blank, and one trip blank from the Tri Cities Barrel Superfund site has been completed by de maximis Data Management Solutions, Inc. (ddms). Stage 4 validation was performed on the samples. The data were reported by the laboratory under SDG No. 680-236351-1. The following samples were reported:

MW-0623	MW-18S	MW-19	MW-7S
EB-061423	PMW-1	Trip Blank	MW-16S

Based on professional judgment, results for non-detects should be considered to be "U," not detected, at the analyte-specific reporting limit (RL) to represent the lowest concentration at which the laboratory has demonstrated that it can detect and accurately quantitate sample concentrations based on the documentation provided. The laboratory reported results as not detected (ND) at the method detection limit (MDL). The MDL is an estimated value based on a statistical determination, not a quantitative measurement supported by the data provided, and it should not be used to report non-detect results.

Based on the validation effort, the following data qualifiers were applied:

- Results for acetone in all samples were qualified as estimated (UJ) due to the low relative response factors (RRFs) in the initial calibration (IC) and IC verification (ICV) standard.

- Results for styrene in all samples were qualified as estimated (UJ) due to high variability between the IC and the ICV standard.

All other results were determined to be valid as reported by the laboratory.

This report should be considered part of the data package for all future distributions of the data.

INTRODUCTION

Analyses for volatile organic compounds were performed by the laboratory according to SW-486 method 8260D. Results of sample analyses are reported by the laboratory as either flagged or unflagged; various codes are used to denote specific information regarding the analytical results.

ddms' validation was performed in conformance with the USEPA Region 2 standard operating procedure (SOP) HW-24, "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C," Revision 4, September 2014, and the requirements of the analytical method followed. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the Contract Laboratory Program (CLP). This requires that the data package be presented in accordance with the CLP requirements, so that sufficient supporting documentation is available to facilitate the validation effort. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by Region 2:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analysis indicates the presence of an analyte the has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control (QC) criteria. The analyte may or may not be present in the sample.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of June 14, 2023. The samples were received at the laboratory on June 15, 2023.

The temperatures of the coolers upon receipt at Eurofins Savannah (5.5°C and 3.0°C) were acceptable (≤6°C). Appropriate sample preservation was noted on the COC record, and pH values were documented on the batch worksheets and were acceptable (QC <2) for all samples. All samples were analyzed within 14-day holding time from collection to analysis specified by the method for chemically-preserved water samples.

II. Documentation

The following documentation issues were observed in the data package:

- Results for sample MW-16S were reported by the laboratory, but this sample was not listed on the COC record. This situation is documented on the login sample receipt checklist.

- A summary form and raw data for a bromofluorobenzene instrument performance check performed on April 23, 2022, on instrument CMSB were included in the data package. This instrument performance check is not associated with the site sample analyses, and the data were not reviewed as a part of the validation effort.

- The samples in this data set were also analyzed for alkalinity, anions, sulfide, and dissolved organic carbon. At the request of the client, data for these analysis parameters were not reviewed.

- The result for tetrachloroethene in MW-19 should have been flagged with an "E" by the laboratory. See Section III.C for further discussion of this issue.

The remainder of this report discusses the review effort for each of the parameters. The table below documents the quality control (QC) parameters reviewed for each analysis parameter. The following sections of this report detail the reasons for application of qualifiers to the sample results. Each parameter section discusses the QC excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	N
Laboratory and Field Blanks	Y
Surrogates	Y
Laboratory Control Sample	N
Field Duplicates	NA
MS/MSD	NA
Internal Standard Responses	Y
Compound Identification	Y
Compound Quantification	N
Tentatively Identified Compounds (TICs)	Y

NA = not analyzed or not applicable

A. Calibration

One IC, performed on June 20, 2023, was reported in support of the samples associated with this data set. Documentation of all individual IC standards was present in the data package, and average relative response factor (RRF) as well as percent relative standard (%RSD) values were correctly calculated and accurately reported. All %RSD values were below the maximum acceptance limit of 20%, and average RRF values were greater than the minimum acceptance limit of 0.05, except for acetone (0.045). Results for acetone in all samples were qualified as estimated (UJ) due to the low average RRF in the IC.

An ICV standard was analyzed after each IC. The %Ds for the ICV standard were less than 20% except for styrene (20.8%), and average RRF values were greater than the minimum acceptance limit of 0.05, except for acetone (0.041). Results for styrene in all samples were qualified as estimated (UJ) due to high variability between the IC and the ICV standard, and results for acetone in all samples were qualified as estimated (UJ) due to the low RRF in the ICV standard.

Two CC standards were reported, one for vinyl acetate only, and one for all other target analytes. Results for the CC standards were acceptable (QC ≤20%D), with the following exceptions:

Analyte	%D	Associated Samples	Qualfier Applied
CC Standard 6/26/23 at 10:23			
Vinyl acetate	+31.6	MW-0623 MW-18S MW-19	None
Ethylbenzene	+22.0		
m,p-Xylenes	+29.7		

Analyte	%D	Associated Samples	Qualfier Applied
o-Xylene	+38.7	MW-7S EB-061423 PMW-1	
Styrene	+21.1		
CC Standard 6/27/23 at 10:53			
Acetone	+28.3	PMW-1 DL Trip Blank MW-16S	None
Vinyl acetate	+37.0		
2-Butanone	+35.1		
4-Methyl-2-pentanone	+32.3		
2-Hexanone	+28.0		
Ethylbenzene	+21.6		
Bromoform	+20.4		

For all of the above compounds, the high %Ds resulted from an increase in instrument response, which suggests the potential for reporting false positives or for sample results that are biased high. Since none of these compounds was detected in any of the associated site samples, no action was necessary.

B. Laboratory Control Sample (LCS) / LCS Duplicate (LCSD)

Two LCS/LCSD pairs were prepared and analyzed with the samples. Percent recoveries (%Rs) and relative percent differences (RPDs) between paired LCS and LCSD results were within the validation limits (70-130%R, ≤20 RPD), with the following exceptions:

Analyte	LCS %R	LCSD %R	RPD	Associated Sample	Qualifier Applied
LCS/LCSD: 680-785468/4 and /5					
Vinyl acetate	135	137	a	MW-0623 MW-18S MW-19 MW-7S EB-061423 PMW-1	None
LCS/LCSD: 680-785686/4 and /5					
2-Butanone	134	139	a	PMW-1 DL Trip Blank MW-16S	None
4-Methyl-2-pentanone	a	133	a		
Vinyl acetate	132	132	a		
2-Hexanone	a	136	a		
Total xylenes	a	131	a		

a = acceptable

Since the recoveries were high and none of the above compounds was detected in any of the associated samples, no action was necessary on this basis.

C. Compound Quantitation

Target analyte concentrations and RLs were correctly calculated and reported, including necessary adjustments for dilutions. Sample MW-16S was analyzed at a 10-fold dilution to obtain concentrations of cis-1,2-dichloroethene, trichloroethene, and vinyl chloride that were within the established calibration range.

The concentration of tetrachloroethene in MW-19 exceeded the upper limit of the calibration range. This concentration (203 µg/L) was within 1.5% of the upper limit, which is at 200 µg/L, well within the 10% limit that is considered to be within experimental error. No action was necessary on this basis. This result should have been flagged with an “E” by the laboratory to alert the data user that the concentration exceeded the calibration range.

ENCLOSURE B

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Erin Huntley
WSP USA Inc.
11 Stanwix Street
Suite 950
Pittsburgh, Pennsylvania 15222

Generated 7/13/2023 9:00:20 AM Revision 1

JOB DESCRIPTION

Tri Cities Barrel Superfund Site-NY

JOB NUMBER

680-236256-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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Revision 1

Authorized for release by
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Case Narrative

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Job ID: 680-236256-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-236256-1

Comments
No additional comments.

Receipt
The samples were received on 6/14/2023 9:56 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2º C.

Receipt Exceptions

A Chain-of-Custody (COC) was not received with these samples: MW-2S (680-236256-1), MW-3 (680-236256-2) and MW-3MS (680-236256-2[MS]).

GC/MS VOA
Method 8260D: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples: MW-3 (680-236256-2).

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

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

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

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

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

Sample Summary

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-236256-1	MW-2S	Water	06/13/23 13:10	06/14/23 09:56
680-236256-2	MW-3	Water	06/13/23 13:15	06/14/23 09:56
680-236256-3	MW-3S	Water	06/13/23 15:55	06/14/23 09:56
680-236256-4	MW-2	Water	06/13/23 16:00	06/14/23 09:56
680-236256-5	Trip Blank	Water	06/13/23 00:00	06/14/23 09:56

Method Summary

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
9056A	Anions, Ion Chromatography	SW846	ELLE
2320B-2011	Alkalinity, Total	SM	ELLE
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	ELLE
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET BUF
5030C	Purge and Trap	SW846	ELLE

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Definitions/Glossary

Client: WSP USA Inc. Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-2S
Date Collected: 06/13/23 13:10
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.70	U	20	0.70	ug/L			06/26/23 18:53	1
Benzene	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Bromodichloromethane	0.20	U	1.0	0.20	ug/L			06/26/23 18:53	1
Bromoform	1.0	U	4.0	1.0	ug/L			06/26/23 18:53	1
Bromomethane	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
2-Butanone (MEK)	0.50	U	10	0.50	ug/L			06/26/23 18:53	1
Carbon disulfide	0.30	U	5.0	0.30	ug/L			06/26/23 18:53	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Chlorobenzene	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Chlorodibromomethane	0.20	U	1.0	0.20	ug/L			06/26/23 18:53	1
Chloroethane	**0.75**	**J**	1.0	0.30	ug/L			06/26/23 18:53	1
Chloroform	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Chloromethane	0.55	U	2.0	0.55	ug/L			06/26/23 18:53	1
cis-1,2-Dichloroethene	**9.1**		1.0	0.30	ug/L			06/26/23 18:53	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 18:53	1
1,1-Dichloroethane	**16**		1.0	0.30	ug/L			06/26/23 18:53	1
1,2-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
1,1-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
1,2-Dichloroethene, Total	**9.1**		1.0	0.30	ug/L			06/26/23 18:53	1
1,2-Dichloropropane	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
1,1-Dichloropropene	0.30	U	5.0	0.30	ug/L			06/26/23 18:53	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/26/23 18:53	1
2-Hexanone	0.85	U	10	0.85	ug/L			06/26/23 18:53	1
Methylene Chloride	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
4-Methyl-2-pentanone (MIBK)	0.50	U	10	0.50	ug/L			06/26/23 18:53	1
Styrene	0.30	U	5.0	0.30	ug/L			06/26/23 18:53	1
1,1,2,2-Tetrachloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Tetrachloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Toluene	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
trans-1,2-Dichloroethene	0.70	U	2.0	0.70	ug/L			06/26/23 18:53	1
trans-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 18:53	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
1,1,2-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Trichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 18:53	1
Vinyl acetate	2.0	U	10	2.0	ug/L			06/26/23 18:53	1
Vinyl chloride	**0.85**	**J**	1.0	0.30	ug/L			06/26/23 18:53	1
Xylenes, Total	0.40	U	1.0	0.40	ug/L			06/26/23 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*06/26/23 18:53*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 120*		*06/26/23 18:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*06/26/23 18:53*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*06/26/23 18:53*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-2S
Date Collected: 06/13/23 13:10
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-1
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	4.5	J	7.5	3.0	mg/L			06/15/23 12:52	5
Nitrate, Dissolved	0.41	J	0.55	0.25	mg/L			06/15/23 12:52	5
Sulfate, Dissolved	2.5	J	7.5	2.5	mg/L			06/15/23 12:52	5

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-2S
Lab Sample ID: 680-236256-1
Date Collected: 06/13/23 13:10
Matrix: Water
Date Received: 06/14/23 09:56

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**330**		8.0	2.6	mg/L			06/23/23 19:12	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 10:58	1
DOC Result 1 (SW846 9060A)	**3.1**		1.0	0.43	mg/L			07/01/23 06:09	1
DOC Result 2 (SW846 9060A)	**3.0**		1.0	0.43	mg/L			07/01/23 06:09	1
DOC Result 3 (SW846 9060A)	**3.3**		1.0	0.43	mg/L			07/01/23 06:09	1
DOC Result 4 (SW846 9060A)	**3.0**		1.0	0.43	mg/L			07/01/23 06:09	1
Dissolved Organic Carbon (SW846 9060A)	**3.1**		1.0	0.43	mg/L			07/01/23 06:09	1
Dissolved Organic Carbon - Quad (SW846 9060A)	**3.1**		1.0	0.43	mg/L			07/01/23 06:09	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-3
Date Collected: 06/13/23 13:15
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.70	U	20	0.70	ug/L			06/26/23 17:03	1
Benzene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Bromodichloromethane	0.20	U	1.0	0.20	ug/L			06/26/23 17:03	1
Bromoform	1.0	U	4.0	1.0	ug/L			06/26/23 17:03	1
Bromomethane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
2-Butanone (MEK)	0.50	U	10	0.50	ug/L			06/26/23 17:03	1
Carbon disulfide	0.30	U	5.0	0.30	ug/L			06/26/23 17:03	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Chlorobenzene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Chlorodibromomethane	0.20	U	1.0	0.20	ug/L			06/26/23 17:03	1
Chloroethane	0.30	U F1	1.0	0.30	ug/L			06/26/23 17:03	1
Chloroform	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Chloromethane	0.55	U F1	2.0	0.55	ug/L			06/26/23 17:03	1
cis-1,2-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
cis-1,3-Dichloropropene	0.20	U F1	1.0	0.20	ug/L			06/26/23 17:03	1
1,1-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
1,2-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
1,1-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
1,2-Dichloroethene, Total	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
1,2-Dichloropropane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
1,1-Dichloropropene	0.30	U	5.0	0.30	ug/L			06/26/23 17:03	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/26/23 17:03	1
2-Hexanone	0.85	U	10	0.85	ug/L			06/26/23 17:03	1
Methylene Chloride	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
4-Methyl-2-pentanone (MIBK)	0.50	U	10	0.50	ug/L			06/26/23 17:03	1
Styrene	0.30	U	5.0	0.30	ug/L			06/26/23 17:03	1
1,1,2,2-Tetrachloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Tetrachloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Toluene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
trans-1,2-Dichloroethene	0.70	U	2.0	0.70	ug/L			06/26/23 17:03	1
trans-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 17:03	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
1,1,2-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Trichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Vinyl acetate	2.0	U	10	2.0	ug/L			06/26/23 17:03	1
Vinyl chloride	0.30	U	1.0	0.30	ug/L			06/26/23 17:03	1
Xylenes, Total	0.40	U	1.0	0.40	ug/L			06/26/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*06/26/23 17:03*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 120*		*06/26/23 17:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*06/26/23 17:03*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*06/26/23 17:03*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-3
Date Collected: 06/13/23 13:15
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-2
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**280**	**F1**	150	60	mg/L			06/16/23 13:11	100
Nitrate, Dissolved	0.25	U	0.55	0.25	mg/L			06/15/23 13:05	5
Sulfate, Dissolved	**24**	**F1**	7.5	2.5	mg/L			06/15/23 13:05	5

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-3
Lab Sample ID: 680-236256-2
Date Collected: 06/13/23 13:15
Matrix: Water
Date Received: 06/14/23 09:56

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**240**	**F1**	8.0	2.6	mg/L			06/23/23 18:52	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/16/23 13:59	1
DOC Result 1 (SW846 9060A)	**0.87**	**J**	1.0	0.43	mg/L			07/01/23 07:35	1
DOC Result 2 (SW846 9060A)	**0.80**	**J**	1.0	0.43	mg/L			07/01/23 07:35	1
DOC Result 3 (SW846 9060A)	**0.95**	**J**	1.0	0.43	mg/L			07/01/23 07:35	1
DOC Result 4 (SW846 9060A)	**0.77**	**J**	1.0	0.43	mg/L			07/01/23 07:35	1
Dissolved Organic Carbon (SW846 9060A)	**0.85**	**J**	1.0	0.43	mg/L			07/01/23 07:35	1
Dissolved Organic Carbon - Quad (SW846 9060A)	**0.85**	**J**	1.0	0.43	mg/L			07/01/23 07:35	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-3S
Date Collected: 06/13/23 15:55
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**2.1**	**J**	20	0.70	ug/L			06/26/23 19:15	1
Benzene	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Bromodichloromethane	0.20	U	1.0	0.20	ug/L			06/26/23 19:15	1
Bromoform	1.0	U	4.0	1.0	ug/L			06/26/23 19:15	1
Bromomethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
2-Butanone (MEK)	0.50	U	10	0.50	ug/L			06/26/23 19:15	1
Carbon disulfide	0.30	U	5.0	0.30	ug/L			06/26/23 19:15	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Chlorobenzene	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Chlorodibromomethane	0.20	U	1.0	0.20	ug/L			06/26/23 19:15	1
Chloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Chloroform	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Chloromethane	0.55	U	2.0	0.55	ug/L			06/26/23 19:15	1
cis-1,2-Dichloroethene	**2.1**		1.0	0.30	ug/L			06/26/23 19:15	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 19:15	1
1,1-Dichloroethane	**2.0**		1.0	0.30	ug/L			06/26/23 19:15	1
1,2-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
1,1-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
1,2-Dichloroethene, Total	**2.1**		1.0	0.30	ug/L			06/26/23 19:15	1
1,2-Dichloropropane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
1,1-Dichloropropene	0.30	U	5.0	0.30	ug/L			06/26/23 19:15	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/26/23 19:15	1
2-Hexanone	0.85	U	10	0.85	ug/L			06/26/23 19:15	1
Methylene Chloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
4-Methyl-2-pentanone (MIBK)	0.50	U	10	0.50	ug/L			06/26/23 19:15	1
Styrene	0.30	U	5.0	0.30	ug/L			06/26/23 19:15	1
1,1,2,2-Tetrachloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Tetrachloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Toluene	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
trans-1,2-Dichloroethene	0.70	U	2.0	0.70	ug/L			06/26/23 19:15	1
trans-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 19:15	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
1,1,2-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Trichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Vinyl acetate	2.0	U	10	2.0	ug/L			06/26/23 19:15	1
Vinyl chloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:15	1
Xylenes, Total	0.40	U	1.0	0.40	ug/L			06/26/23 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*06/26/23 19:15*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 120*		*06/26/23 19:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*06/26/23 19:15*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*06/26/23 19:15*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-3S

Date Collected: 06/13/23 15:55
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	97		38	15	mg/L			06/16/23 14:28	25
Nitrate, Dissolved	0.38	J	0.55	0.25	mg/L			06/15/23 13:56	5
Sulfate, Dissolved	3.1	J	7.5	2.5	mg/L			06/15/23 13:56	5

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-3S
Lab Sample ID: 680-236256-3
Date Collected: 06/13/23 15:55
Matrix: Water
Date Received: 06/14/23 09:56

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	270		8.0	2.6	mg/L			06/23/23 19:18	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/16/23 13:59	1
DOC Result 1 (SW846 9060A)	4.3		1.0	0.43	mg/L			07/01/23 08:59	1
DOC Result 2 (SW846 9060A)	4.2		1.0	0.43	mg/L			07/01/23 08:59	1
DOC Result 3 (SW846 9060A)	4.5		1.0	0.43	mg/L			07/01/23 08:59	1
DOC Result 4 (SW846 9060A)	4.1		1.0	0.43	mg/L			07/01/23 08:59	1
Dissolved Organic Carbon (SW846 9060A)	4.3		1.0	0.43	mg/L			07/01/23 08:59	1
Dissolved Organic Carbon - Quad (SW846 9060A)	4.3		1.0	0.43	mg/L			07/01/23 08:59	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-2
Date Collected: 06/13/23 16:00
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.70	U	20	0.70	ug/L			06/26/23 19:37	1
Benzene	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Bromodichloromethane	0.20	U	1.0	0.20	ug/L			06/26/23 19:37	1
Bromoform	1.0	U	4.0	1.0	ug/L			06/26/23 19:37	1
Bromomethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
2-Butanone (MEK)	0.50	U	10	0.50	ug/L			06/26/23 19:37	1
Carbon disulfide	0.30	U	5.0	0.30	ug/L			06/26/23 19:37	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Chlorobenzene	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Chlorodibromomethane	0.20	U	1.0	0.20	ug/L			06/26/23 19:37	1
Chloroethane	**1.6**		1.0	0.30	ug/L			06/26/23 19:37	1
Chloroform	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Chloromethane	0.55	U	2.0	0.55	ug/L			06/26/23 19:37	1
cis-1,2-Dichloroethene	**9.9**		1.0	0.30	ug/L			06/26/23 19:37	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 19:37	1
1,1-Dichloroethane	**6.3**		1.0	0.30	ug/L			06/26/23 19:37	1
1,2-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
1,1-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
1,2-Dichloroethene, Total	**9.9**		1.0	0.30	ug/L			06/26/23 19:37	1
1,2-Dichloropropane	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
1,1-Dichloropropene	0.30	U	5.0	0.30	ug/L			06/26/23 19:37	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/26/23 19:37	1
2-Hexanone	0.85	U	10	0.85	ug/L			06/26/23 19:37	1
Methylene Chloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
4-Methyl-2-pentanone (MIBK)	0.50	U	10	0.50	ug/L			06/26/23 19:37	1
Styrene	0.30	U	5.0	0.30	ug/L			06/26/23 19:37	1
1,1,2,2-Tetrachloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Tetrachloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Toluene	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
trans-1,2-Dichloroethene	0.70	U	2.0	0.70	ug/L			06/26/23 19:37	1
trans-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 19:37	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
1,1,2-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:37	1
Trichloroethene	**33**		1.0	0.30	ug/L			06/26/23 19:37	1
Vinyl acetate	2.0	U	10	2.0	ug/L			06/26/23 19:37	1
Vinyl chloride	**1.1**		1.0	0.30	ug/L			06/26/23 19:37	1
Xylenes, Total	0.40	U	1.0	0.40	ug/L			06/26/23 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*06/26/23 19:37*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 120*		*06/26/23 19:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*06/26/23 19:37*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*06/26/23 19:37*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-2
Date Collected: 06/13/23 16:00
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-4
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**190**		75	30	mg/L			06/16/23 14:41	50
Nitrate, Dissolved	0.25	U	0.55	0.25	mg/L			06/15/23 14:09	5
Sulfate, Dissolved	**21**		7.5	2.5	mg/L			06/15/23 14:09	5

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-2
Lab Sample ID: 680-236256-4
Date Collected: 06/13/23 16:00
Matrix: Water
Date Received: 06/14/23 09:56

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	300		8.0	2.6	mg/L			06/23/23 19:26	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/16/23 13:59	1
DOC Result 1 (SW846 9060A)	3.0		1.0	0.43	mg/L			07/01/23 09:27	1
DOC Result 2 (SW846 9060A)	3.1		1.0	0.43	mg/L			07/01/23 09:27	1
DOC Result 3 (SW846 9060A)	3.5		1.0	0.43	mg/L			07/01/23 09:27	1
DOC Result 4 (SW846 9060A)	3.1		1.0	0.43	mg/L			07/01/23 09:27	1
Dissolved Organic Carbon (SW846 9060A)	3.2		1.0	0.43	mg/L			07/01/23 09:27	1
Dissolved Organic Carbon - Quad (SW846 9060A)	3.2		1.0	0.43	mg/L			07/01/23 09:27	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: Trip Blank

Date Collected: 06/13/23 00:00
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-5

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**4.9**	**J**	20	0.70	ug/L			06/26/23 19:59	1
Benzene	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Bromodichloromethane	0.20	U	1.0	0.20	ug/L			06/26/23 19:59	1
Bromoform	1.0	U	4.0	1.0	ug/L			06/26/23 19:59	1
Bromomethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
2-Butanone (MEK)	**1.6**	**J**	10	0.50	ug/L			06/26/23 19:59	1
Carbon disulfide	0.30	U	5.0	0.30	ug/L			06/26/23 19:59	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Chlorobenzene	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Chlorodibromomethane	0.20	U	1.0	0.20	ug/L			06/26/23 19:59	1
Chloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Chloroform	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Chloromethane	0.55	U	2.0	0.55	ug/L			06/26/23 19:59	1
cis-1,2-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 19:59	1
1,1-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
1,2-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
1,1-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
1,2-Dichloroethene, Total	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
1,2-Dichloropropane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
1,1-Dichloropropene	0.30	U	5.0	0.30	ug/L			06/26/23 19:59	1
1,4-Dioxane	29	U	250	29	ug/L			06/26/23 19:59	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/26/23 19:59	1
2-Hexanone	0.85	U	10	0.85	ug/L			06/26/23 19:59	1
Methylene Chloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
4-Methyl-2-pentanone (MIBK)	0.50	U	10	0.50	ug/L			06/26/23 19:59	1
Styrene	0.30	U	5.0	0.30	ug/L			06/26/23 19:59	1
1,1,2,2-Tetrachloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Tetrachloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Toluene	**0.88**	**J**	1.0	0.30	ug/L			06/26/23 19:59	1
trans-1,2-Dichloroethene	0.70	U	2.0	0.70	ug/L			06/26/23 19:59	1
trans-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 19:59	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
1,1,2-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Trichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Vinyl acetate	2.0	U	10	2.0	ug/L			06/26/23 19:59	1
Vinyl chloride	0.30	U	1.0	0.30	ug/L			06/26/23 19:59	1
Xylenes, Total	0.40	U	1.0	0.40	ug/L			06/26/23 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*06/26/23 19:59*	*1*
Dibromofluoromethane (Surr)	*118*		*80 - 120*		*06/26/23 19:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*06/26/23 19:59*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*06/26/23 19:59*	*1*

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

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

Lab Sample ID: MB 410-390552/9
Matrix: Water
Analysis Batch: 390552

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.70	U	20	0.70	ug/L			06/26/23 11:33	1
Benzene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Bromodichloromethane	0.20	U	1.0	0.20	ug/L			06/26/23 11:33	1
Bromoform	1.0	U	4.0	1.0	ug/L			06/26/23 11:33	1
Bromomethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
2-Butanone (MEK)	0.50	U	10	0.50	ug/L			06/26/23 11:33	1
Carbon disulfide	0.30	U	5.0	0.30	ug/L			06/26/23 11:33	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Chlorobenzene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Chlorodibromomethane	0.20	U	1.0	0.20	ug/L			06/26/23 11:33	1
Chloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Chloroform	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Chloromethane	0.55	U	2.0	0.55	ug/L			06/26/23 11:33	1
cis-1,2-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 11:33	1
1,1-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
1,2-Dichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
1,1-Dichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
1,2-Dichloroethene, Total	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
1,2-Dichloropropane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
1,1-Dichloropropene	0.30	U	5.0	0.30	ug/L			06/26/23 11:33	1
1,4-Dioxane	29	U	250	29	ug/L			06/26/23 11:33	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/26/23 11:33	1
2-Hexanone	0.85	U	10	0.85	ug/L			06/26/23 11:33	1
Methylene Chloride	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
4-Methyl-2-pentanone (MIBK)	0.50	U	10	0.50	ug/L			06/26/23 11:33	1
Styrene	0.30	U	5.0	0.30	ug/L			06/26/23 11:33	1
1,1,2,2-Tetrachloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Tetrachloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Toluene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
trans-1,2-Dichloroethene	0.70	U	2.0	0.70	ug/L			06/26/23 11:33	1
trans-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			06/26/23 11:33	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
1,1,2-Trichloroethane	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Trichloroethene	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Vinyl acetate	2.0	U	10	2.0	ug/L			06/26/23 11:33	1
Vinyl chloride	0.30	U	1.0	0.30	ug/L			06/26/23 11:33	1
Xylenes, Total	0.40	U	1.0	0.40	ug/L			06/26/23 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*06/26/23 11:33*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*06/26/23 11:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*06/26/23 11:33*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*06/26/23 11:33*	*1*

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

Lab Sample ID: LCS 410-390552/5
Matrix: Water
Analysis Batch: 390552

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	260		ug/L		104	54 - 157
Benzene	20.0	19.7		ug/L		98	80 - 120
Bromodichloromethane	20.0	19.1		ug/L		95	71 - 120
Bromoform	20.0	19.3		ug/L		97	51 - 120
Bromomethane	20.0	18.5		ug/L		93	53 - 128
2-Butanone (MEK)	250	271		ug/L		108	59 - 135
Carbon disulfide	20.0	21.9		ug/L		109	65 - 128
Carbon tetrachloride	20.0	19.8		ug/L		99	64 - 134
Chlorobenzene	20.0	17.8		ug/L		89	80 - 120
Chlorodibromomethane	20.0	18.9		ug/L		95	71 - 120
Chloroethane	20.0	21.9		ug/L		110	55 - 123
Chloroform	20.0	19.4		ug/L		97	80 - 120
Chloromethane	20.0	20.3		ug/L		101	56 - 121
cis-1,2-Dichloroethene	20.0	19.9		ug/L		99	80 - 125
cis-1,3-Dichloropropene	20.0	16.4		ug/L		82	75 - 120
1,1-Dichloroethane	20.0	19.7		ug/L		99	80 - 120
1,2-Dichloroethane	20.0	18.6		ug/L		93	73 - 124
1,1-Dichloroethene	20.0	21.0		ug/L		105	80 - 131
1,2-Dichloroethene, Total	40.0	39.0		ug/L		98	80 - 125
1,2-Dichloropropane	20.0	19.3		ug/L		97	80 - 120
1,1-Dichloropropene	20.0	19.0		ug/L		95	78 - 120
1,4-Dioxane	500	460		ug/L		92	63 - 146
Ethylbenzene	20.0	18.0		ug/L		90	80 - 120
2-Hexanone	250	275		ug/L		110	56 - 135
Methylene Chloride	20.0	21.8		ug/L		109	80 - 120
4-Methyl-2-pentanone (MIBK)	250	269		ug/L		108	62 - 133
Styrene	20.0	17.2		ug/L		86	80 - 120
1,1,2,2-Tetrachloroethane	20.0	19.2		ug/L		96	72 - 120
Tetrachloroethene	20.0	17.6		ug/L		88	80 - 120
Toluene	20.0	18.8		ug/L		94	80 - 120
trans-1,2-Dichloroethene	20.0	19.1		ug/L		96	80 - 126
trans-1,3-Dichloropropene	20.0	17.8		ug/L		89	67 - 120
1,1,1-Trichloroethane	20.0	19.5		ug/L		98	67 - 126
1,1,2-Trichloroethane	20.0	18.8		ug/L		94	80 - 120
Trichloroethene	20.0	17.8		ug/L		89	80 - 120
Vinyl chloride	20.0	19.2		ug/L		96	56 - 120
Xylenes, Total	60.0	53.3		ug/L		89	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*

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

Lab Sample ID: LCS 410-390552/6
Matrix: Water
Analysis Batch: 390552

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Vinyl acetate			100	100		ug/L		100	63 - 145		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 390552

Client Sample ID: MW-3MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetone	0.70	U	250	215		ug/L		86	54 - 157		
Benzene	0.30	U	20.0	19.4		ug/L		97	80 - 120		
Bromodichloromethane	0.20	U	20.0	17.9		ug/L		89	71 - 120		
Bromoform	1.0	U	20.0	16.9		ug/L		85	51 - 120		
Bromomethane	0.30	U	20.0	19.7		ug/L		98	53 - 128		
2-Butanone (MEK)	0.50	U	250	250		ug/L		100	59 - 135		
Carbon disulfide	0.30	U	20.0	22.4		ug/L		112	65 - 128		
Carbon tetrachloride	0.30	U	20.0	20.3		ug/L		101	64 - 134		
Chlorobenzene	0.30	U	20.0	17.7		ug/L		88	80 - 120		
Chlorodibromomethane	0.20	U	20.0	17.3		ug/L		87	71 - 120		
Chloroethane	0.30	U F1	20.0	23.9		ug/L		119	55 - 123		
Chloroform	0.30	U	20.0	18.9		ug/L		94	80 - 120		
Chloromethane	0.55	U F1	20.0	22.9		ug/L		115	56 - 121		
cis-1,2-Dichloroethene	0.30	U	20.0	19.4		ug/L		97	80 - 125		
cis-1,3-Dichloropropene	0.20	U F1	20.0	14.0	F1	ug/L		70	75 - 120		
1,1-Dichloroethane	0.30	U	20.0	19.6		ug/L		98	80 - 120		
1,2-Dichloroethane	0.30	U	20.0	17.7		ug/L		88	73 - 124		
1,1-Dichloroethene	0.30	U	20.0	21.9		ug/L		109	80 - 131		
1,2-Dichloroethene, Total	0.30	U	40.0	38.8		ug/L		97	80 - 125		
1,2-Dichloropropane	0.30	U	20.0	18.6		ug/L		93	80 - 120		
1,1-Dichloropropene	0.30	U	20.0	19.0		ug/L		95	78 - 120		
Ethylbenzene	0.40	U	20.0	17.6		ug/L		88	80 - 120		
2-Hexanone	0.85	U	250	255		ug/L		102	56 - 135		
Methylene Chloride	0.30	U	20.0	21.5		ug/L		107	80 - 120		
4-Methyl-2-pentanone (MIBK)	0.50	U	250	245		ug/L		98	62 - 133		
Styrene	0.30	U	20.0	16.4		ug/L		82	80 - 120		
1,1,2,2-Tetrachloroethane	0.30	U	20.0	17.6		ug/L		88	72 - 120		
Tetrachloroethene	0.30	U	20.0	18.0		ug/L		90	80 - 120		
Toluene	0.30	U	20.0	18.0		ug/L		90	80 - 120		
trans-1,2-Dichloroethene	0.70	U	20.0	19.4		ug/L		97	80 - 126		
trans-1,3-Dichloropropene	0.20	U	20.0	15.6		ug/L		78	67 - 120		
1,1,1-Trichloroethane	0.30	U	20.0	19.6		ug/L		98	67 - 126		
1,1,2-Trichloroethane	0.30	U	20.0	17.3		ug/L		86	80 - 120		
Trichloroethene	0.30	U	20.0	17.5		ug/L		87	80 - 120		
Vinyl chloride	0.30	U	20.0	20.9		ug/L		105	56 - 120		

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

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 390552

Client Sample ID: MW-3MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Xylenes, Total	0.40	U	60.0	51.5		ug/L		86	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 390552

Client Sample ID: MW-3MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl acetate	2.0	U	100	99.8		ug/L		100	63 - 145

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 390552

Client Sample ID: MW-3MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.70	U	250	261		ug/L		105	54 - 157	19	30
Benzene	0.30	U	20.0	21.5		ug/L		107	80 - 120	10	30
Bromodichloromethane	0.20	U	20.0	19.5		ug/L		97	71 - 120	9	30
Bromoform	1.0	U	20.0	18.6		ug/L		93	51 - 120	9	30
Bromomethane	0.30	U	20.0	21.2		ug/L		106	53 - 128	8	30
2-Butanone (MEK)	0.50	U	250	282		ug/L		113	59 - 135	12	30
Carbon disulfide	0.30	U	20.0	24.2		ug/L		121	65 - 128	8	30
Carbon tetrachloride	0.30	U	20.0	22.3		ug/L		111	64 - 134	9	30
Chlorobenzene	0.30	U	20.0	19.0		ug/L		95	80 - 120	7	30
Chlorodibromomethane	0.20	U	20.0	19.3		ug/L		96	71 - 120	11	30
Chloroethane	0.30	U F1	20.0	25.5	F1	ug/L		128	55 - 123	7	30
Chloroform	0.30	U	20.0	20.7		ug/L		104	80 - 120	9	30
Chloromethane	0.55	U F1	20.0	25.3	F1	ug/L		126	56 - 121	10	30
cis-1,2-Dichloroethene	0.30	U	20.0	21.5		ug/L		107	80 - 125	10	30
cis-1,3-Dichloropropene	0.20	U F1	20.0	15.9		ug/L		79	75 - 120	12	30
1,1-Dichloroethane	0.30	U	20.0	21.7		ug/L		108	80 - 120	10	30
1,2-Dichloroethane	0.30	U	20.0	19.8		ug/L		99	73 - 124	11	30
1,1-Dichloroethene	0.30	U	20.0	24.7		ug/L		123	80 - 131	12	30
1,2-Dichloroethene, Total	0.30	U	40.0	42.6		ug/L		107	80 - 125	9	30
1,2-Dichloropropane	0.30	U	20.0	20.6		ug/L		103	80 - 120	10	30
1,1-Dichloropropene	0.30	U	20.0	20.8		ug/L		104	78 - 120	9	30
Ethylbenzene	0.40	U	20.0	19.7		ug/L		98	80 - 120	11	30

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

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 390552

Client Sample ID: MW-3MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Hexanone	0.85	U	250	285		ug/L		114	56 - 135	11	30
Methylene Chloride	0.30	U	20.0	23.9		ug/L		120	80 - 120	11	30
4-Methyl-2-pentanone (MIBK)	0.50	U	250	278		ug/L		111	62 - 133	13	30
Styrene	0.30	U	20.0	18.2		ug/L		91	80 - 120	10	30
1,1,2,2-Tetrachloroethane	0.30	U	20.0	19.7		ug/L		99	72 - 120	11	30
Tetrachloroethene	0.30	U	20.0	19.9		ug/L		99	80 - 120	10	30
Toluene	0.30	U	20.0	20.0		ug/L		100	80 - 120	10	30
trans-1,2-Dichloroethene	0.70	U	20.0	21.1		ug/L		106	80 - 126	8	30
trans-1,3-Dichloropropene	0.20	U	20.0	17.7		ug/L		88	67 - 120	13	30
1,1,1-Trichloroethane	0.30	U	20.0	21.9		ug/L		109	67 - 126	11	30
1,1,2-Trichloroethane	0.30	U	20.0	19.4		ug/L		97	80 - 120	12	30
Trichloroethene	0.30	U	20.0	19.9		ug/L		99	80 - 120	13	30
Vinyl chloride	0.30	U	20.0	23.8		ug/L		119	56 - 120	13	30
Xylenes, Total	0.40	U	60.0	57.2		ug/L		95	80 - 120	10	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 390552

Client Sample ID: MW-3MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl acetate	2.0	U	100	101		ug/L		101	63 - 145	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*109*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 410-386985/12
Matrix: Water
Analysis Batch: 386985

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate, Dissolved	0.050	U	0.11	0.050	mg/L			06/15/23 12:10	1

Lab Sample ID: LCS 410-386985/10
Matrix: Water
Analysis Batch: 386985

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate, Dissolved			0.750	0.702		mg/L		94	90 - 110		

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCSD 410-386985/11
Matrix: Water
Analysis Batch: 386985

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate, Dissolved			0.750	0.703		mg/L		94	90 - 110	0	20

Lab Sample ID: MB 410-386986/12
Matrix: Water
Analysis Batch: 386986

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	0.60	U	1.5	0.60	mg/L			06/15/23 12:10	1
Sulfate, Dissolved	0.50	U	1.5	0.50	mg/L			06/15/23 12:10	1

Lab Sample ID: LCS 410-386986/10
Matrix: Water
Analysis Batch: 386986

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride, Dissolved			3.00	3.04		mg/L		101	90 - 110
Sulfate, Dissolved			7.50	7.48		mg/L		100	90 - 110

Lab Sample ID: LCSD 410-386986/11
Matrix: Water
Analysis Batch: 386986

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride, Dissolved			3.00	3.01		mg/L		100	90 - 110	1	20
Sulfate, Dissolved			7.50	7.44		mg/L		99	90 - 110	1	20

Lab Sample ID: MB 410-387356/5
Matrix: Water
Analysis Batch: 387356

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	0.60	U	1.5	0.60	mg/L			06/16/23 05:42	1
Sulfate, Dissolved	0.50	U	1.5	0.50	mg/L			06/16/23 05:42	1

Lab Sample ID: LCS 410-387356/3
Matrix: Water
Analysis Batch: 387356

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride, Dissolved			3.00	3.09		mg/L		103	90 - 110
Sulfate, Dissolved			7.50	7.52		mg/L		100	90 - 110

Lab Sample ID: LCSD 410-387356/4
Matrix: Water
Analysis Batch: 387356

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride, Dissolved			3.00	3.06		mg/L		102	90 - 110	1	20
Sulfate, Dissolved			7.50	7.53		mg/L		100	90 - 110	0	20

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 386985

Client Sample ID: MW-3MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate, Dissolved	0.25	U	2.50	2.40	H	mg/L		96	90 - 110

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 386985

Client Sample ID: MW-3MSD
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate, Dissolved	0.25	U	2.50	2.33	H	mg/L		93	90 - 110	3	20

Lab Sample ID: 680-236256-2 DU
Matrix: Water
Analysis Batch: 386985

Client Sample ID: MW-3
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate, Dissolved	0.25	U	0.25	U	mg/L		NC	15

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 386986

Client Sample ID: MW-3MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate, Dissolved	24	F1	25.0	52.0	F1	mg/L		112	90 - 110

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 386986

Client Sample ID: MW-3MSD
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate, Dissolved	24	F1	25.0	52.0	F1	mg/L		112	90 - 110	0	20

Lab Sample ID: 680-236256-2 DU
Matrix: Water
Analysis Batch: 386986

Client Sample ID: MW-3
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate, Dissolved	24	F1	24.1		mg/L		0.09	15

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 387356

Client Sample ID: MW-3MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride, Dissolved	280	F1	200	542	F1	mg/L		131	90 - 110

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 387356

Client Sample ID: MW-3MSD
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride, Dissolved	280	F1	200	533	F1	mg/L		126	90 - 110	2	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 680-236256-2 DU
Matrix: Water
Analysis Batch: 387356

Client Sample ID: MW-3
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride, Dissolved	280	F1		280		mg/L				0.2	15
Sulfate, Dissolved	50	U F1		50	U	mg/L				NC	15

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-390336/20
Matrix: Water
Analysis Batch: 390336

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved	2.6	U	8.0	2.6	mg/L			06/23/23 18:35	1

Lab Sample ID: LCS 410-390336/21
Matrix: Water
Analysis Batch: 390336

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity, Dissolved			189	182		mg/L		96	66 - 110		

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 390336

Client Sample ID: MW-3MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity, Dissolved	240	F1	189	335	F1	mg/L		49	66 - 110		

Lab Sample ID: 680-236256-2 DU
Matrix: Water
Analysis Batch: 390336

Client Sample ID: MW-3
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity, Dissolved	240	F1		261		mg/L				8	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 410-387632/1
Matrix: Water
Analysis Batch: 387632

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	0.70	U	2.0	0.70	mg/L			06/16/23 13:59	1

Lab Sample ID: LCS 410-387632/2
Matrix: Water
Analysis Batch: 387632

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide, Dissolved			20.1	19.3		mg/L		96	77 - 110		

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: MB 410-388676/1
Matrix: Water
Analysis Batch: 388676

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	0.70	U	2.0	0.70	mg/L			06/20/23 10:58	1

Lab Sample ID: LCS 410-388676/2
Matrix: Water
Analysis Batch: 388676

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Dissolved	20.1	18.4		mg/L		92	77 - 110

Lab Sample ID: LCSD 410-388676/3
Matrix: Water
Analysis Batch: 388676

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide, Dissolved	20.1	18.2		mg/L		91	77 - 110	1	10

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 387632

Client Sample ID: MW-3MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Dissolved	0.70	U	10.0	8.75		mg/L		87	77 - 110

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 387632

Client Sample ID: MW-3MSD
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide, Dissolved	0.70	U	10.0	8.75		mg/L		87	77 - 110	0	10

Lab Sample ID: 680-236256-2 DU
Matrix: Water
Analysis Batch: 387632

Client Sample ID: MW-3
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide, Dissolved	0.70	U	0.70	U	mg/L		NC	10

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 480-675203/28
Matrix: Water
Analysis Batch: 675203

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DOC Result 1	0.43	U	1.0	0.43	mg/L			07/01/23 01:52	1
DOC Result 2	0.43	U	1.0	0.43	mg/L			07/01/23 01:52	1
DOC Result 3	0.43	U	1.0	0.43	mg/L			07/01/23 01:52	1
DOC Result 4	0.43	U	1.0	0.43	mg/L			07/01/23 01:52	1
Dissolved Organic Carbon	0.43	U	1.0	0.43	mg/L			07/01/23 01:52	1
Dissolved Organic Carbon - Quad	0.43	U	1.0	0.43	mg/L			07/01/23 01:52	1

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 480-675203/29
Matrix: Water
Analysis Batch: 675203

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DOC Result 1	60.0	57.7		mg/L		96	90 - 110
DOC Result 2	60.0	56.9		mg/L		95	90 - 110
DOC Result 3	60.0	56.9		mg/L		95	90 - 110
DOC Result 4	60.0	57.5		mg/L		96	90 - 110
Dissolved Organic Carbon	60.0	57.3		mg/L		95	90 - 110
Dissolved Organic Carbon - Duplicate	60.0	57.3		mg/L		96	90 - 110
Dissolved Organic Carbon - Quad	60.0	57.3		mg/L		95	90 - 110

Lab Sample ID: 680-236256-2 MS
Matrix: Water
Analysis Batch: 675203

Client Sample ID: MW-3MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
DOC Result 1	0.87	J	23.3	26.5		mg/L		110	54 - 131
DOC Result 2	0.80	J	23.3	26.7		mg/L		111	54 - 131
DOC Result 3	0.95	J	23.3	27.5		mg/L		114	54 - 131
DOC Result 4	0.77	J	23.3	26.4		mg/L		110	54 - 131
Dissolved Organic Carbon	0.85	J	23.3	26.8		mg/L		111	54 - 131
Dissolved Organic Carbon - Duplicate	0.84	J	23.3	26.6		mg/L		111	54 - 131
Dissolved Organic Carbon - Quad	0.85	J	23.3	26.8		mg/L		111	54 - 131

Lab Sample ID: 680-236256-2 MSD
Matrix: Water
Analysis Batch: 675203

Client Sample ID: MW-3MSD
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DOC Result 1	0.87	J	23.3	24.6		mg/L		102	54 - 131	7	20
DOC Result 2	0.80	J	23.3	26.2		mg/L		109	54 - 131	2	20
DOC Result 3	0.95	J	23.3	26.4		mg/L		109	54 - 131	4	20
DOC Result 4	0.77	J	23.3	26.4		mg/L		110	54 - 131	0	20
Dissolved Organic Carbon	0.85	J	23.3	25.9		mg/L		108	54 - 131	3	20
Dissolved Organic Carbon - Duplicate	0.84	J	23.3	25.4		mg/L		105	54 - 131	5	20
Dissolved Organic Carbon - Quad	0.85	J	23.3	25.9		mg/L		108	54 - 131	3	20

GC/MS VOA

Analysis Batch: 390552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-1	MW-2S	Total/NA	Water	8260D	
680-236256-2	MW-3	Total/NA	Water	8260D	
680-236256-3	MW-3S	Total/NA	Water	8260D	
680-236256-4	MW-2	Total/NA	Water	8260D	
680-236256-5	Trip Blank	Total/NA	Water	8260D	
MB 410-390552/9	Method Blank	Total/NA	Water	8260D	
LCS 410-390552/5	Lab Control Sample	Total/NA	Water	8260D	
LCS 410-390552/6	Lab Control Sample	Total/NA	Water	8260D	
680-236256-2 MS	MW-3MS	Total/NA	Water	8260D	
680-236256-2 MS	MW-3MS	Total/NA	Water	8260D	
680-236256-2 MSD	MW-3MSD	Total/NA	Water	8260D	
680-236256-2 MSD	MW-3MSD	Total/NA	Water	8260D	

HPLC/IC

Analysis Batch: 386985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-1	MW-2S	Dissolved	Water	9056A	
680-236256-2	MW-3	Dissolved	Water	9056A	
680-236256-3	MW-3S	Dissolved	Water	9056A	
680-236256-4	MW-2	Dissolved	Water	9056A	
MB 410-386985/12	Method Blank	Total/NA	Water	9056A	
LCS 410-386985/10	Lab Control Sample	Total/NA	Water	9056A	
LCSD 410-386985/11	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236256-2 MS	MW-3MS	Dissolved	Water	9056A	
680-236256-2 MSD	MW-3MSD	Dissolved	Water	9056A	
680-236256-2 DU	MW-3	Dissolved	Water	9056A	

Analysis Batch: 386986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-1	MW-2S	Dissolved	Water	9056A	
680-236256-2	MW-3	Dissolved	Water	9056A	
680-236256-3	MW-3S	Dissolved	Water	9056A	
680-236256-4	MW-2	Dissolved	Water	9056A	
MB 410-386986/12	Method Blank	Total/NA	Water	9056A	
LCS 410-386986/10	Lab Control Sample	Total/NA	Water	9056A	
LCSD 410-386986/11	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236256-2 MS	MW-3MS	Dissolved	Water	9056A	
680-236256-2 MSD	MW-3MSD	Dissolved	Water	9056A	
680-236256-2 DU	MW-3	Dissolved	Water	9056A	

Analysis Batch: 387356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-2	MW-3	Dissolved	Water	9056A	
680-236256-3	MW-3S	Dissolved	Water	9056A	
680-236256-4	MW-2	Dissolved	Water	9056A	
MB 410-387356/5	Method Blank	Total/NA	Water	9056A	
LCS 410-387356/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 410-387356/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236256-2 MS	MW-3MS	Dissolved	Water	9056A	
680-236256-2 MSD	MW-3MSD	Dissolved	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 387356 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-2 DU	MW-3	Dissolved	Water	9056A	

General Chemistry

Analysis Batch: 387632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-2	MW-3	Dissolved	Water	9034	
680-236256-3	MW-3S	Dissolved	Water	9034	
680-236256-4	MW-2	Dissolved	Water	9034	
MB 410-387632/1	Method Blank	Total/NA	Water	9034	
LCS 410-387632/2	Lab Control Sample	Total/NA	Water	9034	
680-236256-2 MS	MW-3MS	Dissolved	Water	9034	
680-236256-2 MSD	MW-3MSD	Dissolved	Water	9034	
680-236256-2 DU	MW-3	Dissolved	Water	9034	

Analysis Batch: 388676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-1	MW-2S	Dissolved	Water	9034	
MB 410-388676/1	Method Blank	Total/NA	Water	9034	
LCS 410-388676/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 410-388676/3	Lab Control Sample Dup	Total/NA	Water	9034	

Analysis Batch: 390336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-1	MW-2S	Dissolved	Water	2320B-2011	
680-236256-2	MW-3	Dissolved	Water	2320B-2011	
680-236256-3	MW-3S	Dissolved	Water	2320B-2011	
680-236256-4	MW-2	Dissolved	Water	2320B-2011	
MB 410-390336/20	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-390336/21	Lab Control Sample	Total/NA	Water	2320B-2011	
680-236256-2 MS	MW-3MS	Dissolved	Water	2320B-2011	
680-236256-2 DU	MW-3	Dissolved	Water	2320B-2011	

Analysis Batch: 675203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236256-1	MW-2S	Dissolved	Water	9060A	
680-236256-2	MW-3	Dissolved	Water	9060A	
680-236256-3	MW-3S	Dissolved	Water	9060A	
680-236256-4	MW-2	Dissolved	Water	9060A	
MB 480-675203/28	Method Blank	Dissolved	Water	9060A	
LCS 480-675203/29	Lab Control Sample	Dissolved	Water	9060A	
680-236256-2 MS	MW-3MS	Dissolved	Water	9060A	
680-236256-2 MSD	MW-3MSD	Dissolved	Water	9060A	

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236256-1

Client Sample ID: MW-2S
Date Collected: 06/13/23 13:10
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	390552	TQ4J	ELLE	06/26/23 18:53
Dissolved	Analysis	9056A		5	386985	L4QM	ELLE	06/15/23 12:52
Dissolved	Analysis	9056A		5	386986	L4QM	ELLE	06/15/23 12:52
Dissolved	Analysis	2320B-2011		1	390336	DI9Q	ELLE	06/23/23 19:12
Dissolved	Analysis	9034		1	388676	USE1	ELLE	06/20/23 10:58
Dissolved	Analysis	9060A		1	675203	AF	EET BUF	07/01/23 06:09

Client Sample ID: MW-3
Date Collected: 06/13/23 13:15
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	390552	TQ4J	ELLE	06/26/23 17:03
Dissolved	Analysis	9056A		5	386985	L4QM	ELLE	06/15/23 13:05
Dissolved	Analysis	9056A		5	386986	L4QM	ELLE	06/15/23 13:05
Dissolved	Analysis	9056A		100	387356	L4QM	ELLE	06/16/23 13:11
Dissolved	Analysis	2320B-2011		1	390336	DI9Q	ELLE	06/23/23 18:52
Dissolved	Analysis	9034		1	387632	USE1	ELLE	06/16/23 13:59
Dissolved	Analysis	9060A		1	675203	AF	EET BUF	07/01/23 07:35

Client Sample ID: MW-3S
Date Collected: 06/13/23 15:55
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	390552	TQ4J	ELLE	06/26/23 19:15
Dissolved	Analysis	9056A		5	386985	L4QM	ELLE	06/15/23 13:56
Dissolved	Analysis	9056A		5	386986	L4QM	ELLE	06/15/23 13:56
Dissolved	Analysis	9056A		25	387356	L4QM	ELLE	06/16/23 14:28
Dissolved	Analysis	2320B-2011		1	390336	DI9Q	ELLE	06/23/23 19:18
Dissolved	Analysis	9034		1	387632	USE1	ELLE	06/16/23 13:59
Dissolved	Analysis	9060A		1	675203	AF	EET BUF	07/01/23 08:59

Client Sample ID: MW-2
Date Collected: 06/13/23 16:00
Date Received: 06/14/23 09:56

Lab Sample ID: 680-236256-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	390552	TQ4J	ELLE	06/26/23 19:37
Dissolved	Analysis	9056A		5	386985	L4QM	ELLE	06/15/23 14:09
Dissolved	Analysis	9056A		5	386986	L4QM	ELLE	06/15/23 14:09
Dissolved	Analysis	9056A		50	387356	L4QM	ELLE	06/16/23 14:41
Dissolved	Analysis	2320B-2011		1	390336	DI9Q	ELLE	06/23/23 19:26

Lab Chronicle

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-2
Lab Sample ID: 680-236256-4
Date Collected: 06/13/23 16:00
Matrix: Water
Date Received: 06/14/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Analysis	9034		1	387632	USE1	ELLE	06/16/23 13:59
Dissolved	Analysis	9060A		1	675203	AF	EET BUF	07/01/23 09:27

Client Sample ID: Trip Blank
Lab Sample ID: 680-236256-5
Date Collected: 06/13/23 00:00
Matrix: Water
Date Received: 06/14/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	390552	TQ4J	ELLE	06/26/23 19:59

Laboratory References:

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

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone 912 354 7858 Fax 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: NTW	Lab PM: Lanier Jerry A	Carrier Tracking No(s):	COC No: 680-147535-53409 2
Client Contact: Ms Erin Huntley	Phone: 315-420-9973	E Mail: Jerry Lanier@et eurofinsus com	State of Origin: NY	Page: Page 2 of 2
Company: WSP USA Inc	PWSID:	Analysis Requested		Job #
Address: 11 Stanwix Street Suite 950	Due Date Requested:			
City: Pittsburgh	TAT Requested (days): STANDARD			
State, Zip: PA, 15222	Compliance Project: Δ Yes Δ No			
Phone: 412-216-9896(Tel)	PO #: Ask for PO or Prj No			
Email: erin huntley@wsp com	WO #:			
Project Name: Tri Cities Barrel Superfund Site-NY	Project #: 68029495			
Site:	SSOW#:			

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	Y	Trizma
		Z	other (specify)

Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D (MOD) TCL Sublist	9056A_ORGFM_28D	9056A_ORGFM_48H	2320B (MOD) Local Method	9034 (MOD) Local Method	9060A_Diss (MOD) Local Method	Total Number of containers	Special Instructions/Note
			Preservation Code				A	N	N	N	CB	N		
MW-25	6/13/23	1310	G	Water	Y		X	X	X	X	X	X		
MW-3-MS/MSD		1315	G	Water	Y	X	X	X	X	X	X	X		
MW-35		1555	G	Water	Y		X	X	X	X	X	X		
MW-2		1600	G	Water			X	X	X	X	X	X		
TRIP BLANK	—	—	—				X							

680-236256 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		6/13/23 1745	WSP		6-14-23 950	
2						
3						

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		1.4/1.2

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 680-741144 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry.Lanier@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - New York		Job #: 680-236256-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/30/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: Tri Cities Barrel Superfund Site-NY	Project #: 68029495			
Site:	SSOW#:			

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D/5030C (MOD) TCL Sublist	9056A_ORGFM_28D/ (MOD) Custom Analyte List	9056A_ORGFM_48H/ (MOD) Custom Analyte List	SM4500_S2_D	2320B/ Total Alkalinity	PRE_SCREEN	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-2S (680-236256-1)	6/13/23	13:10 Eastern		Water			X	X	X	X	X	X	5	Data Package requires pH logs
MW-3 (680-236256-2)	6/13/23	13:15 Eastern		Water			X	X	X	X	X	X	6	Data Package requires pH logs
MW-3MS (680-236256-2MS)	6/13/23	13:15 Eastern	MS	Water			X	X	X	X	X		5	Data Package requires pH logs
MW-3MSD (680-236256-2MSD)	6/13/23	13:15 Eastern	MSD	Water			X	X	X	X	X		7	Data Package requires pH logs
MW-3S (680-236256-3)	6/13/23	15:55 Eastern		Water			X	X	X	X	X	X	7	Data Package requires pH logs
MW-2 (680-236256-4)	6/13/23	16:00 Eastern		Water			X	X	X	X	X	X	7	Data Package requires pH logs
Trip Blank (680-236256-5)	6/13/23	Eastern		Water			X					X	2	Data Package requires pH logs

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *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
	6/14/23 1710				
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time: 6/15/23 09:54	Company: ELLET

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR 1.5/1.5 IR 2.0/2.1

Ver: 06/08/2021

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 680-741125.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry.Lanier@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast,		Accreditations Required (See note): NELAP - New York		Job #: 680-236256-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 6/26/2023			
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228-2298				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:			
Email:	WO #:			
Project Name: Tri Cities Barrel Superfund Site-NY	Project #: 68029495			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060A_Diss/Filtration_WC (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-2S (680-236256-1)	6/13/23	13:10 Eastern		Water			X	2	
MW-3 (680-236256-2)	6/13/23	13:15 Eastern		Water			X	2	
MW-3MS (680-236256-2MS)	6/13/23	13:15 Eastern	MS	Water			X	2	
MW-3MSD (680-236256-2MSD)	6/13/23	13:15 Eastern	MSD	Water			X	2	
MW-3S (680-236256-3)	6/13/23	15:55 Eastern		Water			X	2	
MW-2 (680-236256-4)	6/13/23	16:00 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ 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: TH	Date/Time: 06-14-23	Company	Received by:	Date/Time: 6/15/23 1100	Company TA
Relinquished by:	Date/Time: 16:00	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.7 #1 ICE

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 680-236256-1

Login Number: 236256
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 680-236256-1

Login Number: 236256
List Number: 3
Creator: Kolb, Chris M

List Source: Eurofins Buffalo
List Creation: 06/15/23 04:36 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7 ir gun #1 ice
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 680-236256-1

Login Number: 236256
List Number: 2
Creator: McCaskey, Jonathan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/15/23 11:41 AM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
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 (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 680-236256-1

Login Number: 236256
List Number: 4
Creator: Hollinger, Zane T

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
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 (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	False	Refer to Job Narrative for details.
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	N/A	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Accreditation/Certification Summary

Client: WSP USA Inc.
Job ID: 680-236256-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-23
Connecticut	State	PH-0568	03-31-24
Florida	NELAP	E87672	06-30-23 *
Georgia	State	10026 (NY)	03-31-24
Georgia	State Program	N/A	03-31-09 *
Illinois	NELAP	200003	09-30-23
Iowa	State	374	03-01-23 *
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-01-24
Kentucky (DW)	State	90029	01-01-24
Kentucky (UST)	State	30	04-01-23 *
Kentucky (WW)	State	KY90029	12-31-23
Louisiana	NELAP	02031	06-30-23 *
Louisiana (All)	NELAP	02031	06-30-23 *
Maine	State	NY00044	12-04-24
Maryland	State	294	06-30-24
Massachusetts	State	M-NY044	07-01-24
Michigan	State	9937	04-01-24
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-23
New Jersey	NELAP	NY455	06-30-24
New York	NELAP	10026	03-31-24
Pennsylvania	NELAP	68-00281	07-31-23
Rhode Island	State	LAO00328	12-30-23
Texas	NELAP	T104704412-18-10	07-31-23
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-23
Washington	State	C784	02-10-23 *
Wisconsin	State	998310390	08-31-23

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-24

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Erin Huntley
WSP USA Inc.
11 Stanwix Street
Suite 950
Pittsburgh, Pennsylvania 15222

Generated 7/13/2023 9:16:47 AM Revision 1

JOB DESCRIPTION

Tri Cities Barrel Superfund Site-NY

JOB NUMBER

680-236351-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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7/13/2023 9:16:47 AM
Revision 1

Authorized for release by
Heather Trotter, Project Manager
Heather.Trotter@et.eurofinsus.com
Designee for
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Job ID: 680-236351-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-236351-1

Receipt
The samples were received on 6/15/2023 10:19 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.0°C and 5.5°C

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 680-785468 recovered above the upper control limit for Ethylbenzene, Styrene, Vinyl acetate and Xylenes, Total. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The laboratory control sample duplicate (LCSD) for analytical batch 680-785468 recovered outside control limits for the following analytes: Vinyl acetate. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method 8260D: Surrogate recovery for the following sample was outside control limits: MW-16S (680-236351-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 680-785686 recovered above the upper control limit for Acetone, Bromoform, 2-Butanone (MEK), 1,4-Dioxane, Ethylbenzene, 2-Hexanone, 4-Methyl-2-pentanone (MIBK) and Vinyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-785686 recovered outside control limits for the following analytes: Acetone, 2-Butanone (MEK), 1,4-Dioxane and 4-Methyl-2-pentanone (MIBK). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.
The laboratory control sample duplicate (LCSD) for analytical batch 680-785686 recovered outside control limits for the following analytes: 2-Hexanone and Xylenes, Total. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

HPLC/IC
Method 9056A_ORGFM_48H: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-783746 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

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

Sample Summary

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-236351-1	MW-0623	Water	06/14/23 08:00	06/15/23 10:19
680-236351-2	MW-18S	Water	06/14/23 09:30	06/15/23 10:19
680-236351-3	MW-19	Water	06/14/23 12:20	06/15/23 10:19
680-236351-4	MW-7S	Water	06/14/23 12:35	06/15/23 10:19
680-236351-5	EB-061423	Water	06/14/23 14:30	06/15/23 10:19
680-236351-6	PMW-1	Water	06/14/23 15:00	06/15/23 10:19
680-236351-7	Trip Blank	Water	06/14/23 00:00	06/15/23 10:19
680-236351-8	MW-16S	Water	06/14/23 09:55	06/15/23 10:19

Method Summary

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SAV
9056A	Anions, Ion Chromatography	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	ELLE
9060A	Organic Carbon, Dissolved (DOC)	SW846	EET SAV
5030B	Purge and Trap	SW846	EET SAV

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Definitions/Glossary

Client: WSP USA Inc. Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-0623
Date Collected: 06/14/23 08:00
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 14:19	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 14:19	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 14:19	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 14:19	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 14:19	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 14:19	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 14:19	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 14:19	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 14:19	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 14:19	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 14:19	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 14:19	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 14:19	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/26/23 14:19	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 14:19	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/26/23 14:19	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 14:19	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/26/23 14:19	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/26/23 14:19	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 14:19	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 14:19	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 14:19	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 14:19	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 14:19	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 14:19	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 14:19	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 14:19	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/26/23 14:19	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 14:19	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 14:19	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 14:19	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/26/23 14:19	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 14:19	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/26/23 14:19	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			06/26/23 14:19	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 14:19	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*		*06/26/23 14:19*	*1*
Dibromofluoromethane (Surr)	*120*		*70 - 130*		*06/26/23 14:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 124*		*06/26/23 14:19*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*06/26/23 14:19*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-0623
Date Collected: 06/14/23 08:00
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-1
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**91**		0.50	0.20	mg/L			06/30/23 12:04	1
Nitrate, Dissolved	0.023	U F1	0.050	0.023	mg/L			06/15/23 17:04	1
Sulfate, Dissolved	**9.9**		1.0	0.40	mg/L			06/30/23 12:04	1

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-0623
Lab Sample ID: 680-236351-1
Date Collected: 06/14/23 08:00
Matrix: Water
Date Received: 06/15/23 10:19

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**300**		5.0	2.2	mg/L			06/23/23 11:52	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	**2.3**		1.0	0.50	mg/L			06/29/23 04:36	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-18S
Date Collected: 06/14/23 09:30
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 14:39	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 14:39	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 14:39	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 14:39	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 14:39	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 14:39	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 14:39	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 14:39	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 14:39	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 14:39	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 14:39	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 14:39	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 14:39	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/26/23 14:39	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 14:39	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/26/23 14:39	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 14:39	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/26/23 14:39	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/26/23 14:39	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 14:39	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 14:39	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 14:39	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 14:39	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 14:39	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 14:39	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 14:39	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 14:39	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/26/23 14:39	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 14:39	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 14:39	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 14:39	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/26/23 14:39	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 14:39	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/26/23 14:39	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			06/26/23 14:39	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 14:39	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*		*06/26/23 14:39*	*1*
Dibromofluoromethane (Surr)	*119*		*70 - 130*		*06/26/23 14:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*60 - 124*		*06/26/23 14:39*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*06/26/23 14:39*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-18S

Date Collected: 06/14/23 09:30
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-2

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**92**		0.50	0.20	mg/L			06/30/23 12:42	1
Nitrate, Dissolved	0.023	U	0.050	0.023	mg/L			06/15/23 17:35	1
Sulfate, Dissolved	**10**		1.0	0.40	mg/L			06/30/23 12:42	1

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-18S
Date Collected: 06/14/23 09:30
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-2
Matrix: Water

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**300**		5.0	2.2	mg/L			06/23/23 12:04	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	**2.3**		1.0	0.50	mg/L			06/29/23 05:01	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-19

Date Collected: 06/14/23 12:20
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-3

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 14:59	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 14:59	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 14:59	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 14:59	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 14:59	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 14:59	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 14:59	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 14:59	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 14:59	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 14:59	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 14:59	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 14:59	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 14:59	1
cis-1,2-Dichloroethene	**0.75**	**J**	1.0	0.25	ug/L			06/26/23 14:59	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 14:59	1
1,1-Dichloroethane	**4.6**		1.0	0.33	ug/L			06/26/23 14:59	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 14:59	1
1,1-Dichloroethene	**3.2**		1.0	0.33	ug/L			06/26/23 14:59	1
1,2-Dichloroethene, Total	**0.75**	**J**	2.0	0.37	ug/L			06/26/23 14:59	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 14:59	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 14:59	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 14:59	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 14:59	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 14:59	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 14:59	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 14:59	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 14:59	1
Tetrachloroethene	**200**		0.50	0.35	ug/L			06/26/23 14:59	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 14:59	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 14:59	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 14:59	1
1,1,1-Trichloroethane	**45**		1.0	0.21	ug/L			06/26/23 14:59	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 14:59	1
Trichloroethene	**14**		1.0	0.20	ug/L			06/26/23 14:59	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			06/26/23 14:59	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 14:59	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*		*06/26/23 14:59*	*1*
Dibromofluoromethane (Surr)	*118*		*70 - 130*		*06/26/23 14:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*60 - 124*		*06/26/23 14:59*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*06/26/23 14:59*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-19

Date Collected: 06/14/23 12:20
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**110**		0.50	0.20	mg/L			06/30/23 12:54	1
Nitrate, Dissolved	0.023	U	0.050	0.023	mg/L			06/15/23 17:45	1
Sulfate, Dissolved	**13**		1.0	0.40	mg/L			06/30/23 12:54	1

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-19
Lab Sample ID: 680-236351-3
Date Collected: 06/14/23 12:20
Matrix: Water
Date Received: 06/15/23 10:19

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**140**		5.0	2.2	mg/L			06/23/23 11:41	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	**0.83**	**J**	1.0	0.50	mg/L			06/29/23 05:21	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-7S
Date Collected: 06/14/23 12:35
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 15:18	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 15:18	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 15:18	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 15:18	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 15:18	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 15:18	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 15:18	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 15:18	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 15:18	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 15:18	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 15:18	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 15:18	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 15:18	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/26/23 15:18	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 15:18	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/26/23 15:18	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 15:18	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/26/23 15:18	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/26/23 15:18	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 15:18	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 15:18	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 15:18	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 15:18	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 15:18	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 15:18	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 15:18	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 15:18	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/26/23 15:18	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 15:18	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 15:18	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 15:18	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/26/23 15:18	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 15:18	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/26/23 15:18	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			06/26/23 15:18	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 15:18	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*06/26/23 15:18*	*1*
Dibromofluoromethane (Surr)	*118*		*70 - 130*		*06/26/23 15:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 124*		*06/26/23 15:18*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*06/26/23 15:18*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-7S

Date Collected: 06/14/23 12:35
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-4

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	240		1.0	0.40	mg/L			06/30/23 13:07	2
Nitrate, Dissolved	0.034	J	0.050	0.023	mg/L			06/15/23 17:54	1
Sulfate, Dissolved	6.3		2.0	0.80	mg/L			06/30/23 13:07	2

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-7S
Lab Sample ID: 680-236351-4
Date Collected: 06/14/23 12:35
Matrix: Water
Date Received: 06/15/23 10:19

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**72**		5.0	2.2	mg/L			06/23/23 12:13	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	**1.6**		1.0	0.50	mg/L			06/29/23 05:45	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: EB-061423
Date Collected: 06/14/23 14:30
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 15:38	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 15:38	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 15:38	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 15:38	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 15:38	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 15:38	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 15:38	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 15:38	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 15:38	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 15:38	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 15:38	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 15:38	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 15:38	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/26/23 15:38	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 15:38	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/26/23 15:38	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 15:38	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/26/23 15:38	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/26/23 15:38	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 15:38	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 15:38	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 15:38	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 15:38	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 15:38	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 15:38	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 15:38	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 15:38	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/26/23 15:38	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 15:38	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 15:38	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 15:38	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/26/23 15:38	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 15:38	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/26/23 15:38	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			06/26/23 15:38	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 15:38	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*		*06/26/23 15:38*	*1*
Dibromofluoromethane (Surr)	*114*		*70 - 130*		*06/26/23 15:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*60 - 124*		*06/26/23 15:38*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*06/26/23 15:38*	*1*

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: EB-061423
Lab Sample ID: 680-236351-5
Date Collected: 06/14/23 14:30
Matrix: Water
Date Received: 06/15/23 10:19

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**0.20**	**J**	0.50	0.20	mg/L			06/30/23 13:20	1
Nitrate, Dissolved	0.023	U	0.050	0.023	mg/L			06/15/23 18:14	1
Sulfate, Dissolved	0.40	U	1.0	0.40	mg/L			06/30/23 13:20	1

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: EB-061423
Lab Sample ID: 680-236351-5
Date Collected: 06/14/23 14:30
Matrix: Water
Date Received: 06/15/23 10:19

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	2.2	U	5.0	2.2	mg/L			06/23/23 11:16	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	0.50	U	1.0	0.50	mg/L			06/29/23 06:04	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: PMW-1

Date Collected: 06/14/23 15:00
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-6

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 15:58	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 15:58	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 15:58	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 15:58	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 15:58	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 15:58	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 15:58	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 15:58	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 15:58	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 15:58	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 15:58	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 15:58	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 15:58	1
cis-1,2-Dichloroethene	**0.33**	**J**	1.0	0.25	ug/L			06/26/23 15:58	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 15:58	1
1,1-Dichloroethane	**5.1**		1.0	0.33	ug/L			06/26/23 15:58	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 15:58	1
1,1-Dichloroethene	**3.5**		1.0	0.33	ug/L			06/26/23 15:58	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/26/23 15:58	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 15:58	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 15:58	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 15:58	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 15:58	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 15:58	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 15:58	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 15:58	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 15:58	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 15:58	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 15:58	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 15:58	1
1,1,1-Trichloroethane	**48**		1.0	0.21	ug/L			06/26/23 15:58	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 15:58	1
Trichloroethene	**26**		1.0	0.20	ug/L			06/26/23 15:58	1
Vinyl acetate	0.69	U *+	2.0	0.69	ug/L			06/26/23 15:58	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 15:58	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*		*06/26/23 15:58*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 130*		*06/26/23 15:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*117*		*60 - 124*		*06/26/23 15:58*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*06/26/23 15:58*	*1*

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: PMW-1
Date Collected: 06/14/23 15:00
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-6
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	190		2.5	1.8	ug/L			06/27/23 19:50	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*		*06/27/23 19:50*	*5*
Dibromofluoromethane (Surr)	*118*		*70 - 130*		*06/27/23 19:50*	*5*
1,2-Dichloroethane-d4 (Surr)	*122*		*60 - 124*		*06/27/23 19:50*	*5*
Toluene-d8 (Surr)	*87*		*70 - 130*		*06/27/23 19:50*	*5*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: PMW-1

Date Collected: 06/14/23 15:00
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**120**		0.50	0.20	mg/L			06/30/23 13:32	1
Nitrate, Dissolved	0.023	U	0.050	0.023	mg/L			06/15/23 18:23	1
Sulfate, Dissolved	**14**		1.0	0.40	mg/L			06/30/23 13:32	1

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: PMW-1
Lab Sample ID: 680-236351-6
Date Collected: 06/14/23 15:00
Matrix: Water
Date Received: 06/15/23 10:19

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**130**		5.0	2.2	mg/L			06/23/23 11:31	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	**0.67**	**J**	1.0	0.50	mg/L			06/29/23 06:24	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: Trip Blank

Date Collected: 06/14/23 00:00
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U *+	10	3.7	ug/L			06/27/23 14:11	1
Benzene	0.27	U	1.0	0.27	ug/L			06/27/23 14:11	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/27/23 14:11	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/27/23 14:11	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/27/23 14:11	1
2-Butanone (MEK)	6.4	U *+	10	6.4	ug/L			06/27/23 14:11	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/27/23 14:11	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/27/23 14:11	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/27/23 14:11	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/27/23 14:11	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/27/23 14:11	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/27/23 14:11	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/27/23 14:11	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/27/23 14:11	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/27/23 14:11	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/27/23 14:11	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/27/23 14:11	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/27/23 14:11	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/27/23 14:11	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/27/23 14:11	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/27/23 14:11	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/27/23 14:11	1
2-Hexanone	3.2	U *+	10	3.2	ug/L			06/27/23 14:11	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/27/23 14:11	1
4-Methyl-2-pentanone (MIBK)	2.7	U *+	10	2.7	ug/L			06/27/23 14:11	1
Styrene	0.27	U	1.0	0.27	ug/L			06/27/23 14:11	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/27/23 14:11	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/27/23 14:11	1
Toluene	0.25	U	1.0	0.25	ug/L			06/27/23 14:11	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/27/23 14:11	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/27/23 14:11	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/27/23 14:11	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/27/23 14:11	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/27/23 14:11	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			06/27/23 14:11	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/27/23 14:11	1
Xylenes, Total	0.23	U *+	1.0	0.23	ug/L			06/27/23 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*		*06/27/23 14:11*	*1*
Dibromofluoromethane (Surr)	*114*		*70 - 130*		*06/27/23 14:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*60 - 124*		*06/27/23 14:11*	*1*
Toluene-d8 (Surr)	*76*		*70 - 130*		*06/27/23 14:11*	*1*

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

Client Sample ID: MW-16S
Date Collected: 06/14/23 09:55
Date Received: 06/15/23 10:19

Lab Sample ID: 680-236351-8
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	37	U *+	100	37	ug/L			06/27/23 18:50	10
Benzene	2.7	U	10	2.7	ug/L			06/27/23 18:50	10
Bromodichloromethane	2.5	U	10	2.5	ug/L			06/27/23 18:50	10
Bromoform	5.9	U	10	5.9	ug/L			06/27/23 18:50	10
Bromomethane	37	U	50	37	ug/L			06/27/23 18:50	10
2-Butanone (MEK)	64	U *+	100	64	ug/L			06/27/23 18:50	10
Carbon disulfide	4.3	U	20	4.3	ug/L			06/27/23 18:50	10
Carbon tetrachloride	3.0	U	10	3.0	ug/L			06/27/23 18:50	10
Chlorobenzene	1.5	U	10	1.5	ug/L			06/27/23 18:50	10
Chlorodibromomethane	3.9	U	10	3.9	ug/L			06/27/23 18:50	10
Chloroethane	46	U	50	46	ug/L			06/27/23 18:50	10
Chloroform	2.7	U	10	2.7	ug/L			06/27/23 18:50	10
Chloromethane	5.4	U	10	5.4	ug/L			06/27/23 18:50	10
cis-1,2-Dichloroethene	**1200**		10	2.5	ug/L			06/27/23 18:50	10
cis-1,3-Dichloropropene	2.6	U	10	2.6	ug/L			06/27/23 18:50	10
1,1-Dichloroethane	**44**		10	3.3	ug/L			06/27/23 18:50	10
1,2-Dichloroethane	2.5	U	10	2.5	ug/L			06/27/23 18:50	10
1,1-Dichloroethene	3.3	U	10	3.3	ug/L			06/27/23 18:50	10
1,2-Dichloroethene, Total	**1200**		20	3.7	ug/L			06/27/23 18:50	10
1,2-Dichloropropane	2.2	U	10	2.2	ug/L			06/27/23 18:50	10
1,1-Dichloropropene	2.8	U	10	2.8	ug/L			06/27/23 18:50	10
Ethylbenzene	2.0	U	10	2.0	ug/L			06/27/23 18:50	10
2-Hexanone	32	U *+	100	32	ug/L			06/27/23 18:50	10
Methylene Chloride	32	U	50	32	ug/L			06/27/23 18:50	10
4-Methyl-2-pentanone (MIBK)	27	U *+	100	27	ug/L			06/27/23 18:50	10
Styrene	2.7	U	10	2.7	ug/L			06/27/23 18:50	10
1,1,2,2-Tetrachloroethane	4.0	U	10	4.0	ug/L			06/27/23 18:50	10
Tetrachloroethene	3.5	U	5.0	3.5	ug/L			06/27/23 18:50	10
Toluene	2.5	U	10	2.5	ug/L			06/27/23 18:50	10
trans-1,2-Dichloroethene	3.4	U	10	3.4	ug/L			06/27/23 18:50	10
trans-1,3-Dichloropropene	2.3	U	10	2.3	ug/L			06/27/23 18:50	10
1,1,1-Trichloroethane	2.1	U	10	2.1	ug/L			06/27/23 18:50	10
1,1,2-Trichloroethane	3.2	U	10	3.2	ug/L			06/27/23 18:50	10
Trichloroethene	**1100**		10	2.0	ug/L			06/27/23 18:50	10
Vinyl acetate	6.9	U	20	6.9	ug/L			06/27/23 18:50	10
Vinyl chloride	**330**		10	4.0	ug/L			06/27/23 18:50	10
Xylenes, Total	2.3	U *+	10	2.3	ug/L			06/27/23 18:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*		*06/27/23 18:50*	*10*
Dibromofluoromethane (Surr)	*120*		*70 - 130*		*06/27/23 18:50*	*10*
1,2-Dichloroethane-d4 (Surr)	*129*	*S1+*	*60 - 124*		*06/27/23 18:50*	*10*
Toluene-d8 (Surr)	*109*		*70 - 130*		*06/27/23 18:50*	*10*

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-16S
Lab Sample ID: 680-236351-8
Date Collected: 06/14/23 09:55
Matrix: Water
Date Received: 06/15/23 10:19

Method: SW846 9056A - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	**91**		0.50	0.20	mg/L			06/30/23 13:45	1
Nitrate, Dissolved	0.023	U	0.050	0.023	mg/L			06/15/23 18:33	1
Sulfate, Dissolved	**53**		1.0	0.40	mg/L			06/30/23 13:45	1

Client Sample Results

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-16S
Lab Sample ID: 680-236351-8
Date Collected: 06/14/23 09:55
Matrix: Water
Date Received: 06/15/23 10:19

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved (SM 2320B-2011)	**380**		5.0	2.2	mg/L			06/23/23 12:26	1
Sulfide, Dissolved (SW846 9034)	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1
Dissolved Organic Carbon (SW846 9060A)	**5.5**		1.0	0.50	mg/L			06/29/23 06:50	1

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

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

Lab Sample ID: MB 680-785468/9
Matrix: Water
Analysis Batch: 785468

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/26/23 12:47	1
Benzene	0.27	U	1.0	0.27	ug/L			06/26/23 12:47	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/26/23 12:47	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/26/23 12:47	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/26/23 12:47	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/26/23 12:47	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/26/23 12:47	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/26/23 12:47	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/26/23 12:47	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/26/23 12:47	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/26/23 12:47	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/26/23 12:47	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/26/23 12:47	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/26/23 12:47	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/26/23 12:47	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/26/23 12:47	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/26/23 12:47	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/26/23 12:47	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/26/23 12:47	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/26/23 12:47	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/26/23 12:47	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/26/23 12:47	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/26/23 12:47	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/26/23 12:47	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/26/23 12:47	1
Styrene	0.27	U	1.0	0.27	ug/L			06/26/23 12:47	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/26/23 12:47	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/26/23 12:47	1
Toluene	0.25	U	1.0	0.25	ug/L			06/26/23 12:47	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/26/23 12:47	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/26/23 12:47	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/26/23 12:47	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/26/23 12:47	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/26/23 12:47	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			06/26/23 12:47	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/26/23 12:47	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/26/23 12:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*		*06/26/23 12:47*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 130*		*06/26/23 12:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*60 - 124*		*06/26/23 12:47*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*06/26/23 12:47*	*1*

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

Lab Sample ID: LCS 680-785468/4
Matrix: Water
Analysis Batch: 785468

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	273		ug/L		109	67 - 120
Benzene	50.0	51.9		ug/L		104	70 - 130
Bromodichloromethane	50.0	62.0		ug/L		124	70 - 130
Bromoform	50.0	51.6		ug/L		103	69 - 129
Bromomethane	50.0	41.5		ug/L		83	28 - 192
2-Butanone (MEK)	250	271		ug/L		108	69 - 120
Carbon disulfide	50.0	48.5		ug/L		97	70 - 130
Carbon tetrachloride	50.0	50.9		ug/L		102	70 - 130
Chlorobenzene	50.0	53.9		ug/L		108	70 - 130
Chlorodibromomethane	50.0	59.0		ug/L		118	70 - 130
Chloroethane	50.0	54.9		ug/L		110	31 - 213
Chloroform	50.0	55.8		ug/L		112	70 - 130
Chloromethane	50.0	54.4		ug/L		109	59 - 127
cis-1,2-Dichloroethene	50.0	58.8		ug/L		118	70 - 130
cis-1,3-Dichloropropene	50.0	62.2		ug/L		124	70 - 130
1,1-Dichloroethane	50.0	53.8		ug/L		108	70 - 130
1,2-Dichloroethane	50.0	57.5		ug/L		115	70 - 130
1,1-Dichloroethene	50.0	51.7		ug/L		103	70 - 130
1,2-Dichloroethene, Total	100	113		ug/L		113	70 - 130
1,2-Dichloropropane	50.0	57.9		ug/L		116	70 - 130
1,1-Dichloropropene	50.0	50.9		ug/L		102	70 - 130
Ethylbenzene	50.0	55.2		ug/L		110	70 - 130
2-Hexanone	250	234		ug/L		94	70 - 130
Methylene Chloride	50.0	56.5		ug/L		113	70 - 130
4-Methyl-2-pentanone (MIBK)	250	273		ug/L		109	68 - 120
Styrene	50.0	48.9		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	50.0	54.0		ug/L		108	70 - 130
Tetrachloroethene	50.0	51.5		ug/L		103	70 - 130
Toluene	50.0	48.2		ug/L		96	70 - 130
trans-1,2-Dichloroethene	50.0	53.9		ug/L		108	70 - 130
trans-1,3-Dichloropropene	50.0	62.9		ug/L		126	70 - 130
1,1,1-Trichloroethane	50.0	53.7		ug/L		107	70 - 130
1,1,2-Trichloroethane	50.0	58.0		ug/L		116	70 - 130
Trichloroethene	50.0	54.9		ug/L		110	70 - 130
Vinyl acetate	100	135		ug/L		135	67 - 135
Vinyl chloride	50.0	47.9		ug/L		96	66 - 129
Xylenes, Total	100	107		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
Dibromofluoromethane (Surr)	*120*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*117*		*60 - 124*
Toluene-d8 (Surr)	*91*		*70 - 130*

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

Lab Sample ID: LCSD 680-785468/5
Matrix: Water
Analysis Batch: 785468

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone			250	281		ug/L		113	67 - 120	3	30
Benzene			50.0	51.8		ug/L		104	70 - 130	0	30
Bromodichloromethane			50.0	60.6		ug/L		121	70 - 130	2	30
Bromoform			50.0	50.6		ug/L		101	69 - 129	2	30
Bromomethane			50.0	42.7		ug/L		85	28 - 192	3	30
2-Butanone (MEK)			250	272		ug/L		109	69 - 120	1	30
Carbon disulfide			50.0	47.6		ug/L		95	70 - 130	2	30
Carbon tetrachloride			50.0	48.9		ug/L		98	70 - 130	4	30
Chlorobenzene			50.0	54.6		ug/L		109	70 - 130	1	30
Chlorodibromomethane			50.0	57.6		ug/L		115	70 - 130	2	30
Chloroethane			50.0	55.8		ug/L		112	31 - 213	2	30
Chloroform			50.0	55.2		ug/L		110	70 - 130	1	30
Chloromethane			50.0	50.8		ug/L		102	59 - 127	7	30
cis-1,2-Dichloroethene			50.0	57.6		ug/L		115	70 - 130	2	30
cis-1,3-Dichloropropene			50.0	61.8		ug/L		124	70 - 130	1	20
1,1-Dichloroethane			50.0	53.1		ug/L		106	70 - 130	1	30
1,2-Dichloroethane			50.0	57.3		ug/L		115	70 - 130	0	50
1,1-Dichloroethene			50.0	52.0		ug/L		104	70 - 130	1	20
1,2-Dichloroethene, Total			100	110		ug/L		110	70 - 130	2	20
1,2-Dichloropropane			50.0	58.0		ug/L		116	70 - 130	0	20
1,1-Dichloropropene			50.0	50.4		ug/L		101	70 - 130	1	20
Ethylbenzene			50.0	58.8		ug/L		118	70 - 130	6	20
2-Hexanone			250	231		ug/L		93	70 - 130	1	20
Methylene Chloride			50.0	56.3		ug/L		113	70 - 130	0	30
4-Methyl-2-pentanone (MIBK)			250	275		ug/L		110	68 - 120	1	30
Styrene			50.0	51.0		ug/L		102	70 - 130	4	30
1,1,2,2-Tetrachloroethane			50.0	53.9		ug/L		108	70 - 130	0	30
Tetrachloroethene			50.0	50.5		ug/L		101	70 - 130	2	30
Toluene			50.0	47.6		ug/L		95	70 - 130	1	30
trans-1,2-Dichloroethene			50.0	52.4		ug/L		105	70 - 130	3	30
trans-1,3-Dichloropropene			50.0	60.9		ug/L		122	70 - 130	3	30
1,1,1-Trichloroethane			50.0	52.3		ug/L		105	70 - 130	3	30
1,1,2-Trichloroethane			50.0	57.0		ug/L		114	70 - 130	2	30
Trichloroethene			50.0	54.2		ug/L		108	70 - 130	1	30
Vinyl acetate			100	137	*+	ug/L		137	67 - 135	1	30
Vinyl chloride			50.0	47.2		ug/L		94	66 - 129	1	30
Xylenes, Total			100	112		ug/L		112	70 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
Dibromofluoromethane (Surr)	*118*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*117*		*60 - 124*
Toluene-d8 (Surr)	*91*		*70 - 130*

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

Lab Sample ID: MB 680-785686/8
Matrix: Water
Analysis Batch: 785686

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.7	U	10	3.7	ug/L			06/27/23 12:31	1
Benzene	0.27	U	1.0	0.27	ug/L			06/27/23 12:31	1
Bromodichloromethane	0.25	U	1.0	0.25	ug/L			06/27/23 12:31	1
Bromoform	0.59	U	1.0	0.59	ug/L			06/27/23 12:31	1
Bromomethane	3.7	U	5.0	3.7	ug/L			06/27/23 12:31	1
2-Butanone (MEK)	6.4	U	10	6.4	ug/L			06/27/23 12:31	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			06/27/23 12:31	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			06/27/23 12:31	1
Chlorobenzene	0.15	U	1.0	0.15	ug/L			06/27/23 12:31	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			06/27/23 12:31	1
Chloroethane	4.6	U	5.0	4.6	ug/L			06/27/23 12:31	1
Chloroform	0.27	U	1.0	0.27	ug/L			06/27/23 12:31	1
Chloromethane	0.54	U	1.0	0.54	ug/L			06/27/23 12:31	1
cis-1,2-Dichloroethene	0.25	U	1.0	0.25	ug/L			06/27/23 12:31	1
cis-1,3-Dichloropropene	0.26	U	1.0	0.26	ug/L			06/27/23 12:31	1
1,1-Dichloroethane	0.33	U	1.0	0.33	ug/L			06/27/23 12:31	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			06/27/23 12:31	1
1,1-Dichloroethene	0.33	U	1.0	0.33	ug/L			06/27/23 12:31	1
1,2-Dichloroethene, Total	0.37	U	2.0	0.37	ug/L			06/27/23 12:31	1
1,2-Dichloropropane	0.22	U	1.0	0.22	ug/L			06/27/23 12:31	1
1,1-Dichloropropene	0.28	U	1.0	0.28	ug/L			06/27/23 12:31	1
Ethylbenzene	0.20	U	1.0	0.20	ug/L			06/27/23 12:31	1
2-Hexanone	3.2	U	10	3.2	ug/L			06/27/23 12:31	1
Methylene Chloride	3.2	U	5.0	3.2	ug/L			06/27/23 12:31	1
4-Methyl-2-pentanone (MIBK)	2.7	U	10	2.7	ug/L			06/27/23 12:31	1
Styrene	0.27	U	1.0	0.27	ug/L			06/27/23 12:31	1
1,1,2,2-Tetrachloroethane	0.40	U	1.0	0.40	ug/L			06/27/23 12:31	1
Tetrachloroethene	0.35	U	0.50	0.35	ug/L			06/27/23 12:31	1
Toluene	0.25	U	1.0	0.25	ug/L			06/27/23 12:31	1
trans-1,2-Dichloroethene	0.34	U	1.0	0.34	ug/L			06/27/23 12:31	1
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	ug/L			06/27/23 12:31	1
1,1,1-Trichloroethane	0.21	U	1.0	0.21	ug/L			06/27/23 12:31	1
1,1,2-Trichloroethane	0.32	U	1.0	0.32	ug/L			06/27/23 12:31	1
Trichloroethene	0.20	U	1.0	0.20	ug/L			06/27/23 12:31	1
Vinyl acetate	0.69	U	2.0	0.69	ug/L			06/27/23 12:31	1
Vinyl chloride	0.40	U	1.0	0.40	ug/L			06/27/23 12:31	1
Xylenes, Total	0.23	U	1.0	0.23	ug/L			06/27/23 12:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*		*06/27/23 12:31*	*1*
Dibromofluoromethane (Surr)	*115*		*70 - 130*		*06/27/23 12:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*60 - 124*		*06/27/23 12:31*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*06/27/23 12:31*	*1*

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

Lab Sample ID: LCS 680-785686/4
Matrix: Water
Analysis Batch: 785686

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	310	*+	ug/L		124	67 - 120
Benzene	50.0	49.1		ug/L		98	70 - 130
Bromodichloromethane	50.0	57.1		ug/L		114	70 - 130
Bromoform	50.0	61.9		ug/L		124	69 - 129
Bromomethane	50.0	39.9		ug/L		80	28 - 192
2-Butanone (MEK)	250	334	*+	ug/L		134	69 - 120
Carbon disulfide	50.0	46.2		ug/L		92	70 - 130
Carbon tetrachloride	50.0	47.7		ug/L		95	70 - 130
Chlorobenzene	50.0	53.5		ug/L		107	70 - 130
Chlorodibromomethane	50.0	56.1		ug/L		112	70 - 130
Chloroethane	50.0	50.9		ug/L		102	31 - 213
Chloroform	50.0	51.1		ug/L		102	70 - 130
Chloromethane	50.0	43.7		ug/L		87	59 - 127
cis-1,2-Dichloroethene	50.0	54.1		ug/L		108	70 - 130
cis-1,3-Dichloropropene	50.0	58.4		ug/L		117	70 - 130
1,1-Dichloroethane	50.0	50.3		ug/L		101	70 - 130
1,2-Dichloroethane	50.0	54.3		ug/L		109	70 - 130
1,1-Dichloroethene	50.0	50.8		ug/L		102	70 - 130
1,2-Dichloroethene, Total	100	105		ug/L		105	70 - 130
1,2-Dichloropropane	50.0	54.6		ug/L		109	70 - 130
1,1-Dichloropropene	50.0	49.2		ug/L		98	70 - 130
Ethylbenzene	50.0	59.2		ug/L		118	70 - 130
2-Hexanone	250	306		ug/L		123	70 - 130
Methylene Chloride	50.0	54.5		ug/L		109	70 - 130
4-Methyl-2-pentanone (MIBK)	250	321	*+	ug/L		128	68 - 120
Styrene	50.0	56.7		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	50.0	55.4		ug/L		111	70 - 130
Tetrachloroethene	50.0	50.4		ug/L		101	70 - 130
Toluene	50.0	46.3		ug/L		93	70 - 130
trans-1,2-Dichloroethene	50.0	50.8		ug/L		102	70 - 130
trans-1,3-Dichloropropene	50.0	58.2		ug/L		116	70 - 130
1,1,1-Trichloroethane	50.0	50.0		ug/L		100	70 - 130
1,1,2-Trichloroethane	50.0	55.6		ug/L		111	70 - 130
Trichloroethene	50.0	52.5		ug/L		105	70 - 130
Vinyl acetate	100	132		ug/L		132	67 - 135
Vinyl chloride	50.0	44.7		ug/L		89	66 - 129
Xylenes, Total	100	120		ug/L		120	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*111*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*60 - 124*
Toluene-d8 (Surr)	*100*		*70 - 130*

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

Lab Sample ID: LCSD 680-785686/5
Matrix: Water
Analysis Batch: 785686

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone			250	324	*+	ug/L		130	67 - 120	4	30
Benzene			50.0	49.2		ug/L		98	70 - 130	0	30
Bromodichloromethane			50.0	57.7		ug/L		115	70 - 130	1	30
Bromoform			50.0	62.9		ug/L		126	69 - 129	2	30
Bromomethane			50.0	43.3		ug/L		87	28 - 192	8	30
2-Butanone (MEK)			250	347	*+	ug/L		139	69 - 120	4	30
Carbon disulfide			50.0	46.2		ug/L		92	70 - 130	0	30
Carbon tetrachloride			50.0	48.9		ug/L		98	70 - 130	2	30
Chlorobenzene			50.0	54.3		ug/L		109	70 - 130	1	30
Chlorodibromomethane			50.0	57.3		ug/L		115	70 - 130	2	30
Chloroethane			50.0	51.8		ug/L		104	31 - 213	2	30
Chloroform			50.0	51.7		ug/L		103	70 - 130	1	30
Chloromethane			50.0	43.5		ug/L		87	59 - 127	1	30
cis-1,2-Dichloroethene			50.0	54.8		ug/L		110	70 - 130	1	30
cis-1,3-Dichloropropene			50.0	59.1		ug/L		118	70 - 130	1	20
1,1-Dichloroethane			50.0	50.7		ug/L		101	70 - 130	1	30
1,2-Dichloroethane			50.0	54.3		ug/L		109	70 - 130	0	50
1,1-Dichloroethene			50.0	50.9		ug/L		102	70 - 130	0	20
1,2-Dichloroethene, Total			100	105		ug/L		105	70 - 130	1	20
1,2-Dichloropropane			50.0	55.6		ug/L		111	70 - 130	2	20
1,1-Dichloropropene			50.0	49.4		ug/L		99	70 - 130	0	20
Ethylbenzene			50.0	61.3		ug/L		123	70 - 130	3	20
2-Hexanone			250	340	*+	ug/L		136	70 - 130	10	20
Methylene Chloride			50.0	55.6		ug/L		111	70 - 130	2	30
4-Methyl-2-pentanone (MIBK)			250	334	*+	ug/L		133	68 - 120	4	30
Styrene			50.0	63.3		ug/L		127	70 - 130	11	30
1,1,2,2-Tetrachloroethane			50.0	49.4		ug/L		99	70 - 130	12	30
Tetrachloroethene			50.0	52.0		ug/L		104	70 - 130	3	30
Toluene			50.0	47.8		ug/L		96	70 - 130	3	30
trans-1,2-Dichloroethene			50.0	50.7		ug/L		101	70 - 130	0	30
trans-1,3-Dichloropropene			50.0	59.2		ug/L		118	70 - 130	2	30
1,1,1-Trichloroethane			50.0	50.7		ug/L		101	70 - 130	2	30
1,1,2-Trichloroethane			50.0	56.9		ug/L		114	70 - 130	2	30
Trichloroethene			50.0	52.8		ug/L		106	70 - 130	1	30
Vinyl acetate			100	132		ug/L		132	67 - 135	0	30
Vinyl chloride			50.0	45.1		ug/L		90	66 - 129	1	30
Xylenes, Total			100	131	*+	ug/L		131	70 - 130	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
Dibromofluoromethane (Surr)	*112*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*60 - 124*
Toluene-d8 (Surr)	*100*		*70 - 130*

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-783746/2
Matrix: Water
Analysis Batch: 783746

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate, Dissolved	0.023	U	0.050	0.023	mg/L			06/15/23 11:57	1

Lab Sample ID: LCS 680-783746/3
Matrix: Water
Analysis Batch: 783746

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate, Dissolved	1.00	1.07		mg/L		107	90 - 110

Lab Sample ID: LCSD 680-783746/4
Matrix: Water
Analysis Batch: 783746

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate, Dissolved	1.00	1.07		mg/L		107	90 - 110	0	15

Lab Sample ID: MB 680-786374/71
Matrix: Water
Analysis Batch: 786374

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	0.20	U	0.50	0.20	mg/L			06/30/23 11:09	1
Sulfate, Dissolved	0.40	U	1.0	0.40	mg/L			06/30/23 11:09	1

Lab Sample ID: LCS 680-786374/15
Matrix: Water
Analysis Batch: 786374

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride, Dissolved	10.0	10.0		mg/L		100	90 - 110
Sulfate, Dissolved	10.0	9.79		mg/L		98	90 - 110

Lab Sample ID: LCSD 680-786374/16
Matrix: Water
Analysis Batch: 786374

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride, Dissolved	10.0	10.0		mg/L		100	90 - 110	0	15
Sulfate, Dissolved	10.0	9.85		mg/L		98	90 - 110	1	15

Lab Sample ID: 680-236351-1 MS
Matrix: Water
Analysis Batch: 783746

Client Sample ID: MW-0623
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate, Dissolved	0.023	U F1	1.00	0.629	F1	mg/L		63	80 - 120

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 680-236351-1 MSD
Matrix: Water
Analysis Batch: 783746

Client Sample ID: MW-0623
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate, Dissolved	0.023	U F1	1.00	0.655	F1	mg/L		66	80 - 120	4	15

Lab Sample ID: 680-236351-1 MS
Matrix: Water
Analysis Batch: 786374

Client Sample ID: MW-0623
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride, Dissolved	91		10.0	100	4	mg/L		91	80 - 120
Sulfate, Dissolved	9.9		10.0	20.4		mg/L		105	80 - 120

Lab Sample ID: 680-236351-1 MSD
Matrix: Water
Analysis Batch: 786374

Client Sample ID: MW-0623
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride, Dissolved	91		10.0	100	4	mg/L		89	80 - 120	0	15
Sulfate, Dissolved	9.9		10.0	19.3		mg/L		94	80 - 120	6	15

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-785491/4
Matrix: Water
Analysis Batch: 785491

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Dissolved	2.2	U	5.0	2.2	mg/L			06/23/23 10:54	1

Lab Sample ID: LCS 680-785491/6
Matrix: Water
Analysis Batch: 785491

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Dissolved	250	246		mg/L		98	90 - 112

Lab Sample ID: LCSD 680-785491/31
Matrix: Water
Analysis Batch: 785491

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity, Dissolved	250	253		mg/L		101	90 - 112	3	30

Lab Sample ID: 680-236351-5 DU
Matrix: Water
Analysis Batch: 785491

Client Sample ID: EB-061423
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Dissolved	2.2	U	2.2	U	mg/L		NC	30

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 410-388758/1
Matrix: Water
Analysis Batch: 388758

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	0.70	U	2.0	0.70	mg/L			06/20/23 14:08	1

Lab Sample ID: LCS 410-388758/2
Matrix: Water
Analysis Batch: 388758

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Dissolved	20.1	18.2		mg/L		91	77 - 110

Lab Sample ID: LCSD 410-388758/3
Matrix: Water
Analysis Batch: 388758

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide, Dissolved	20.1	18.2		mg/L		91	77 - 110	0	10

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 680-786243/2
Matrix: Water
Analysis Batch: 786243

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	0.50	U	1.0	0.50	mg/L			06/29/23 02:04	1

Lab Sample ID: LCS 680-786243/3
Matrix: Water
Analysis Batch: 786243

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	20.0	19.9		mg/L		99	80 - 120

Lab Sample ID: LCSD 680-786243/4
Matrix: Water
Analysis Batch: 786243

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	20.0		mg/L		100	80 - 120	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

GC/MS VOA

Analysis Batch: 785468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-1	MW-0623	Total/NA	Water	8260D	
680-236351-2	MW-18S	Total/NA	Water	8260D	
680-236351-3	MW-19	Total/NA	Water	8260D	
680-236351-4	MW-7S	Total/NA	Water	8260D	
680-236351-5	EB-061423	Total/NA	Water	8260D	
680-236351-6	PMW-1	Total/NA	Water	8260D	
MB 680-785468/9	Method Blank	Total/NA	Water	8260D	
LCS 680-785468/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-785468/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 785686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-6 - DL	PMW-1	Total/NA	Water	8260D	
680-236351-7	Trip Blank	Total/NA	Water	8260D	
680-236351-8	MW-16S	Total/NA	Water	8260D	
MB 680-785686/8	Method Blank	Total/NA	Water	8260D	
LCS 680-785686/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-785686/5	Lab Control Sample Dup	Total/NA	Water	8260D	

HPLC/IC

Analysis Batch: 783746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-1	MW-0623	Dissolved	Water	9056A	
680-236351-2	MW-18S	Dissolved	Water	9056A	
680-236351-3	MW-19	Dissolved	Water	9056A	
680-236351-4	MW-7S	Dissolved	Water	9056A	
680-236351-5	EB-061423	Dissolved	Water	9056A	
680-236351-6	PMW-1	Dissolved	Water	9056A	
680-236351-8	MW-16S	Dissolved	Water	9056A	
MB 680-783746/2	Method Blank	Total/NA	Water	9056A	
LCS 680-783746/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-783746/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236351-1 MS	MW-0623	Dissolved	Water	9056A	
680-236351-1 MSD	MW-0623	Dissolved	Water	9056A	

Analysis Batch: 786374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-1	MW-0623	Dissolved	Water	9056A	
680-236351-2	MW-18S	Dissolved	Water	9056A	
680-236351-3	MW-19	Dissolved	Water	9056A	
680-236351-4	MW-7S	Dissolved	Water	9056A	
680-236351-5	EB-061423	Dissolved	Water	9056A	
680-236351-6	PMW-1	Dissolved	Water	9056A	
680-236351-8	MW-16S	Dissolved	Water	9056A	
MB 680-786374/71	Method Blank	Total/NA	Water	9056A	
LCS 680-786374/15	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-786374/16	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236351-1 MS	MW-0623	Dissolved	Water	9056A	
680-236351-1 MSD	MW-0623	Dissolved	Water	9056A	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tri Cities Barrel Superfund Site-NY

Job ID: 680-236351-1

General Chemistry

Analysis Batch: 388758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-1	MW-0623	Dissolved	Water	9034	
680-236351-2	MW-18S	Dissolved	Water	9034	
680-236351-3	MW-19	Dissolved	Water	9034	
680-236351-4	MW-7S	Dissolved	Water	9034	
680-236351-5	EB-061423	Dissolved	Water	9034	
680-236351-6	PMW-1	Dissolved	Water	9034	
680-236351-8	MW-16S	Dissolved	Water	9034	
MB 410-388758/1	Method Blank	Total/NA	Water	9034	
LCS 410-388758/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 410-388758/3	Lab Control Sample Dup	Total/NA	Water	9034	

Analysis Batch: 785491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-1	MW-0623	Dissolved	Water	2320B-2011	
680-236351-2	MW-18S	Dissolved	Water	2320B-2011	
680-236351-3	MW-19	Dissolved	Water	2320B-2011	
680-236351-4	MW-7S	Dissolved	Water	2320B-2011	
680-236351-5	EB-061423	Dissolved	Water	2320B-2011	
680-236351-6	PMW-1	Dissolved	Water	2320B-2011	
680-236351-8	MW-16S	Dissolved	Water	2320B-2011	
MB 680-785491/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-785491/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-785491/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-236351-5 DU	EB-061423	Dissolved	Water	2320B-2011	

Analysis Batch: 786243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236351-1	MW-0623	Dissolved	Water	9060A	
680-236351-2	MW-18S	Dissolved	Water	9060A	
680-236351-3	MW-19	Dissolved	Water	9060A	
680-236351-4	MW-7S	Dissolved	Water	9060A	
680-236351-5	EB-061423	Dissolved	Water	9060A	
680-236351-6	PMW-1	Dissolved	Water	9060A	
680-236351-8	MW-16S	Dissolved	Water	9060A	
MB 680-786243/2	Method Blank	Dissolved	Water	9060A	
LCS 680-786243/3	Lab Control Sample	Dissolved	Water	9060A	
LCSD 680-786243/4	Lab Control Sample Dup	Dissolved	Water	9060A	

Lab Chronicle

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: MW-0623
Lab Sample ID: 680-236351-1
Date Collected: 06/14/23 08:00
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785468	Y1S	EET SAV	06/26/23 14:19
Dissolved	Analysis	9056A		1	786374	GE	EET SAV	06/30/23 12:04
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 17:04
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 11:52
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 04:36

Client Sample ID: MW-18S
Lab Sample ID: 680-236351-2
Date Collected: 06/14/23 09:30
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785468	Y1S	EET SAV	06/26/23 14:39
Dissolved	Analysis	9056A		1	786374	GE	EET SAV	06/30/23 12:42
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 17:35
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 12:04
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 05:01

Client Sample ID: MW-19
Lab Sample ID: 680-236351-3
Date Collected: 06/14/23 12:20
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785468	Y1S	EET SAV	06/26/23 14:59
Dissolved	Analysis	9056A		1	786374	GE	EET SAV	06/30/23 12:54
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 17:45
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 11:41
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 05:21

Client Sample ID: MW-7S
Lab Sample ID: 680-236351-4
Date Collected: 06/14/23 12:35
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785468	Y1S	EET SAV	06/26/23 15:18
Dissolved	Analysis	9056A		2	786374	GE	EET SAV	06/30/23 13:07
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 17:54
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 12:13
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 05:45

Lab Chronicle

Client: WSP USA Inc.
Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Client Sample ID: EB-061423
Lab Sample ID: 680-236351-5
Date Collected: 06/14/23 14:30
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785468	Y1S	EET SAV	06/26/23 15:38
Dissolved	Analysis	9056A		1	786374	GE	EET SAV	06/30/23 13:20
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 18:14
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 11:16
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 06:04

Client Sample ID: PMW-1
Lab Sample ID: 680-236351-6
Date Collected: 06/14/23 15:00
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785468	Y1S	EET SAV	06/26/23 15:58
Total/NA	Analysis	8260D	DL	5	785686	Y1S	EET SAV	06/27/23 19:50
Dissolved	Analysis	9056A		1	786374	GE	EET SAV	06/30/23 13:32
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 18:23
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 11:31
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 06:24

Client Sample ID: Trip Blank
Lab Sample ID: 680-236351-7
Date Collected: 06/14/23 00:00
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	785686	Y1S	EET SAV	06/27/23 14:11

Client Sample ID: MW-16S
Lab Sample ID: 680-236351-8
Date Collected: 06/14/23 09:55
Matrix: Water
Date Received: 06/15/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	785686	Y1S	EET SAV	06/27/23 18:50
Dissolved	Analysis	9056A		1	786374	GE	EET SAV	06/30/23 13:45
Dissolved	Analysis	9056A		1	783746	JU	EET SAV	06/15/23 18:33
Dissolved	Analysis	2320B-2011		1	785491	PG	EET SAV	06/23/23 12:26
Dissolved	Analysis	9034		1	388758	USE1	ELLE	06/20/23 14:08
Dissolved	Analysis	9060A		1	786243	JU	EET SAV	06/29/23 06:50

Laboratory References:
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

2 x coolers.

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404
Phone 912-354 7858 Fax 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: NTW / EAG	Lab PM: Lanier Jerry A	Carrier Tracking No(s):	COC No: 680 147535-53409 1
Client Contact: Ms Erin Huntley	Phone: 315-430-9973	E Mail: Jerry Lanier@et eurofinsus com	State of Origin:	Page: Page 1 of 2
Company: WSP USA Inc	PWSID:			Job #:
Address: 11 Stanwix Street Suite 950	Due Date Requested:			
City: Pittsburgh	TAT Requested (days):			
State Zip: PA 15222	Compliance Project: Δ Yes Δ No			
Phone: 412-216-9896(Tel)	PO #: Ask for PO or Prj No			
Email: erin huntley@wsp com	WO #:			
Project Name: Tri Cities Barrel Superfund Site-NY	Project #: 68029495			
Site:	SSOW#:			

Analysis Requested

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, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - (MOD) TCL Sublist	9056A_ORGFM_28D	9056A_ORGFM_48H	2320B - (MOD) Local Method	9034 - (MOD) Local Method	9060A_Diss (MOD) Local Method	Total Number of containers	Special Instructions/Note
			Preservation Code				A	N	N	N	CB	N		
MW-0623	6/14/23	0800	G	Water	Y		X	X	X	X	X	X	9	VOCs NOT FIELD
MW-185	"	0930	G	Water	Y		X	X	X	X	X	X	9	FILTERED (8260)
MW-19	"	1200	G	Water	Y		X	X	X	X	X	X	9	"
MW-75	"	1235	G	Water	Y		X	X	X	X	X	X	9	"
EB-061423	"	1430	G	Water	N		X	X	X	X	X	X	9	"
PMW-1	"	1500	G	Water	Y		X	X	X	X	X	X	9	"
TRIP BLANK	—	—	—	Water	N		X						2	
				Water										
				Water										
				Water										
				Water										

680-236351 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assesse
☐ Return To Client ☐ Disposa

Deliverable Requested I II, III IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	6/14/23 1750			6.15.23 1019	M
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
		5.7/5.5 3.2/3.0

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 680-741345.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry Lanier@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - New York		Job #: 680-236351-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 7/3/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601	PO #:			
Phone: 717-656-2300(Tel)	WO #:			
Email:				
Project Name: Tri Cities Barrel Superfund Site-NY	Project #: 68029495			
Site:	SSOW#:			

Analysis Requested

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034/ Sulfide (FF)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-0623 (680-236351-1)	6/14/23	08:00 Eastern		Water			X	2	
MW-18S (680-236351-2)	6/14/23	09:30 Eastern		Water			X	2	
MW-19 (680-236351-3)	6/14/23	12:20 Eastern		Water			X	2	
MW-7S (680-236351-4)	6/14/23	12:35 Eastern		Water			X	2	
EB-061423 (680-236351-5)	6/14/23	14:30 Eastern		Water			X	2	
PMW-1 (680-236351-6)	6/14/23	15:00 Eastern		Water			X	2	
MW-16S (680-236351-8)	6/14/23	09:55 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *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
TH	06-16-23 15:00				
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time 6/17/23 1000	Company EUET

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Raw: 1.4 Cor: 1.2

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 680-236351-1

Login Number: 236351
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 680-236351-1

Login Number: 236351
List Number: 2
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/17/23 12:51 PM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
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 (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 680-236351-1
Project/Site: Tri Cities Barrel Superfund Site-NY

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	07-09-23
Arkansas DEQ	State	19-015-0	02-01-24
California	State	2939	06-30-23
Florida	NELAP	E87052	06-30-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-24
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	06-30-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-23
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	06-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-23
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	01-01-24
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-24
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-24

ENCLOSURE C

February 4, 2022

Matthew Banks
Building Inspector
Town of Fenton
44 Park Street
Port Crane, NY 13833

Subject: **U.S. Environmental Protection Agency Request - Building Permits**
Tri-Cities Barrel Superfund Site, Fenton, New York

Dear Mr. Banks:

Regarding the Tri-Cities Barrel Superfund Site, could you please complete and sign the acknowledgement below and return to WSP via electronic mail (erin.huntley@wsp.com). If you have any questions, please contact me at (412) 375-0265. Thank you for your cooperation.

Sincerely yours,

Erin Huntley
Senior Lead Consultant, Geologist

EMH
K:\TRI-CITY\31401357\31401357.003\LTMP\31401357.003_Fenton Building Inspector Annual IC 02042022.docx

I Matthew Banks **(name), building inspector for the Town of Fenton, confirm that the Town of Fenton has a record of the U.S. Environmental Protection Agency's (EPA) request that the Town of Fenton's building inspector confer with the U.S. EPA before issuing any building permits for construction at the Tri-Cities Barrel Superfund Site.**

Signature

2/7/2022
Date

WSP USA
Suite 950
11 Stanwix Street
Pittsburgh, PA 15222

Tel.: +1 412 604 1040
Fax: +1 412 920 7435
wsp.com

February 3, 2023

Matthew Banks
Building Inspector
Town of Fenton
44 Park Street
Port Crane, NY 13833

Subject: **U.S. Environmental Protection Agency Request - Building Permits**
Tri-Cities Barrel Superfund Site, Fenton, New York

Dear Mr. Banks:

The U.S. Environmental Protection Agency (EPA) requires annual confirmation that the institutional controls for the Tri-Cities Barrel Superfund Site (Parcel Nos. 113.04-1-18, 113.04-1-19, and 113.04-1-34) located at 3 Osborne Hollow Road, Port Crane, New York are maintained. At your earliest convenience, please complete and sign the acknowledgement below regarding these institutional controls and return to WSP via electronic mail (erin.huntley@wsp.com).

If you have any questions, please contact me at (412) 375-0265. Thank you for your cooperation.

Sincerely yours,

Erin Huntley
Assistant Vice President

EMH
K:\TRI-CITY\31401357\31401357.004\31401357.004_Fenton Building Inspector Annual IC 02032023.docx

I Matthew Banks **(name), building inspector for the Town of Fenton, confirm that the Town of Fenton has a record of the U.S. EPA request that I confer with the U.S. EPA before issuing any building permits for construction at the Tri-Cities Barrel Superfund Site.**

Signature

2/6/2023
Date

WSP USA
Suite 950
11 Stanwix Street
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