TETRA TECH

June 8, 2018
(117-7469002.04)

Mr. Thomas Wentland
Waste Management Engineer
Wisconsin Department of Natural Resources
P.O. Box 408
Plymouth, WI 53073-0408

RE: Second Quarter 2018 Progress Report, Source Area Remedial Action, Pentair Flow Technologies, LLC Facility, 293 S. Wright Street, Delavan, Wisconsin
BRRTS# 02-65-529579, FID# 265091640

SITE NAME/ACTIVITY:
Contract No. SF-90-02
Delavan Municipal Well #4
Delavan, Wisconsin
Source Area Remediation

DATE: June 8, 2018

PERIOD: April 1 through June 30, 2018

Dear Mr. Wentland:

As requested by the Wisconsin Department of Natural Resources (WNDR) in its February 8, 2017 letter, Pentair Flow Technologies began collecting groundwater samples from monitor well TW-4 on a quarterly schedule during the first quarter of 2017 (January – March). The increase in sampling frequency of TW-4 from annual to quarterly was requested because the trichloroethene (TCE) concentration in the annual groundwater samples collected from TW-4 increased from 20 ug/L for the 2014 sample to 36 ug/L for the 2015 sample. The reported TCE concentration of 36 ug/L in the 2015 sample exceeds the U.S. EPA Removal Management Level (RML) of 22 ug/L for TCE used to protect against commercial/industrial exposure via vapor inhalation. The annual groundwater sample collected from TW-4 in May 2016 had a reported TCE concentration of 15 ug/L, which is less than the RML of 22 ug/L. The sampling of TW-4 on a quarterly schedule is to continue until directed otherwise in writing by the WDNR.

The second quarter 2018 sample was collected from TW-4 by Tetra Tech personnel on May 10, 2018. The groundwater sample was submitted to the TestAmerica laboratory in University Park, Illinois for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260B. Copies of the field water quality sampling and analysis form and the laboratory analytical report are provided in Appendix A. Historical VOCs results and the current VOCs results for the groundwater samples collected from TW-4 are summarized on Table 1. A chart showing the trends in trichloroethene (TCE) and total VOCs concentrations in TW-4 is included as Figure 1 and a site layout figure showing the location of TW-4 is included as Figure 2. As shown on Table 1 and Figure 1, the reported TCE concentration in the groundwater sample collected from TW-4 on May 10th was 16 ug/L, which is slightly higher than the reported TCE concentration of 11 ug/L for the

previous groundwater sample collected from TW-4 on February 28, 2018. The TCE concentrations in all of the quarterly samples collected from TW-4 in 2017 and the TCE concentrations in the samples collected from TW-4 in the first two quarters of 2018 are below the RML of 22 ug/L, which indicates there is not a vapor inhalation exposure risk at the Delavan facility at this time. The 2017 and first and second quarter 2018 TCE results also confirms the overall decreasing trend in TCE impacts at TW-4 (see Figure 1).

The next quarterly groundwater sample is scheduled to be collected from TW-4 by Tetra Tech personnel during the month of July, which is the normal month that the annual groundwater sampling event is performed. Please contact me if you require additional information or have any questions regarding these matters.

Sincerely,

Tetra Tech

Mark A. Manthey, P.G.
Associate Hydrogeologist
mark.manthey@tetratech.com

Encs.

cc: Thomas Samuel, Pentair Flow Technologies, LLC (Electronic copy via email.)
William Ryan, U.S. EPA (Electronic copy via email.)
Robert Thiboldeaux, PhD, Senior Toxicologist, Wisconsin Department of Health Services (Electronic copy via email.)

FIGURES

Figure 1. Monitor Well TW-4 Trichloroethene (TCE) and Total VOCs Time Series Chart

Figure 2. Site Layout

TABLES

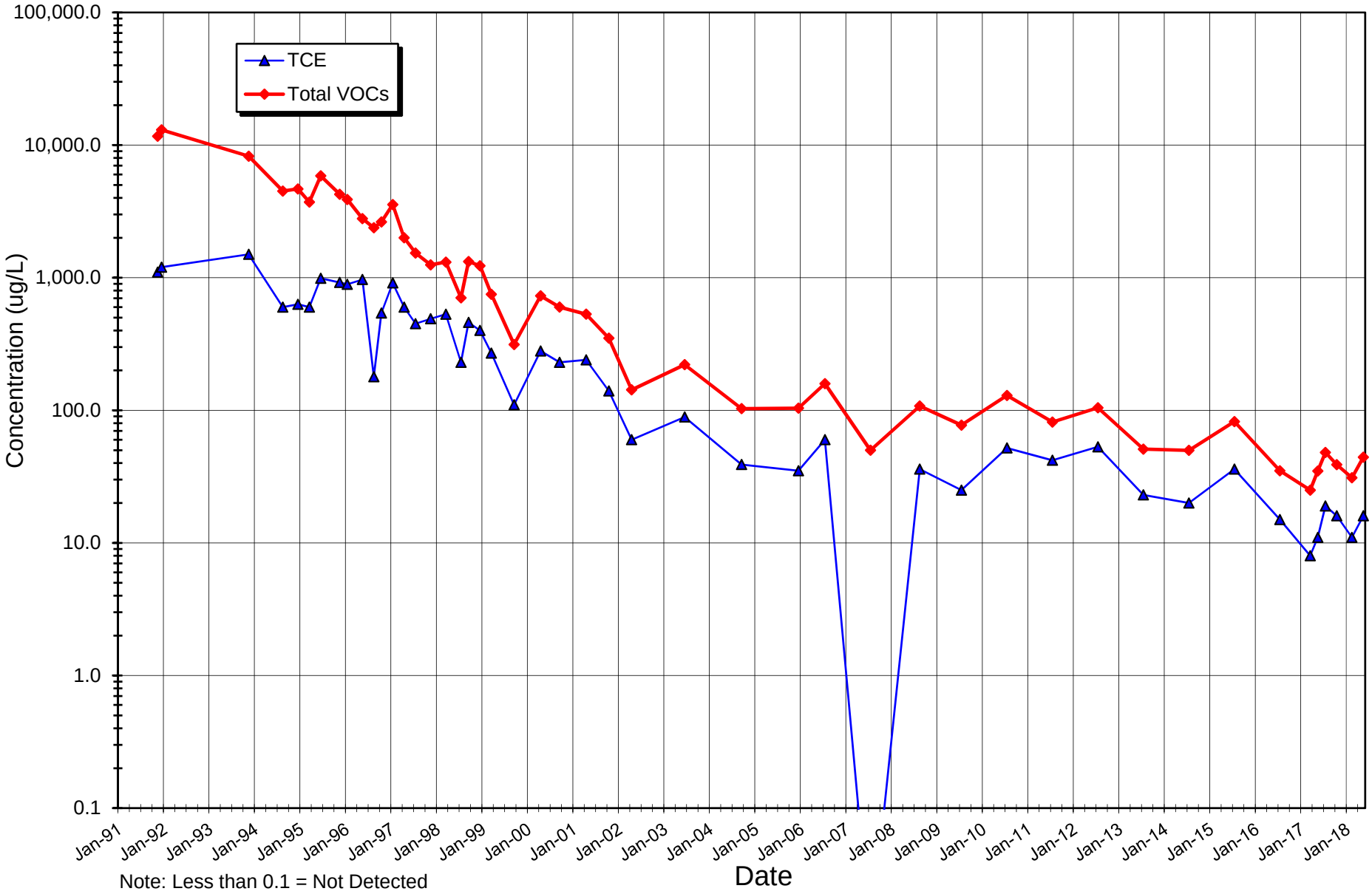
Table 1. Summary of VOCs Groundwater Monitoring Analytical Results for Plant #1 Monitor Well TW-4

APPENDIX

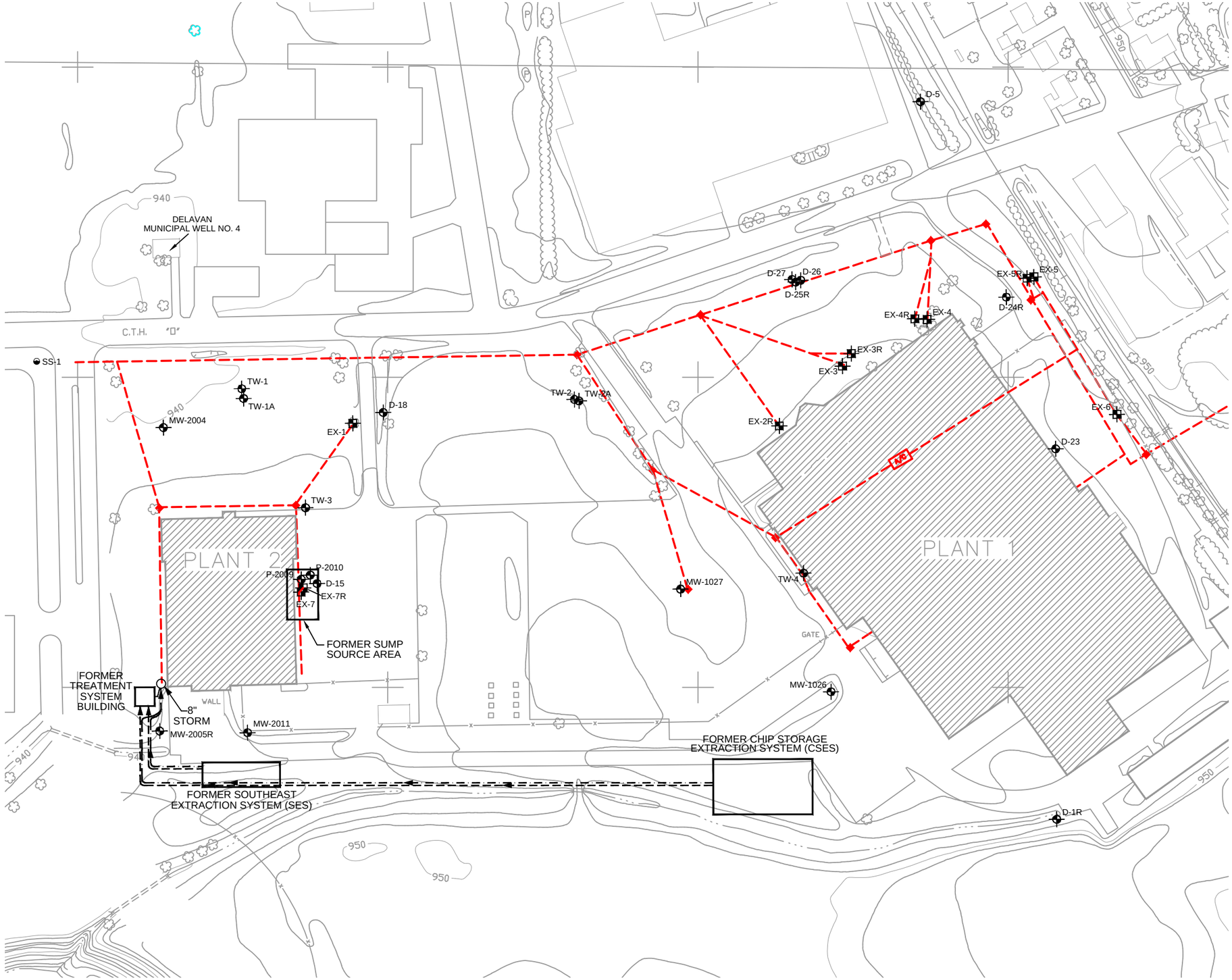
Appendix A. Field Form and Laboratory Analytical Report

FIGURES

Figure 1. Monitor Well TW-4 Trichloroethene (TCE) and Total VOCs
Time Series Chart



Note: Less than 0.1 = Not Detected



EXPLANATION

- MW-2004 — MONITOR WELL LOCATION AND DESIGNATION
- E-3 — EXTRACTION WELL LOCATION AND DESIGNATION
- SS-1 — STORM SEWER SAMPLE LOCATION AND DESIGNATION
- P-2009 — PIEZOMETER LOCATION AND DESIGNATION
- EXTRACTION WELL/ STORM SEWER PIPING

N

SCALE

0 330

Feet

Base map from Areo-Metric Engineering, 4/16/88.

STA-RITE INDUSTRIES, INC. DELAVAN, WISCONSIN	DATE:	12/16/17
	DESIGNED:	HJW
DELAVAN FACILITY LAYOUT AND WELL LOCATIONS	CHECKED:	MAM
	APPROVED:	MAM
	DRAWN:	HJW
	PROJ.:	117-7469002
TETRA TECH	Figure	2

S:\CAD\STA-RITE\DELAVAN\12-13-17\FIG3.DWG

TABLE

Table 1. Summary of VOCs Groundwater Monitoring Analytical Results for Plant #1 Monitor Well TW-4

WELL	DATE	PCE	1,1,1-TCA	TCE	1,1,2-TCA	Vinyl Chloride	Acetone	Benzene	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	CIS-1,2-DCE	Trans-1,2-DCE	Methylene Chloride	Ethylbenzene	Xylenes, Total	**Total VOCs**
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NR 140	ES	5.0	200	5	5	0.2	9000	5.0	6	850	5	7	70	100	5	700	2000	
NR 140	PAL	0.5	40	0.5	0.5	0.02	1800	0.5	0.6	85	0.5	0.7	7	20	0.5	140	400	
TW-4	11/05/91	**0.50**	**10000**	**1100**	**5.6**	<0.3	<1.0	<0.5	**4.0**	**61**	<0.5	**440.0**	**50**	<0.5	**2.4**	<0.5	<1.0	11663.5
	12/12/91	**0.60**	**11000**	**1200**	**4.5**	<0.3	<1.0	<0.5	**3.7**	**93**	**3**	**680.0**	**52**	<0.5	<1	<0.5	<1.0	13036.8
	11/11/93	**0.80**	**6200**	**1500**	**3.2**	<0.3	<1.0	<0.5	<0.5	**26**	<0.5	**490**	**25**	<0.5	<1.0	<0.5	<1.0	8245
	08/17/94	<1	**3900**	**600**	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4500
	12/14/94	<50	**4040**	**630**	NA	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4670
	03/13/95	ND	**3120**	**600**	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3720
	06/21/95	NA	**4220**	**990**	**17.6**	**5.4**	<1.0	NA	**3.8**	**113**	<0.5	**415**	**93.6**	NA	NA	NA	NA	5858.4
	11/08/95	**1.2**	**3340**	**920**	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4261.2
	01/25/96	**1.1**	**3000**	**891**	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3892.1
	05/14/96	**0.90**	**1820**	**969**	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2789.9
	08/14/96	<0.5	**2150**	**179**	**1.8**	<0.5	<1.0	<0.5	<0.5	**12**	<1.6	**36.7**	NA	<0.5	NA	<0.5	NA	2379.5
	10/08/96	**0.90**	**1850**	**541**	**6.3**	<0.5	<1.0	<0.5	**1.0**	**36.3**	<1.6	**196**	NA	<0.5	NA	<0.5	NA	2631.5
	01/21/97	<0.5	**2650**	**913**	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3563
	04/01/97	**0.83**	**1400**	**600**	NA	<0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2000.83
	07/23/97	**0.67**	**950**	**450**	**4.4**	<0.46	**3.4**	**0.3**	**0.70**	**24**	<0.20	**66**	**36**	0.5	<0.87	<0.38	<1.1	1535.97
	11/18/97	**0.83**	**760**	**490**	NA	<0.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1250.83
	03/23/98	**0.74**	**780**	**530**	NA	<0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1310.74
	07/27/98	<2.5	**410**	**230**	<2.5	<2.5	<20	<1.0	<2.5	**13**	<2.5	**16**	**21**	<2.5	**15**	<2.5	<5.0	705
	09/28/98	<0.63	**860**	**460**	**2.8**	<0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1322.8
	12/05/98	<6.3	**830**	**400**	NA	<4.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1230
	03/11/99	<6.3	**480**	**270**	NA	<4.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	750
	09/02/99	<3.2	**180**	**110**	**2.4**	<2.3	NA	<1.6	<0.90	<1.2	<1.0	**19**	**2.0**	<2.0	<4.4	<1.9	<5.5	313.4
	04/25/00	<3.2	**450**	**280**	NA	<2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.5	730
	09/26/00	<6.3	**340**	**230**	<1.5	<4.6	NA	<3.1	<1.8	**5.2**	<2.0	**15**	**10**	<3.9	<8.7	<3.8	<5.5	600.2
	04/23/01	**0.60**	**290**	**240**	NA	<0.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	530.6
	10/02/01	<2.0	**190**	**140**	<2.0	<2.0	NA	<0.80	<2.0	**2.1**	<2.0	**6.8**	**3.0**	<2.0	**8.1**	<2.0	<2.0	350
TW-4	04/16/02	<0.25	**76**	**60**	**1.5**	<0.25	NA	<0.10	<0.25	**1.4**	<0.25	**2.5**	**0.76**	<0.25	**0.47**	<0.25	<0.25	142.63

Table 1. Summary of VOCs Groundwater Monitoring Analytical Results for Plant #1 Monitor Well TW-4

WELL	DATE	PCE	1,1,1-TCA	TCE	1,1,2-TCA	Vinyl Chloride	Acetone	Benzene	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	CIS-1,2-DCE	Trans-1,2-DCE	Methylene Chloride	Ethylbenzene	Xylenes, Total	**Total VOCs**
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NR 140	ES	5.0	200	5	5	0.2	9000	5.0	6	850	5	7	70	100	5	700	2000	
NR 140	PAL	0.5	40	0.5	0.5	0.02	1800	0.5	0.6	85	0.5	0.7	7	20	0.5	140	400	
TW-4	06/24/03	<1.0	**120**	**89**	**1.4**	<1.0	NA	<0.50	<0.50	**2.1**	<1.0	**4.7**	**3.7**	<1.0	<2.0	<1.0	<1.0	220.9
	09/21/04	<0.50	**64**	**39**	NA	<0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	103
	12/14/05	<0.50	**65**	**35**	**0.92**	<0.20	<2.0	<0.20	<0.20	**0.76**	<0.50	**1.6**	**0.55**	<0.50	<1.0	<0.50	<0.50	103.83
	07/31/06	<0.50	**92**	**60**	**1.3**	<0.20	<2.0	<0.20	<0.20	**1.3**	<0.50	**2.9**	**1.4**	<0.50	<1.0	<0.50	<0.50	158.9
	07/31/07	<0.50	**50**	<0.20	<0.25	<0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
	08/20/08	<0.50	**71**	**36**	**0.73**	<0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	107.73
	07/28/09	<0.50	**52**	**25**	**0.34**	<0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	77.34
	07/14/10	<0.50	**75**	**52**	**0.28**	<0.20	NA	<0.20	<0.20	<0.50	<0.50	**2.1**	<0.50	<0.50	<1.0	<0.50	<0.50	129.38
	07/21/11	<0.50	**38**	**42**	**0.28**	<0.20	NA	<0.20	<0.20	**0.52**	<0.50	**0.78**	<0.50	<0.50	<1.0	<0.50	<0.50	81.58
	07/10/12	<0.17	**48**	**53**	<0.28	<0.10	NA	<0.074	<0.20	**1.8**	<0.28	**1.8**	<0.12	<0.25	<0.68	<0.50	<0.068	104.6
	07/24/13	<0.17	**26**	**23**	<0.28	<0.10	NA	<0.074	<0.20	**0.54**	<0.28	**1.1**	<0.12	<0.25	<0.68	**0.13**	**0.20**	50.97
	07/29/14	<0.17	**29**	**20**	<0.28	<0.10	NA	<0.074	<0.20	<0.19	<0.28	**0.9**	<0.12	<0.25	<0.68	<0.13	<0.068	49.9
	07/14/15	<0.17	**30**	**36**	<0.28	<0.10	NA	<0.074	<0.20	**4.9**	<0.28	**1.4**	**1.7**	<0.25	**8.2 B**	<0.10	<0.068	82.2
	07/29/16	<0.37	**20**	**15**	<0.35	<0.20	NA	<0.15	<0.37	<0.41	<0.39	<0.39	<0.41	<0.35	<1.6	<0.18	<0.22	35
	03/01/17	<0.37	**17**	**8.0**	<0.35	<0.20	NA	<0.15	<0.37	<0.41	<0.39	<0.39	<0.41	<0.35	<1.6	<0.18	<0.22	25
	05/17/17	<0.37	**22**	**11**	<0.35	<0.20	NA	<0.15	<0.37	**0.96**	<0.39	**0.90**	<0.41	<0.35	<1.6	<0.18	<0.22	34.86
	07/13/17	<0.37	**27**	**19**	<0.35	<0.20	NA	<0.15	<0.37	**1.1**	<0.39	**1.0**	<0.41	<0.35	<1.6	<0.18	<0.22	48.1
	10/24/17	<0.37	**22**	**16**	<0.35	<0.20	NA	<0.15	<0.37	<0.41	<0.39	**0.91**	<0.41	<0.35	<1.6	<0.18	<0.22	38.91
	02/28/18	<0.37	**20**	**11**	<0.35	<0.20	NA	<0.15	<0.37	<0.41	<0.39	<0.39	<0.41	<0.35	<1.6	<0.18	<0.22	31
TW-4	05/10/18	<0.74	**27**	**16**	<0.33	<0.50	NA	<0.43	<0.50	**0.58**	<0.50	**0.70**	<0.41	<0.37	<2.5	<0.33	<0.23	44.28

Notes: All values listed are in parts per billion (ug/L).
VOCs = Volatile Organic Compounds
ES = Enforcement Standard, PAL = Preventative Action Limit
Orange Highlight = above ES, Yellow Highlight = above PAL
ND = not detected, NA = not analyzed or no data available

PCE = Tetrachloroethene
TCA = Trichloroethane
TCE = Trichloroethene

DCA = Dichloroethane
DCE = Dichloroethene

B = Detected in blank sample at a similar concentration.

ATTACHMENT A
FIELD FORM AND
LABORATORY ANALYTICAL REPORT

TETRA TECH FIELD WATER QUALITY SAMPLING AND ANALYSIS FORM

PROJECT INFORMATION		INSTRUMENTS	
PROJECT	Delavan Facility Remedial Action	Temp. & pH	Hanna
PROJECT NO.	117-7469002.02	Conductivity	Hanna
LOCATION	Delavan, Wi.	ORP	NA
PERSONNEL	Todd M Thomson	DO	NA

SAMPLE POINT ID		TW-4				
WATER TYPE		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
DATE (month/day/year)		5-10-18				
CLOCK TIME (Military)		08:20				
DEPTH TO WATER (ft)*		37.86				
MEASURED WELL DEPTH (ft)*		50.52				
CASING VOLUME (gallons)		2.1				
PURGE VOLUME (gallons)		10				
DEPTH SAMPLE TAKEN (ft)*		45				
SAMPLING DEVICE		Hargrave Bailer				
FIELD TEMPERATURE (°C)		14.1				
pH		6.91				
ELEC. COND. (uS/cm)	Measured	NA				
	at 25° C	1782				
ORP (mV)		NA				
DISSOLVED OXYGEN (ppm)		NA				
DISSOLVED OXYGEN (% Sat.)		NA				
COLOR		Clear				
ODOR		None				
CLARITY		Clear				

SAMPLING PARAMETERS	# OF CONTAINERS & VOLUME; CONTAINER TYPE (A = AMBER GLASS; G = GLASS; P = PLASTIC); PRESERVATIVE TYPE (L = LAB ADDED; F = FIELD ADDED) OR NEUTRAL; FILTERED (YES or NO)				
VOCs (EPA Method 8260 B)	3 – 40 ml; G; L; HCL; No				
NAME OF LABORATORY	Test America				
DATE SENT TO LAB	5-11-18				
SAMPLER-S NAME	TMT				

*Measured from top of well casing.

TETRA TECH

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145412-1
Client Project/Site: Pentair Delavan - 117-7469002.04

For:
Tetra Tech GEO
175 N Corporate Drive
Suite 100
Brookfield, Wisconsin 53045

Attn: Mr. Mark Manthey

Authorized for release by:
5/25/2018 2:52:34 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

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Case Narrative

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Job ID: 500-145412-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-145412-1

Comments
No additional comments.

Receipt
The samples were received on 5/12/2018 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-525041.

Method(s) 8260B: The laboratory control sample duplicate (LCSD) for analytical batch 680-525041 recovered outside control limits for the following analytes: Bromomethane. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 680-525047 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-525047.

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

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

Detection Summary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Client Sample ID: TW-4 — Lab Sample ID: 500-145412-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.58	J	1.0	0.38	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.70	J	1.0	0.36	ug/L	1		8260B	Total/NA
1,1,1-Trichloroethane	27		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	16		1.0	0.48	ug/L	1		8260B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 500-145412-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-145412-1	TW-4	Ground Water	05/10/18 08:20	05/12/18 10:10
500-145412-2	Trip Blank	Water	05/10/18 00:00	05/12/18 10:10

Client Sample ID: TW-4
Date Collected: 05/10/18 08:20
Date Received: 05/12/18 10:10

Lab Sample ID: 500-145412-1
Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.43		1.0	0.43	ug/L			05/23/18 16:04	1
Bromobenzene	<0.50		1.0	0.50	ug/L			05/23/18 16:04	1
Bromochloromethane	<0.45		1.0	0.45	ug/L			05/23/18 16:04	1
Bromodichloromethane	<0.44		1.0	0.44	ug/L			05/23/18 16:04	1
Bromoform	<0.43		1.0	0.43	ug/L			05/23/18 16:04	1
Bromomethane	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
Carbon tetrachloride	<0.33		1.0	0.33	ug/L			05/23/18 16:04	1
Chlorobenzene	<0.26		1.0	0.26	ug/L			05/23/18 16:04	1
Chloroethane	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
Chloroform	<0.50		1.0	0.50	ug/L			05/23/18 16:04	1
Chloromethane	<0.40		1.0	0.40	ug/L			05/23/18 16:04	1
2-Chlorotoluene	<0.27		1.0	0.27	ug/L			05/23/18 16:04	1
4-Chlorotoluene	<0.45		1.0	0.45	ug/L			05/23/18 16:04	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/23/18 16:04	1
cis-1,3-Dichloropropene	<0.40		1.0	0.40	ug/L			05/23/18 16:04	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			05/23/18 16:04	1
1,2-Dibromo-3-Chloropropane	<1.1	*	5.0	1.1	ug/L			05/23/18 16:04	1
1,2-Dibromoethane	<0.44		1.0	0.44	ug/L			05/23/18 16:04	1
Dibromomethane	<0.35		1.0	0.35	ug/L			05/23/18 16:04	1
1,2-Dichlorobenzene	<0.37		1.0	0.37	ug/L			05/23/18 16:04	1
1,3-Dichlorobenzene	<0.43		1.0	0.43	ug/L			05/23/18 16:04	1
1,4-Dichlorobenzene	<0.46		1.0	0.46	ug/L			05/23/18 16:04	1
Dichlorodifluoromethane	<0.60		1.0	0.60	ug/L			05/23/18 16:04	1
1,1-Dichloroethane	**0.58**	**J**	1.0	0.38	ug/L			05/23/18 16:04	1
1,2-Dichloroethane	<0.50		1.0	0.50	ug/L			05/23/18 16:04	1
1,1-Dichloroethene	**0.70**	**J**	1.0	0.36	ug/L			05/23/18 16:04	1
1,2-Dichloropropane	<0.67		1.0	0.67	ug/L			05/23/18 16:04	1
1,3-Dichloropropane	<0.34		1.0	0.34	ug/L			05/23/18 16:04	1
2,2-Dichloropropane	<0.37		1.0	0.37	ug/L			05/23/18 16:04	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			05/23/18 16:04	1
Ethylbenzene	<0.33		1.0	0.33	ug/L			05/23/18 16:04	1
Hexachlorobutadiene	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			05/23/18 16:04	1
Isopropyl ether	<1.0		10	1.0	ug/L			05/23/18 16:04	1
Methylene Chloride	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
Methyl tert-butyl ether	<0.30		10	0.30	ug/L			05/23/18 16:04	1
Naphthalene	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
n-Butylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 16:04	1
N-Propylbenzene	<0.38		1.0	0.38	ug/L			05/23/18 16:04	1
p-Isopropyltoluene	<0.48		1.0	0.48	ug/L			05/23/18 16:04	1
sec-Butylbenzene	<0.42		1.0	0.42	ug/L			05/23/18 16:04	1
Styrene	<0.27		1.0	0.27	ug/L			05/23/18 16:04	1
tert-Butylbenzene	<0.45		1.0	0.45	ug/L			05/23/18 16:04	1
1,1,1,2-Tetrachloroethane	<0.37		1.0	0.37	ug/L			05/23/18 16:04	1
1,1,2,2-Tetrachloroethane	<0.62		1.0	0.62	ug/L			05/23/18 16:04	1
Tetrachloroethene	<0.74		1.0	0.74	ug/L			05/23/18 16:04	1
Toluene	<0.48		1.0	0.48	ug/L			05/23/18 16:04	1
trans-1,2-Dichloroethene	<0.37		1.0	0.37	ug/L			05/23/18 16:04	1
trans-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/23/18 16:04	1

Client Sample ID: TW-4

Date Collected: 05/10/18 08:20
Date Received: 05/12/18 10:10

Lab Sample ID: 500-145412-1

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
1,2,4-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 16:04	1
1,1,1-Trichloroethane	**27**		1.0	0.37	ug/L			05/23/18 16:04	1
1,1,2-Trichloroethane	<0.33		1.0	0.33	ug/L			05/23/18 16:04	1
Trichloroethene	**16**		1.0	0.48	ug/L			05/23/18 16:04	1
Trichlorofluoromethane	<0.42		1.0	0.42	ug/L			05/23/18 16:04	1
1,2,3-Trichloropropane	<0.39		1.0	0.39	ug/L			05/23/18 16:04	1
1,2,4-Trimethylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 16:04	1
1,3,5-Trimethylbenzene	<0.31		1.0	0.31	ug/L			05/23/18 16:04	1
Vinyl chloride	<0.50		1.0	0.50	ug/L			05/23/18 16:04	1
Xylenes, Total	<0.23		1.0	0.23	ug/L			05/23/18 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*05/23/18 16:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*73 - 131*		*05/23/18 16:04*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*05/23/18 16:04*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 122*		*05/23/18 16:04*	*1*

Client Sample ID: Trip Blank

Date Collected: 05/10/18 00:00
Date Received: 05/12/18 10:10

Lab Sample ID: 500-145412-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.43		1.0	0.43	ug/L			05/23/18 11:23	1
Bromobenzene	<0.50		1.0	0.50	ug/L			05/23/18 11:23	1
Bromochloromethane	<0.45		1.0	0.45	ug/L			05/23/18 11:23	1
Bromodichloromethane	<0.44		1.0	0.44	ug/L			05/23/18 11:23	1
Bromoform	<0.43		1.0	0.43	ug/L			05/23/18 11:23	1
Bromomethane	<2.5	*	5.0	2.5	ug/L			05/23/18 11:23	1
Carbon tetrachloride	<0.33		1.0	0.33	ug/L			05/23/18 11:23	1
Chlorobenzene	<0.26		1.0	0.26	ug/L			05/23/18 11:23	1
Chloroethane	<2.5		5.0	2.5	ug/L			05/23/18 11:23	1
Chloroform	<0.50		1.0	0.50	ug/L			05/23/18 11:23	1
Chloromethane	<0.40		1.0	0.40	ug/L			05/23/18 11:23	1
2-Chlorotoluene	<0.27		1.0	0.27	ug/L			05/23/18 11:23	1
4-Chlorotoluene	<0.45		1.0	0.45	ug/L			05/23/18 11:23	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/23/18 11:23	1
cis-1,3-Dichloropropene	<0.40		1.0	0.40	ug/L			05/23/18 11:23	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			05/23/18 11:23	1
1,2-Dibromo-3-Chloropropane	<1.1		5.0	1.1	ug/L			05/23/18 11:23	1
1,2-Dibromoethane	<0.44		1.0	0.44	ug/L			05/23/18 11:23	1
Dibromomethane	<0.35		1.0	0.35	ug/L			05/23/18 11:23	1
1,2-Dichlorobenzene	<0.37		1.0	0.37	ug/L			05/23/18 11:23	1
1,3-Dichlorobenzene	<0.43		1.0	0.43	ug/L			05/23/18 11:23	1
1,4-Dichlorobenzene	<0.46		1.0	0.46	ug/L			05/23/18 11:23	1
Dichlorodifluoromethane	<0.60		1.0	0.60	ug/L			05/23/18 11:23	1
1,1-Dichloroethane	<0.38		1.0	0.38	ug/L			05/23/18 11:23	1
1,2-Dichloroethane	<0.50		1.0	0.50	ug/L			05/23/18 11:23	1
1,1-Dichloroethene	<0.36		1.0	0.36	ug/L			05/23/18 11:23	1

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Client Sample ID: Trip Blank
Date Collected: 05/10/18 00:00
Date Received: 05/12/18 10:10

Lab Sample ID: 500-145412-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.67		1.0	0.67	ug/L			05/23/18 11:23	1
1,3-Dichloropropane	<0.34		1.0	0.34	ug/L			05/23/18 11:23	1
2,2-Dichloropropane	<0.37		1.0	0.37	ug/L			05/23/18 11:23	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			05/23/18 11:23	1
Ethylbenzene	<0.33		1.0	0.33	ug/L			05/23/18 11:23	1
Hexachlorobutadiene	<2.5		5.0	2.5	ug/L			05/23/18 11:23	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			05/23/18 11:23	1
Isopropyl ether	<1.0		10	1.0	ug/L			05/23/18 11:23	1
Methylene Chloride	<2.5		5.0	2.5	ug/L			05/23/18 11:23	1
Methyl tert-butyl ether	<0.30		10	0.30	ug/L			05/23/18 11:23	1
Naphthalene	<2.5		5.0	2.5	ug/L			05/23/18 11:23	1
n-Butylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 11:23	1
N-Propylbenzene	<0.38		1.0	0.38	ug/L			05/23/18 11:23	1
p-Isopropyltoluene	<0.48		1.0	0.48	ug/L			05/23/18 11:23	1
sec-Butylbenzene	<0.42		1.0	0.42	ug/L			05/23/18 11:23	1
Styrene	<0.27		1.0	0.27	ug/L			05/23/18 11:23	1
tert-Butylbenzene	<0.45		1.0	0.45	ug/L			05/23/18 11:23	1
1,1,1,2-Tetrachloroethane	<0.37		1.0	0.37	ug/L			05/23/18 11:23	1
1,1,2,2-Tetrachloroethane	<0.62		1.0	0.62	ug/L			05/23/18 11:23	1
Tetrachloroethene	<0.74		1.0	0.74	ug/L			05/23/18 11:23	1
Toluene	<0.48		1.0	0.48	ug/L			05/23/18 11:23	1
trans-1,2-Dichloroethene	<0.37		1.0	0.37	ug/L			05/23/18 11:23	1
trans-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/23/18 11:23	1
1,2,3-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 11:23	1
1,2,4-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 11:23	1
1,1,1-Trichloroethane	<0.37		1.0	0.37	ug/L			05/23/18 11:23	1
1,1,2-Trichloroethane	<0.33		1.0	0.33	ug/L			05/23/18 11:23	1
Trichloroethene	<0.48		1.0	0.48	ug/L			05/23/18 11:23	1
Trichlorofluoromethane	<0.42		1.0	0.42	ug/L			05/23/18 11:23	1
1,2,3-Trichloropropane	<0.39		1.0	0.39	ug/L			05/23/18 11:23	1
1,2,4-Trimethylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 11:23	1
1,3,5-Trimethylbenzene	<0.31		1.0	0.31	ug/L			05/23/18 11:23	1
Vinyl chloride	<0.50		1.0	0.50	ug/L			05/23/18 11:23	1
Xylenes, Total	<0.23		1.0	0.23	ug/L			05/23/18 11:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*05/23/18 11:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*73 - 131*		*05/23/18 11:23*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*05/23/18 11:23*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 122*		*05/23/18 11:23*	*1*

Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Qualifiers

GC/MS VOA

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

Glossary

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

QC Association Summary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

GC/MS VOA

Analysis Batch: 525041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145412-2	Trip Blank	Total/NA	Water	8260B	
MB 680-525041/8	Method Blank	Total/NA	Water	8260B	
LCS 680-525041/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-525041/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 525047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145412-1	TW-4	Total/NA	Ground Water	8260B	
MB 680-525047/8	Method Blank	Total/NA	Water	8260B	
LCS 680-525047/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-525047/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DCA	TOL	DBFM
Lab Sample ID	Client Sample ID	(80-120)	(73-131)	(80-120)	(80-122)
500-145412-1	TW-4	107	108	102	106

Surrogate Legend

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

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DCA	TOL	DBFM
Lab Sample ID	Client Sample ID	(80-120)	(73-131)	(80-120)	(80-122)
500-145412-2	Trip Blank	100	101	102	105
LCS 680-525041/4	Lab Control Sample	90	90	92	93
LCS 680-525047/4	Lab Control Sample	106	117	101	108
LCSD 680-525041/5	Lab Control Sample Dup	98	100	103	103
LCSD 680-525047/5	Lab Control Sample Dup	103	112	98	106
MB 680-525041/8	Method Blank	97	100	101	105
MB 680-525047/8	Method Blank	106	109	102	104

Surrogate Legend

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

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-525041/8
Matrix: Water
Analysis Batch: 525041

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.43		1.0	0.43	ug/L			05/23/18 09:35	1
Bromobenzene	<0.50		1.0	0.50	ug/L			05/23/18 09:35	1
Bromochloromethane	<0.45		1.0	0.45	ug/L			05/23/18 09:35	1
Bromodichloromethane	<0.44		1.0	0.44	ug/L			05/23/18 09:35	1
Bromoform	<0.43		1.0	0.43	ug/L			05/23/18 09:35	1
Bromomethane	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
Carbon tetrachloride	<0.33		1.0	0.33	ug/L			05/23/18 09:35	1
Chlorobenzene	<0.26		1.0	0.26	ug/L			05/23/18 09:35	1
Chloroethane	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
Chloroform	<0.50		1.0	0.50	ug/L			05/23/18 09:35	1
Chloromethane	<0.40		1.0	0.40	ug/L			05/23/18 09:35	1
2-Chlorotoluene	<0.27		1.0	0.27	ug/L			05/23/18 09:35	1
4-Chlorotoluene	<0.45		1.0	0.45	ug/L			05/23/18 09:35	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/23/18 09:35	1
cis-1,3-Dichloropropene	<0.40		1.0	0.40	ug/L			05/23/18 09:35	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			05/23/18 09:35	1
1,2-Dibromo-3-Chloropropane	<1.1		5.0	1.1	ug/L			05/23/18 09:35	1
1,2-Dibromoethane	<0.44		1.0	0.44	ug/L			05/23/18 09:35	1
Dibromomethane	<0.35		1.0	0.35	ug/L			05/23/18 09:35	1
1,2-Dichlorobenzene	<0.37		1.0	0.37	ug/L			05/23/18 09:35	1
1,3-Dichlorobenzene	<0.43		1.0	0.43	ug/L			05/23/18 09:35	1
1,4-Dichlorobenzene	<0.46		1.0	0.46	ug/L			05/23/18 09:35	1
Dichlorodifluoromethane	<0.60		1.0	0.60	ug/L			05/23/18 09:35	1
1,1-Dichloroethane	<0.38		1.0	0.38	ug/L			05/23/18 09:35	1
1,2-Dichloroethane	<0.50		1.0	0.50	ug/L			05/23/18 09:35	1
1,1-Dichloroethene	<0.36		1.0	0.36	ug/L			05/23/18 09:35	1
1,2-Dichloropropane	<0.67		1.0	0.67	ug/L			05/23/18 09:35	1
1,3-Dichloropropane	<0.34		1.0	0.34	ug/L			05/23/18 09:35	1
2,2-Dichloropropane	<0.37		1.0	0.37	ug/L			05/23/18 09:35	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			05/23/18 09:35	1
Ethylbenzene	<0.33		1.0	0.33	ug/L			05/23/18 09:35	1
Hexachlorobutadiene	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			05/23/18 09:35	1
Isopropyl ether	<1.0		10	1.0	ug/L			05/23/18 09:35	1
Methylene Chloride	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
Methyl tert-butyl ether	<0.30		10	0.30	ug/L			05/23/18 09:35	1
Naphthalene	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
n-Butylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 09:35	1
N-Propylbenzene	<0.38		1.0	0.38	ug/L			05/23/18 09:35	1
p-Isopropyltoluene	<0.48		1.0	0.48	ug/L			05/23/18 09:35	1
sec-Butylbenzene	<0.42		1.0	0.42	ug/L			05/23/18 09:35	1
Styrene	<0.27		1.0	0.27	ug/L			05/23/18 09:35	1
tert-Butylbenzene	<0.45		1.0	0.45	ug/L			05/23/18 09:35	1
1,1,1,2-Tetrachloroethane	<0.37		1.0	0.37	ug/L			05/23/18 09:35	1
1,1,2,2-Tetrachloroethane	<0.62		1.0	0.62	ug/L			05/23/18 09:35	1
Tetrachloroethene	<0.74		1.0	0.74	ug/L			05/23/18 09:35	1
Toluene	<0.48		1.0	0.48	ug/L			05/23/18 09:35	1
trans-1,2-Dichloroethene	<0.37		1.0	0.37	ug/L			05/23/18 09:35	1

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

Lab Sample ID: MB 680-525041/8
Matrix: Water
Analysis Batch: 525041

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/23/18 09:35	1
1,2,3-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
1,2,4-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 09:35	1
1,1,1-Trichloroethane	<0.37		1.0	0.37	ug/L			05/23/18 09:35	1
1,1,2-Trichloroethane	<0.33		1.0	0.33	ug/L			05/23/18 09:35	1
Trichloroethene	<0.48		1.0	0.48	ug/L			05/23/18 09:35	1
Trichlorofluoromethane	<0.42		1.0	0.42	ug/L			05/23/18 09:35	1
1,2,3-Trichloropropane	<0.39		1.0	0.39	ug/L			05/23/18 09:35	1
1,2,4-Trimethylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 09:35	1
1,3,5-Trimethylbenzene	<0.31		1.0	0.31	ug/L			05/23/18 09:35	1
Vinyl chloride	<0.50		1.0	0.50	ug/L			05/23/18 09:35	1
Xylenes, Total	<0.23		1.0	0.23	ug/L			05/23/18 09:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*05/23/18 09:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*73 - 131*		*05/23/18 09:35*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*05/23/18 09:35*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 122*		*05/23/18 09:35*	*1*

Lab Sample ID: LCS 680-525041/4
Matrix: Water
Analysis Batch: 525041

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	45.5		ug/L		91	80 - 120
Bromobenzene	50.0	45.3		ug/L		91	71 - 124
Bromochloromethane	50.0	46.7		ug/L		93	80 - 120
Bromodichloromethane	50.0	47.4		ug/L		95	80 - 120
Bromoform	50.0	45.7		ug/L		91	52 - 122
Bromomethane	50.0	72.4		ug/L		145	43 - 146
Carbon tetrachloride	50.0	46.5		ug/L		93	67 - 125
Chlorobenzene	50.0	46.0		ug/L		92	80 - 120
Chloroethane	50.0	46.6		ug/L		93	48 - 145
Chloroform	50.0	46.6		ug/L		93	80 - 120
Chloromethane	50.0	44.0		ug/L		88	76 - 149
2-Chlorotoluene	50.0	44.0		ug/L		88	80 - 120
4-Chlorotoluene	50.0	44.6		ug/L		89	80 - 120
cis-1,2-Dichloroethene	50.0	46.5		ug/L		93	80 - 120
cis-1,3-Dichloropropene	50.0	49.5		ug/L		99	80 - 129
Dibromochloromethane	50.0	47.0		ug/L		94	68 - 120
1,2-Dibromo-3-Chloropropane	50.0	45.0		ug/L		90	74 - 120
1,2-Dibromoethane	50.0	44.4		ug/L		89	75 - 126
Dibromomethane	50.0	44.7		ug/L		89	80 - 120
1,2-Dichlorobenzene	50.0	46.6		ug/L		93	80 - 120
1,3-Dichlorobenzene	50.0	45.8		ug/L		92	80 - 120
1,4-Dichlorobenzene	50.0	45.6		ug/L		91	80 - 120
Dichlorodifluoromethane	50.0	44.2		ug/L		88	70 - 137
1,1-Dichloroethane	50.0	45.5		ug/L		91	80 - 120

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

Lab Sample ID: LCS 680-525041/4
Matrix: Water
Analysis Batch: 525041

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	50.0	45.6		ug/L		91	72 - 128
1,1-Dichloroethene	50.0	45.9		ug/L		92	80 - 120
1,2-Dichloropropane	50.0	47.4		ug/L		95	80 - 120
1,3-Dichloropropane	50.0	44.0		ug/L		88	80 - 120
2,2-Dichloropropane	50.0	49.1		ug/L		98	80 - 135
1,1-Dichloropropene	50.0	45.5		ug/L		91	80 - 120
Ethylbenzene	50.0	45.2		ug/L		90	80 - 120
Hexachlorobutadiene	50.0	49.4		ug/L		99	71 - 131
Isopropylbenzene	50.0	45.6		ug/L		91	79 - 126
Methylene Chloride	50.0	46.5		ug/L		93	80 - 120
Methyl tert-butyl ether	50.0	44.0		ug/L		88	80 - 122
Naphthalene	50.0	46.6		ug/L		93	61 - 136
n-Butylbenzene	50.0	47.2		ug/L		94	75 - 132
N-Propylbenzene	50.0	45.7		ug/L		91	80 - 125
p-Isopropyltoluene	50.0	46.9		ug/L		94	80 - 120
sec-Butylbenzene	50.0	45.6		ug/L		91	80 - 120
Styrene	50.0	44.9		ug/L		90	80 - 126
tert-Butylbenzene	50.0	44.9		ug/L		90	80 - 120
1,1,1,2-Tetrachloroethane	50.0	46.6		ug/L		93	73 - 124
1,1,2,2-Tetrachloroethane	50.0	42.7		ug/L		85	76 - 126
Tetrachloroethene	50.0	46.1		ug/L		92	71 - 123
Toluene	50.0	45.7		ug/L		91	80 - 120
trans-1,2-Dichloroethene	50.0	47.8		ug/L		96	80 - 120
trans-1,3-Dichloropropene	50.0	46.2		ug/L		92	80 - 128
1,2,3-Trichlorobenzene	50.0	47.3		ug/L		95	70 - 125
1,2,4-Trichlorobenzene	50.0	49.2		ug/L		98	71 - 126
1,1,1-Trichloroethane	50.0	46.3		ug/L		93	80 - 120
1,1,2-Trichloroethane	50.0	45.3		ug/L		91	80 - 120
Trichloroethene	50.0	46.1		ug/L		92	80 - 120
Trichlorofluoromethane	50.0	49.4		ug/L		99	58 - 127
1,2,3-Trichloropropane	50.0	43.1		ug/L		86	78 - 128
1,2,4-Trimethylbenzene	50.0	44.6		ug/L		89	80 - 120
1,3,5-Trimethylbenzene	50.0	44.9		ug/L		90	80 - 120
Vinyl chloride	50.0	44.3		ug/L		89	80 - 129
Xylenes, Total	100	91.1		ug/L		91	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*73 - 131*
Toluene-d8 (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 122*

Lab Sample ID: LCSD 680-525041/5
Matrix: Water
Analysis Batch: 525041

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
Benzene	50.0	50.5		ug/L		101	80 - 120	10	20

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

Lab Sample ID: LCSD 680-525041/5
Matrix: Water
Analysis Batch: 525041

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
Bromobenzene	50.0	50.8		ug/L		102	71 - 124	12	20
Bromochloromethane	50.0	49.7		ug/L		99	80 - 120	6	20
Bromodichloromethane	50.0	53.1		ug/L		106	80 - 120	11	20
Bromoform	50.0	52.9		ug/L		106	52 - 122	15	20
Bromomethane	50.0	86.3	*	ug/L		173	43 - 146	18	20
Carbon tetrachloride	50.0	53.3		ug/L		107	67 - 125	14	20
Chlorobenzene	50.0	50.7		ug/L		101	80 - 120	10	20
Chloroethane	50.0	49.8		ug/L		100	48 - 145	7	20
Chloroform	50.0	51.2		ug/L		102	80 - 120	9	20
Chloromethane	50.0	51.7		ug/L		103	76 - 149	16	30
2-Chlorotoluene	50.0	50.0		ug/L		100	80 - 120	13	20
4-Chlorotoluene	50.0	50.3		ug/L		101	80 - 120	12	20
cis-1,2-Dichloroethene	50.0	51.9		ug/L		104	80 - 120	11	20
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	80 - 129	11	20
Dibromochloromethane	50.0	53.8		ug/L		108	68 - 120	14	20
1,2-Dibromo-3-Chloropropane	50.0	53.2		ug/L		106	74 - 120	17	20
1,2-Dibromoethane	50.0	51.6		ug/L		103	75 - 126	15	20
Dibromomethane	50.0	51.1		ug/L		102	80 - 120	14	20
1,2-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 120	9	20
1,3-Dichlorobenzene	50.0	50.8		ug/L		102	80 - 120	10	20
1,4-Dichlorobenzene	50.0	50.7		ug/L		101	80 - 120	11	20
Dichlorodifluoromethane	50.0	51.7		ug/L		103	70 - 137	16	40
1,1-Dichloroethane	50.0	50.3		ug/L		101	80 - 120	10	20
1,2-Dichloroethane	50.0	51.5		ug/L		103	72 - 128	12	50
1,1-Dichloroethene	50.0	54.7		ug/L		109	80 - 120	17	20
1,2-Dichloropropane	50.0	53.2		ug/L		106	80 - 120	12	20
1,3-Dichloropropane	50.0	50.5		ug/L		101	80 - 120	14	20
2,2-Dichloropropane	50.0	55.3		ug/L		111	80 - 135	12	20
1,1-Dichloropropene	50.0	52.0		ug/L		104	80 - 120	13	20
Ethylbenzene	50.0	50.2		ug/L		100	80 - 120	10	20
Hexachlorobutadiene	50.0	54.4		ug/L		109	71 - 131	10	20
Isopropylbenzene	50.0	51.0		ug/L		102	79 - 126	11	20
Methylene Chloride	50.0	52.9		ug/L		106	80 - 120	13	20
Methyl tert-butyl ether	50.0	49.8		ug/L		100	80 - 122	12	20
Naphthalene	50.0	53.0		ug/L		106	61 - 136	13	20
n-Butylbenzene	50.0	52.7		ug/L		105	75 - 132	11	20
N-Propylbenzene	50.0	51.2		ug/L		102	80 - 125	11	20
p-Isopropyltoluene	50.0	51.9		ug/L		104	80 - 120	10	20
sec-Butylbenzene	50.0	51.7		ug/L		103	80 - 120	13	20
Styrene	50.0	50.5		ug/L		101	80 - 126	12	20
tert-Butylbenzene	50.0	50.9		ug/L		102	80 - 120	13	20
1,1,1,2-Tetrachloroethane	50.0	51.5		ug/L		103	73 - 124	10	20
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	76 - 126	15	20
Tetrachloroethene	50.0	52.3		ug/L		105	71 - 123	13	20
Toluene	50.0	51.0		ug/L		102	80 - 120	11	20
trans-1,2-Dichloroethene	50.0	53.6		ug/L		107	80 - 120	11	20
trans-1,3-Dichloropropene	50.0	52.1		ug/L		104	80 - 128	12	30
1,2,3-Trichlorobenzene	50.0	53.4		ug/L		107	70 - 125	12	20

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

Lab Sample ID: LCSD 680-525041/5
Matrix: Water
Analysis Batch: 525041

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
1,2,4-Trichlorobenzene			50.0	54.5		ug/L		109	71 - 126	10	20
1,1,1-Trichloroethane			50.0	52.4		ug/L		105	80 - 120	12	20
1,1,2-Trichloroethane			50.0	51.4		ug/L		103	80 - 120	13	20
Trichloroethene			50.0	52.3		ug/L		105	80 - 120	13	20
Trichlorofluoromethane			50.0	57.8		ug/L		116	58 - 127	16	20
1,2,3-Trichloropropane			50.0	49.3		ug/L		99	78 - 128	13	30
1,2,4-Trimethylbenzene			50.0	50.2		ug/L		100	80 - 120	12	20
1,3,5-Trimethylbenzene			50.0	50.6		ug/L		101	80 - 120	12	20
Vinyl chloride			50.0	51.9		ug/L		104	80 - 129	16	20
Xylenes, Total			100	101		ug/L		101	80 - 120	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*100*		*73 - 131*
Toluene-d8 (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 122*

Lab Sample ID: MB 680-525047/8
Matrix: Water
Analysis Batch: 525047

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.43		1.0	0.43	ug/L			05/23/18 13:10	1
Bromobenzene	<0.50		1.0	0.50	ug/L			05/23/18 13:10	1
Bromochloromethane	<0.45		1.0	0.45	ug/L			05/23/18 13:10	1
Bromodichloromethane	<0.44		1.0	0.44	ug/L			05/23/18 13:10	1
Bromoform	<0.43		1.0	0.43	ug/L			05/23/18 13:10	1
Bromomethane	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
Carbon tetrachloride	<0.33		1.0	0.33	ug/L			05/23/18 13:10	1
Chlorobenzene	<0.26		1.0	0.26	ug/L			05/23/18 13:10	1
Chloroethane	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
Chloroform	<0.50		1.0	0.50	ug/L			05/23/18 13:10	1
Chloromethane	<0.40		1.0	0.40	ug/L			05/23/18 13:10	1
2-Chlorotoluene	<0.27		1.0	0.27	ug/L			05/23/18 13:10	1
4-Chlorotoluene	<0.45		1.0	0.45	ug/L			05/23/18 13:10	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			05/23/18 13:10	1
cis-1,3-Dichloropropene	<0.40		1.0	0.40	ug/L			05/23/18 13:10	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			05/23/18 13:10	1
1,2-Dibromo-3-Chloropropane	<1.1		5.0	1.1	ug/L			05/23/18 13:10	1
1,2-Dibromoethane	<0.44		1.0	0.44	ug/L			05/23/18 13:10	1
Dibromomethane	<0.35		1.0	0.35	ug/L			05/23/18 13:10	1
1,2-Dichlorobenzene	<0.37		1.0	0.37	ug/L			05/23/18 13:10	1
1,3-Dichlorobenzene	<0.43		1.0	0.43	ug/L			05/23/18 13:10	1
1,4-Dichlorobenzene	<0.46		1.0	0.46	ug/L			05/23/18 13:10	1
Dichlorodifluoromethane	<0.60		1.0	0.60	ug/L			05/23/18 13:10	1
1,1-Dichloroethane	<0.38		1.0	0.38	ug/L			05/23/18 13:10	1
1,2-Dichloroethane	<0.50		1.0	0.50	ug/L			05/23/18 13:10	1
1,1-Dichloroethene	<0.36		1.0	0.36	ug/L			05/23/18 13:10	1

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

Lab Sample ID: MB 680-525047/8
Matrix: Water
Analysis Batch: 525047

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.67		1.0	0.67	ug/L			05/23/18 13:10	1
1,3-Dichloropropane	<0.34		1.0	0.34	ug/L			05/23/18 13:10	1
2,2-Dichloropropane	<0.37		1.0	0.37	ug/L			05/23/18 13:10	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			05/23/18 13:10	1
Ethylbenzene	<0.33		1.0	0.33	ug/L			05/23/18 13:10	1
Hexachlorobutadiene	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
Isopropylbenzene	<0.35		1.0	0.35	ug/L			05/23/18 13:10	1
Isopropyl ether	<1.0		10	1.0	ug/L			05/23/18 13:10	1
Methylene Chloride	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
Methyl tert-butyl ether	<0.30		10	0.30	ug/L			05/23/18 13:10	1
Naphthalene	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
n-Butylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 13:10	1
N-Propylbenzene	<0.38		1.0	0.38	ug/L			05/23/18 13:10	1
p-Isopropyltoluene	<0.48		1.0	0.48	ug/L			05/23/18 13:10	1
sec-Butylbenzene	<0.42		1.0	0.42	ug/L			05/23/18 13:10	1
Styrene	<0.27		1.0	0.27	ug/L			05/23/18 13:10	1
tert-Butylbenzene	<0.45		1.0	0.45	ug/L			05/23/18 13:10	1
1,1,1,2-Tetrachloroethane	<0.37		1.0	0.37	ug/L			05/23/18 13:10	1
1,1,2,2-Tetrachloroethane	<0.62		1.0	0.62	ug/L			05/23/18 13:10	1
Tetrachloroethene	<0.74		1.0	0.74	ug/L			05/23/18 13:10	1
Toluene	<0.48		1.0	0.48	ug/L			05/23/18 13:10	1
trans-1,2-Dichloroethene	<0.37		1.0	0.37	ug/L			05/23/18 13:10	1
trans-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			05/23/18 13:10	1
1,2,3-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
1,2,4-Trichlorobenzene	<2.5		5.0	2.5	ug/L			05/23/18 13:10	1
1,1,1-Trichloroethane	<0.37		1.0	0.37	ug/L			05/23/18 13:10	1
1,1,2-Trichloroethane	<0.33		1.0	0.33	ug/L			05/23/18 13:10	1
Trichloroethene	<0.48		1.0	0.48	ug/L			05/23/18 13:10	1
Trichlorofluoromethane	<0.42		1.0	0.42	ug/L			05/23/18 13:10	1
1,2,3-Trichloropropane	<0.39		1.0	0.39	ug/L			05/23/18 13:10	1
1,2,4-Trimethylbenzene	<0.47		1.0	0.47	ug/L			05/23/18 13:10	1
1,3,5-Trimethylbenzene	<0.31		1.0	0.31	ug/L			05/23/18 13:10	1
Vinyl chloride	<0.50		1.0	0.50	ug/L			05/23/18 13:10	1
Xylenes, Total	<0.23		1.0	0.23	ug/L			05/23/18 13:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*05/23/18 13:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*73 - 131*		*05/23/18 13:10*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*05/23/18 13:10*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/23/18 13:10*	*1*

Lab Sample ID: LCS 680-525047/4
Matrix: Water
Analysis Batch: 525047

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	54.0		ug/L		108	80 - 120
Bromobenzene	50.0	52.0		ug/L		104	71 - 124

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

Lab Sample ID: LCS 680-525047/4
Matrix: Water
Analysis Batch: 525047

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromochloromethane	50.0	55.8		ug/L		112	80 - 120
Bromodichloromethane	50.0	58.0		ug/L		116	80 - 120
Bromoform	50.0	57.8		ug/L		116	52 - 122
Bromomethane	50.0	56.7		ug/L		113	43 - 146
Carbon tetrachloride	50.0	58.7		ug/L		117	67 - 125
Chlorobenzene	50.0	51.8		ug/L		104	80 - 120
Chloroethane	50.0	63.2		ug/L		126	48 - 145
Chloroform	50.0	54.5		ug/L		109	80 - 120
Chloromethane	50.0	47.2		ug/L		94	76 - 149
2-Chlorotoluene	50.0	54.7		ug/L		109	80 - 120
4-Chlorotoluene	50.0	53.9		ug/L		108	80 - 120
cis-1,2-Dichloroethene	50.0	52.0		ug/L		104	80 - 120
cis-1,3-Dichloropropene	50.0	60.1		ug/L		120	80 - 129
Dibromochloromethane	50.0	59.3		ug/L		119	68 - 120
1,2-Dibromo-3-Chloropropane	50.0	60.4	*	ug/L		121	74 - 120
1,2-Dibromoethane	50.0	56.3		ug/L		113	75 - 126
Dibromomethane	50.0	55.7		ug/L		111	80 - 120
1,2-Dichlorobenzene	50.0	53.1		ug/L		106	80 - 120
1,3-Dichlorobenzene	50.0	52.4		ug/L		105	80 - 120
1,4-Dichlorobenzene	50.0	52.8		ug/L		106	80 - 120
Dichlorodifluoromethane	50.0	54.7		ug/L		109	70 - 137
1,1-Dichloroethane	50.0	52.7		ug/L		105	80 - 120
1,2-Dichloroethane	50.0	59.0		ug/L		118	72 - 128
1,1-Dichloroethene	50.0	51.8		ug/L		104	80 - 120
1,2-Dichloropropane	50.0	55.1		ug/L		110	80 - 120
1,3-Dichloropropane	50.0	56.6		ug/L		113	80 - 120
2,2-Dichloropropane	50.0	58.2		ug/L		116	80 - 135
1,1-Dichloropropene	50.0	56.4		ug/L		113	80 - 120
Ethylbenzene	50.0	52.7		ug/L		105	80 - 120
Hexachlorobutadiene	50.0	51.9		ug/L		104	71 - 131
Isopropylbenzene	50.0	53.6		ug/L		107	79 - 126
Methylene Chloride	50.0	56.3		ug/L		113	80 - 120
Methyl tert-butyl ether	50.0	57.7		ug/L		115	80 - 122
Naphthalene	50.0	54.6		ug/L		109	61 - 136
n-Butylbenzene	50.0	54.3		ug/L		109	75 - 132
N-Propylbenzene	50.0	53.4		ug/L		107	80 - 125
p-Isopropyltoluene	50.0	53.8		ug/L		108	80 - 120
sec-Butylbenzene	50.0	52.8		ug/L		106	80 - 120
Styrene	50.0	52.2		ug/L		104	80 - 126
tert-Butylbenzene	50.0	52.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	50.0	52.9		ug/L		106	73 - 124
1,1,2,2-Tetrachloroethane	50.0	57.4		ug/L		115	76 - 126
Tetrachloroethene	50.0	53.9		ug/L		108	71 - 123
Toluene	50.0	54.5		ug/L		109	80 - 120
trans-1,2-Dichloroethene	50.0	51.6		ug/L		103	80 - 120
trans-1,3-Dichloropropene	50.0	60.3		ug/L		121	80 - 128
1,2,3-Trichlorobenzene	50.0	52.6		ug/L		105	70 - 125
1,2,4-Trichlorobenzene	50.0	52.6		ug/L		105	71 - 126

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

Lab Sample ID: LCS 680-525047/4
Matrix: Water
Analysis Batch: 525047

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1,1-Trichloroethane			50.0	56.5		ug/L		113	80 - 120		
1,1,2-Trichloroethane			50.0	57.6		ug/L		115	80 - 120		
Trichloroethene			50.0	52.3		ug/L		105	80 - 120		
Trichlorofluoromethane			50.0	55.7		ug/L		111	58 - 127		
1,2,3-Trichloropropane			50.0	58.3		ug/L		117	78 - 128		
1,2,4-Trimethylbenzene			50.0	51.1		ug/L		102	80 - 120		
1,3,5-Trimethylbenzene			50.0	52.8		ug/L		106	80 - 120		
Vinyl chloride			50.0	52.8		ug/L		106	80 - 129		
Xylenes, Total			100	107		ug/L		107	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*117*		*73 - 131*
Toluene-d8 (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*80 - 122*

Lab Sample ID: LCSD 680-525047/5
Matrix: Water
Analysis Batch: 525047

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
Benzene			50.0	51.4		ug/L		103	80 - 120	5	20
Bromobenzene			50.0	46.5		ug/L		93	71 - 124	11	20
Bromochloromethane			50.0	52.2		ug/L		104	80 - 120	7	20
Bromodichloromethane			50.0	55.1		ug/L		110	80 - 120	5	20
Bromoform			50.0	52.6		ug/L		105	52 - 122	9	20
Bromomethane			50.0	50.0		ug/L		100	43 - 146	13	20
Carbon tetrachloride			50.0	56.5		ug/L		113	67 - 125	4	20
Chlorobenzene			50.0	48.7		ug/L		97	80 - 120	6	20
Chloroethane			50.0	59.2		ug/L		118	48 - 145	6	20
Chloroform			50.0	53.8		ug/L		108	80 - 120	1	20
Chloromethane			50.0	42.1		ug/L		84	76 - 149	12	30
2-Chlorotoluene			50.0	49.3		ug/L		99	80 - 120	10	20
4-Chlorotoluene			50.0	49.9		ug/L		100	80 - 120	8	20
cis-1,2-Dichloroethene			50.0	51.9		ug/L		104	80 - 120	0	20
cis-1,3-Dichloropropene			50.0	56.4		ug/L		113	80 - 129	6	20
Dibromochloromethane			50.0	55.1		ug/L		110	68 - 120	7	20
1,2-Dibromo-3-Chloropropane			50.0	54.2		ug/L		108	74 - 120	11	20
1,2-Dibromoethane			50.0	52.6		ug/L		105	75 - 126	7	20
Dibromomethane			50.0	53.7		ug/L		107	80 - 120	4	20
1,2-Dichlorobenzene			50.0	50.2		ug/L		100	80 - 120	6	20
1,3-Dichlorobenzene			50.0	49.9		ug/L		100	80 - 120	5	20
1,4-Dichlorobenzene			50.0	49.6		ug/L		99	80 - 120	6	20
Dichlorodifluoromethane			50.0	51.3		ug/L		103	70 - 137	7	40
1,1-Dichloroethane			50.0	53.0		ug/L		106	80 - 120	1	20
1,2-Dichloroethane			50.0	58.4		ug/L		117	72 - 128	1	50
1,1-Dichloroethene			50.0	52.3		ug/L		105	80 - 120	1	20
1,2-Dichloropropane			50.0	53.8		ug/L		108	80 - 120	2	20

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

Lab Sample ID: LCSD 680-525047/5
Matrix: Water
Analysis Batch: 525047

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
1,3-Dichloropropane			50.0	53.1		ug/L		106	80 - 120	6	20
2,2-Dichloropropane			50.0	56.3		ug/L		113	80 - 135	3	20
1,1-Dichloropropene			50.0	54.2		ug/L		108	80 - 120	4	20
Ethylbenzene			50.0	49.6		ug/L		99	80 - 120	6	20
Hexachlorobutadiene			50.0	50.4		ug/L		101	71 - 131	3	20
Isopropylbenzene			50.0	50.0		ug/L		100	79 - 126	7	20
Methylene Chloride			50.0	51.5		ug/L		103	80 - 120	9	20
Methyl tert-butyl ether			50.0	55.3		ug/L		111	80 - 122	4	20
Naphthalene			50.0	52.1		ug/L		104	61 - 136	5	20
n-Butylbenzene			50.0	52.2		ug/L		104	75 - 132	4	20
N-Propylbenzene			50.0	49.8		ug/L		100	80 - 125	7	20
p-Isopropyltoluene			50.0	52.6		ug/L		105	80 - 120	2	20
sec-Butylbenzene			50.0	49.2		ug/L		98	80 - 120	7	20
Styrene			50.0	48.1		ug/L		96	80 - 126	8	20
tert-Butylbenzene			50.0	48.4		ug/L		97	80 - 120	8	20
1,1,1,2-Tetrachloroethane			50.0	51.1		ug/L		102	73 - 124	3	20
1,1,2,2-Tetrachloroethane			50.0	51.9		ug/L		104	76 - 126	10	20
Tetrachloroethene			50.0	50.2		ug/L		100	71 - 123	7	20
Toluene			50.0	51.9		ug/L		104	80 - 120	5	20
trans-1,2-Dichloroethene			50.0	52.1		ug/L		104	80 - 120	1	20
trans-1,3-Dichloropropene			50.0	55.6		ug/L		111	80 - 128	8	30
1,2,3-Trichlorobenzene			50.0	51.1		ug/L		102	70 - 125	3	20
1,2,4-Trichlorobenzene			50.0	51.0		ug/L		102	71 - 126	3	20
1,1,1-Trichloroethane			50.0	55.7		ug/L		111	80 - 120	1	20
1,1,2-Trichloroethane			50.0	53.7		ug/L		107	80 - 120	7	20
Trichloroethene			50.0	50.3		ug/L		101	80 - 120	4	20
Trichlorofluoromethane			50.0	55.7		ug/L		111	58 - 127	0	20
1,2,3-Trichloropropane			50.0	53.6		ug/L		107	78 - 128	9	30
1,2,4-Trimethylbenzene			50.0	46.6		ug/L		93	80 - 120	9	20
1,3,5-Trimethylbenzene			50.0	49.3		ug/L		99	80 - 120	7	20
Vinyl chloride			50.0	49.2		ug/L		98	80 - 129	7	20
Xylenes, Total			100	99.3		ug/L		99	80 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*112*		*73 - 131*
Toluene-d8 (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 122*

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Client Sample ID: TW-4

Lab Sample ID: 500-145412-1

Date Collected: 05/10/18 08:20

Matrix: Ground Water

Date Received: 05/12/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	525047	05/23/18 16:04	Y1S	TAL SAV

Client Sample ID: Trip Blank

Lab Sample ID: 500-145412-2

Date Collected: 05/10/18 00:00

Matrix: Water

Date Received: 05/12/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	525041	05/23/18 11:23	Y1S	TAL SAV

Laboratory References:

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

Accreditation/Certification Summary

Client: Tetra Tech GEO
Project/Site: Pentair Delavan - 117-7469002.04

TestAmerica Job ID: 500-145412-1

Laboratory: TestAmerica Chicago

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

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

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999819810	08-31-18

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-145412

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 3.1

Report To (optional)
Contact: MARK MANIFERY
Company: TETRA TECH
Address: 175N CORPORATE DR Suite 400
Address: BROOKFIELD, WI. 53045
Phone: (262) 792-1282
Fax:
E-Mail:

Bill To (optional)
Contact: Same AS Report To:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Client: TETRA TECH
Client Project #: 117-7469002.04
Project Name: PENTAIR DELAVAN
Project Location/State: DELAVAN, WI.
Lab Project #:
Sampler: T. M. Thomson
Lab PM: SANDIE FREDRICK

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

500-145412 COC

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs 8260B	Comments
1		TW-4	5-10-18	08:20	3	GW	1	✓	
2		TRIP BLANK	—	—	1	DI		✓	LAB PREPARED

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date: STANDARD

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

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	TETRATECH	5-11-18	08:00		TA	5-11-18	11:00
	TA	5-11-18	1700		TALNT	05/12/18	1010

Lab Courier: TestAmerica
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 500-145412-1

Login Number: 145412
List Number: 1
Creator: Sanchez, Ariel M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 500-145412-1

Login Number: 145412
List Number: 2
Creator: Jones, Tyre D

List Source: TestAmerica Savannah
List Creation: 05/22/18 02:27 PM

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	