July 18, 2019
Discharge Monitoring Report #189
(117-3005039.05)

Ms. Stacey Koch, PE, Pretreatment & Waste Acceptance Coordinator
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, WI 53713-3398

RE: June 2019 Discharge Monitoring Report, Hydraulic Barrier System, Hydrite Chemical Co., Cottage Grove, Wisconsin

Dear Ms. Koch:

Tetra Tech, on behalf of Hydrite Chemical Co., has prepared this discharge monitoring report to comply with the reporting requirements listed in Part 3 of the reissued Wastewater Discharge Permit for the Hydrite Chemical Co. Cottage Grove facility Hydraulic Barrier System (Permit No. NTO-88.06). This report provides information on the operation history and discharge monitoring results for the Hydraulic Barrier System for the month of June 2019. The following information is being provided in accordance with Section 3.01 of Part 3 (Reporting) of the reissued Wastewater Discharge Permit:

- Sample Type: Groundwater

- Place sample collected: Sample tap on the hydraulic barrier system effluent line located in the manhole east of the 110 South Main Street lift station.

- Date and time the sample was collected: June 19, 2019 at 12:50 pm.

- The person that collected the sample: Todd Thomson, Senior Environmental Technician, Tetra Tech.

- The persons and laboratory performing the analyses: Pace Analytical Services Chemists, Pace Analytical Services, Inc., Green Bay, Wisconsin.

- Dates the analyses were performed and analytical techniques used:
  Analyses performed by Pace Analytical Services, Inc.:
  Parameters Tested Monthly:
  1. Volatile Organic Compounds (VOCs) by EPA Method 8260, June 21, 2019.
  2. Chloride by EPA Method 300.0, June 27, 2019.

TETRA TECH
175 N. Corporate Drive, Suite 100, Brookfield, WI 53045
Tel 262.792.1282 Fax 262.792.1310 www.tetratech.com

Parameters Tested Quarterly:

1. Total Suspended Solids by Method SM 2540D, June 24, 2019.
2. Carbonaceous Biochemical Oxygen Demand, 5 day (cBOD) by SM Method 5210B, June 21, 2019.
3. Total Kjeldahl Nitrogen by EPA Method 351.2, June 26, 2019.
4. Total Phosphorus by EPA Method 365.4, July 1, 2019.

Analysis performed in the field by Tetra Tech personnel:

1. Field pH, June 19, 2019.
   The effluent sampling and analysis form containing the field pH result for the effluent sample and the equipment calibration form documenting the successful calibration of the instrument used to measure the effluent sample pH in the field are included in Attachment A.

- The laboratory analytical results for the monthly effluent sample collected from the hydraulic barrier system during this reporting period are included in Attachment A to this report and are summarized on Table 1 and Table 2.

- Total VOCs time series charts for the effluent samples collected from the hydraulic barrier system are provided as Chart 1 and Chart 2. Chart 1 displays the total VOCs concentrations and average pumping rates for the barrier system from 2003 to present, which is the year the barrier system was brought on-line. Chart 2 displays the total VOCs concentrations and average pumping rates for the barrier system from 2008 to present. A chart showing the total mass of VOCs and chlorinated VOCs discharged to the sanitary sewer is provided as Chart 3.

- The current month discharge and cumulative total discharge volumes are provided below:

Reporting Period	**Groundwater Discharge Volume (gallons)**
May 2019 Discharge Volume (May 31 through June 30, 2019)	5,066,648
Cumulative Total Discharge Volume (October 8, 2003 through June 30, 2019)	895,442.940

Hydraulic Barrier System Operation and Maintenance History for the Month of June 2019

Groundwater was pumped from extraction wells P-128, P-130, and P-164 during this reporting period. Total flow readings taken from the 3-inch Badger Magnetoflow® electromagnetic water meter (mag meter) indicate the hydraulic barrier system operated at an average pumping rate of 121 gallons per minute (gpm) in June.

Based on meter readings collected from the water meters in the manholes at extraction wells P-128 and P-130 and the total barrier system flow readings from the mag meter, the extraction wells operated at the pumping rates listed below during this reporting period:

Extraction Wells Pumping Rates for June 2019

- P-128: 34.6 to 35.1 gpm.
- P-130: 35.1 to 35.7 gpm
- P-164: 50.5 to 53.0 gpm

L-R Meter Testing and Repair, Inc. (L-R Meter Testing) personnel performed an accuracy test of the mag meter on June 10th. The meter test report has not yet been received. The results of the accuracy test will be discussed in the next discharge monitoring report. The meter test report will also be included as an attachment in the next discharge monitoring report.

Tetra Tech personnel treated extraction well P-164 with muriatic acid solution June 25th to June 26th to maintain the sustainable pumping rate of the well at the target rate of 50 to 55 gpm. Approximately 4 gallons of muriatic acid was poured into P-164 with the pump off followed by about 2 gallons of tap water. The pump was kept off for 26 hours to allow the muriatic solution to break down the slime bacteria build-up in the discharge pipe, well and pump components. Extraction wells P-128 and P-130 were operating while P-164 was shut down for the muriatic acid solution treatment.

Occasions when the barrier system was shut down and re-started are listed below:

- Village of Cottage Grove Public Works Department personnel performed tests of the backup generator in the 110 South Main Street lift station building on Tuesday, June 4th, Tuesday, June 11th, Tuesday, June 18th, and Tuesday, June 25th. The hydraulic barrier system automatically shut down during the generator tests and was re-started the same day by Tetra Tech personnel after the generator tests were completed.

- The hydraulic barrier system was manually shut down by Tetra Tech personnel for approximately 58 minutes on Monday, June 10th to install and remove the equipment used by L-R Meter Testing for the mag meter accuracy test.

This report was prepared by,
Tetra Tech

Associate Hydrogeologist
encl.

cc: Mr. Chris Hampton – Town of Cottage Grove
Mr. Thomas J. Miazga - Hydrite Chemical Co.
Mr. Raymond R. Krueger - Michael, Best & Friedrich, LLP
Mr. JJ Larson - Village of Cottage Grove (Electronic copy via email.)
Mr. Michael R. Schmoller – Wisconsin Department of Natural Resources (Electronic copy via email.)

TABLES
AND CHARTS

Table 1. Summary of Hydraulic Barrier System Effluent Monitoring VOCs and Chloride Analytical Results, Hydrite Chemical Co., Cottage Grove Facility

Sample Identification				EFFLUENT	
Lab Sample Identification				40189820018	
Date Sample Collected				06/19/19	
Dilution Factor for VOCs				10	
COMPOUND	Units	Target Detection Limits	NR140 ES		
1,1,1-Trichloroethane	ug/L	0.50	200	359	
2-Butanone (MEK)	ug/L	3.0	460		U
4-Methyl-2-Pentanone (MIBK)	ug/L	2.1	500		U
Acetone	ug/L	3.0	1000		U
cis-1,2-Dichloroethene	ug/L	0.26	70	1430	
Methylene chloride	ug/L	0.23	5.0	44	J
Tetrachloroethene	ug/L	0.50	5.0	10.9	
Toluene	ug/L	0.50	1000	159	
Trichloroethene	ug/L	0.33	5.0	36	
Vinyl chloride	ug/L	0.18	0.2	42.8	
Xylenes (total)	ug/L	1.5	10000	57.2	
TOTAL VOCs	ug/L			2138.9	
Total Chlorinated VOCs	ug/L			1922.7	
Chloride	mg/L	2.5	250	37.9	

Notes:
VOCs - Volatile organic compounds.
Blank spaces indicate the compound was analyzed but not detected. The detection limits for the VOCs are equal to the target detection limits multiplied by the corresponding dilution factor for each sample.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
M0 - Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1 - Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
U - Indicates the compound was analyzed but not detected.
X - Analyte was above the QC limits for the continuing calibration check.
ug/L - micrograms per liter which is equivalent to parts per billion (ppb)
NR140 ES - The compound's Enforcement Standard as listed in Chapter NR140 of the Wisconsin Administrative Code.
NR140 PAL - The compound's Preventive Action Limit as listed in Chapter NR140 of the Wisconsin Administrative Code.
Madison Metropolitan Sewerage District Total VOCs discharge limit for hydraulic barrier system = 10,000 ug/L or 10 mg/L (as of 12/13/2016).
The Madison Metroplitan Sewerage District set no discharge limit for chloride, but it is a parameter of concern.
"Effluent" samples are collected from the sample spigot on the combined effluent discharge line for the barrier system located in the manhole by the Village of Cottage Grove lift station.

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Table 2. Summary of Hydraulic Barrier System Effluent Monitoring Inogranic Parameters Analytical Results, Hydrite Chemical Co., Cottage Grove Facility

Sample Identification		EFFLUENT
Lab Sample Identification		40189820018
Date Sample Collected		06/19/19
Parameter	Units	
Chloride	mg/L	37.9
Carbonaceous Biochemical Oxygen Demand (cBOD)	mg/L	<2.0
Nitrogen, Total Kjeldahl	mg/L	<0.22 M0
Phosphorus	mg/L	<0.052 1q
Total Suspended Solids	mg/L	<0.95

Notes: mg/L - milligrams per liter, which is equivalent to parts per million.
H1 - Analysis conducted outside the recognized method holding time.
J - Estimated concentration above the adjusted method detection limit and below the adjusted quantitation limit.
B - The compound was detected in an associated field blank, trip blank or method blank as well as in the sample at a similar concentration.
D3 - Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0 - Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
N - Spiked sample recovery not within control lilmits
Q - Qualitative mass spectral evidence of analyte present; concentration is between the detection limit and limit of quantitation.
1q - Analyte was measured in the associated method blank at a similar concentration.
<2.0 - The compound was analyzed but not detected above its method detection limit of 2.0 ug/L.

Chart 1. Hydrite Chemical Co. Hydraulic Barrier System MMSD List Total VOCs and Average Pumping Rate Time Series Chart (2003 to Present)

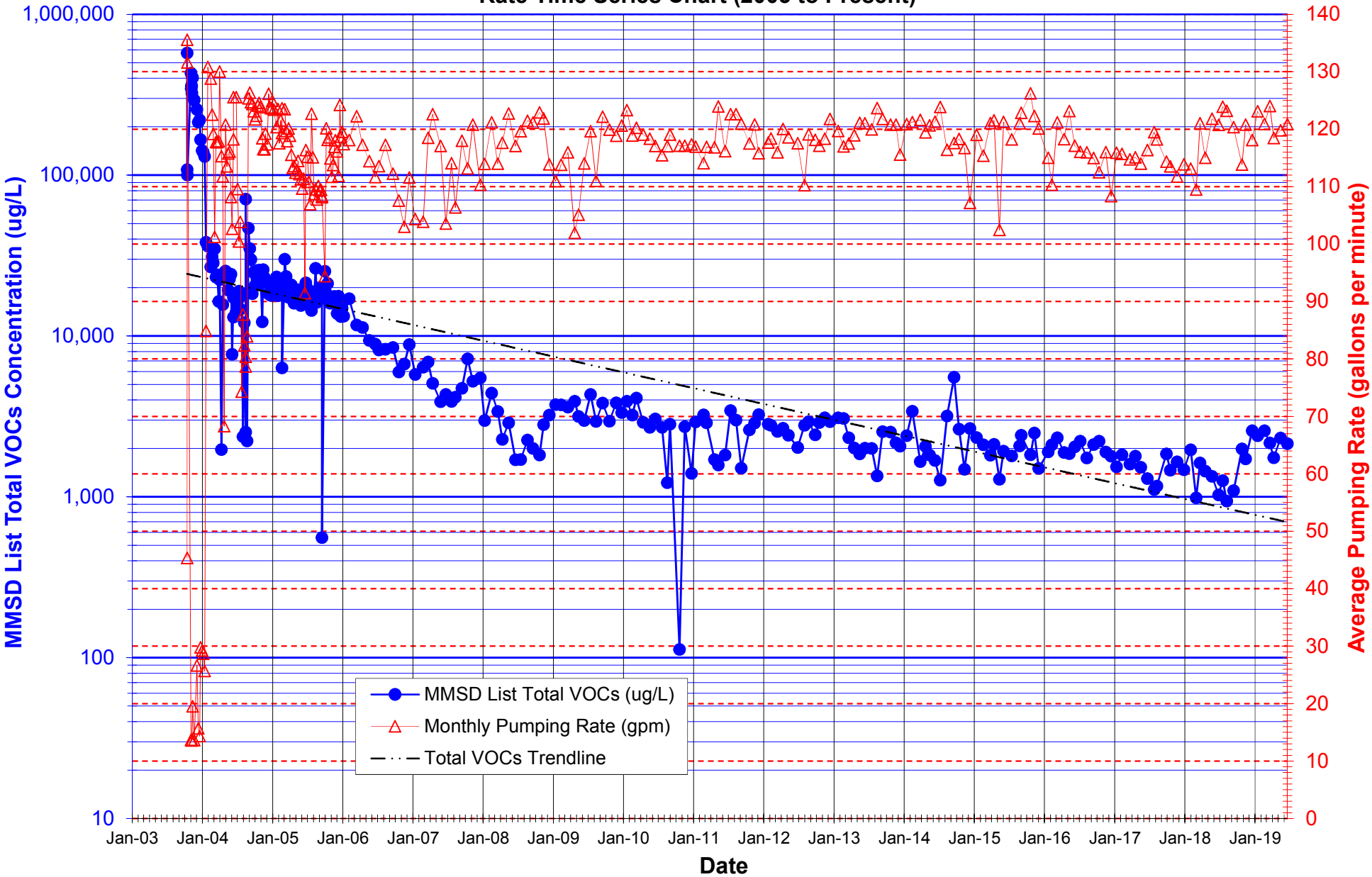

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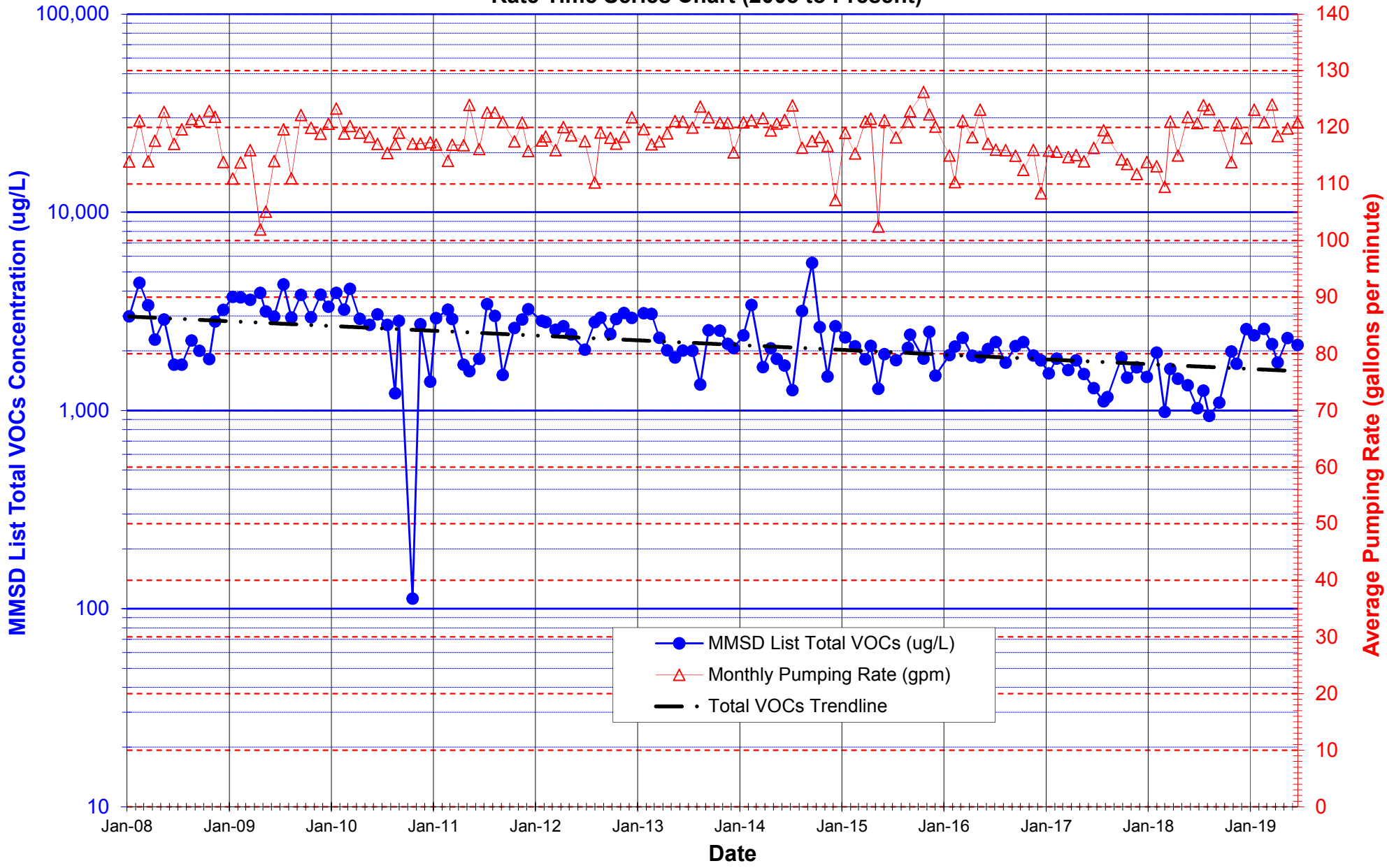
Chart 2. Hydrite Chemical Co. Hydraulic Barrier System MMSD List Total VOCs and Average Pumping Rate Time Series Chart (2008 to Present)



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ATTACHMENT A
HYDRAULIC BARRIER SYSTEM
EFFLUENT SAMPLE FIELD FORM AND
LABORATORY ANALYTICAL REPORT

TETRA TECH GEO REMEDIATION SYSTEM EFFLUENT WATER QUALITY SAMPLING AND ANALYSIS FORM

PROJECT INFORMATION		INSTRUMENTS	
PROJECT	Hydrite Chemical Co., Cottage Grove Facility Layer 5 Hydraulic Barrier System Monitoring	Temp. & pH	HANNA
PROJECT NO.	117-3005039.01	Conductivity	HANNA
LOCATION	Cottage Grove, WI	ORP	NA
PERSONNEL	Todd M. Thomson	DO	NA

SAMPLE ID	Effluent			
WATER TYPE	Groundwater			
DATE (month/day/year)	6-19-19			
CLOCK TIME (Military)	12:50			
FLOW METER READING (gallons)	6423/6584			
FLOW RATE (gpm)*	117.2			
SAMPLING DEVICE	Sample Spigot on 6-inch discharge line			
FIELD TEMPERATURE (°C)	15.3			
pH	7.15			
ELECTRICAL CONDUCTIVITY at 25° C (uS/cm)	637			
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)			
TCL VOCs (Method SW846 8260B)	3-40 ml; G; HCl-L; No			
Chloride (Method 300.0)	250-ml; P; None; No			
Carbonaceous Biochemical Oxygen Demand (CBOD, 5 day) (Method SM 5210B)	1-liter; P; None; No	*48-hour hold time.		
Nitrogen, Total Kjeldahl (EPA Method 351.2), & Phosphorus (EPA Method 365.4)	1-500 ml; P; H_2SO_4-L; No			
Total Suspended Solids (Method SM 2540D)	1-liter; P; None; No			
NAME OF LABORATORY	Pace Analytical			
DATE SENT TO LAB	6-19-19			
SAMPLER'S NAME	TMT			

Note: gpm = gallons per minute

TETRA TECH EQUIPMENT CALIBRATION FORM

Equipment Make	HANNA Instruments
Equipment Model	HI 98129 pH/EC/TDC/Temperature Meter
Tetra Tech GEO ID Number	1

DATE	TIME	CALIBRATION MEDIA	RESULTS	COMMENTS
6-19-19	12:30	pH 4.0 and pH 7.0 buffer solutions	Calibration successful	
6-19-19	12:30	1,413 µs conductivity calibration solution	Calibration successful	
		pH 4.0 and pH 7.0 buffer solutions	Calibration successful	
		1,413 µs conductivity calibration solution	Calibration successful	
		pH 4.0 and pH 7.0 buffer solutions	Calibration successful	
		1,413 µs conductivity calibration solution	Calibration successful	
		pH 4.0 and pH 7.0 buffer solutions	Calibration successful	
		1,413 µs conductivity calibration solution	Calibration successful	
		pH 4.0 and pH 7.0 buffer solutions	Calibration successful	
		1,413 µs conductivity calibration solution	Calibration successful	

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

July 02, 2019

Mark Manthey
Tetra Tech Geo
175 North Corporate Drive
Suite 100
Brookfield, WI 53045

RE: Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Dear Mark Manthey:
Enclosed are the analytical results for sample(s) received by the laboratory on June 20, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

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CERTIFICATIONS

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40189820018	**EFFLUENT**	Water	06/19/19 12:50	06/20/19 09:15

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SAMPLE ANALYTE COUNT

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40189820018	**EFFLUENT**	EPA 8260	SMT	38
		SM 2540D	DEY	1
		SM 5210B	JXM	1
		EPA 300.0	HMB	1
		EPA 351.2	TMK	1
		EPA 365.4	BAF	1

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ANALYTICAL RESULTS

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Sample: EFFLUENT **Lab ID: 40189820018** Collected: 06/19/19 12:50 Received: 06/20/19 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Acetone	**<27.4**	ug/L	200	27.4	10		06/21/19 18:31	67-64-1	
Benzene	**<2.5**	ug/L	10.0	2.5	10		06/21/19 18:31	71-43-2	
Bromodichloromethane	**<3.6**	ug/L	12.1	3.6	10		06/21/19 18:31	75-27-4	
Bromoform	**<39.7**	ug/L	132	39.7	10		06/21/19 18:31	75-25-2	
Bromomethane	**<9.7**	ug/L	50.0	9.7	10		06/21/19 18:31	74-83-9	
2-Butanone (MEK)	**<29.4**	ug/L	200	29.4	10		06/21/19 18:31	78-93-3	
Carbon disulfide	**<3.7**	ug/L	50.0	3.7	10		06/21/19 18:31	75-15-0	
Carbon tetrachloride	**<1.7**	ug/L	10.0	1.7	10		06/21/19 18:31	56-23-5	
Chlorobenzene	**<7.1**	ug/L	23.7	7.1	10		06/21/19 18:31	108-90-7	
Chloroethane	**163**	ug/L	50.0	13.4	10		06/21/19 18:31	75-00-3	
Chloroform	**<12.7**	ug/L	50.0	12.7	10		06/21/19 18:31	67-66-3	
Chloromethane	**<21.9**	ug/L	73.0	21.9	10		06/21/19 18:31	74-87-3	
Dibromochloromethane	**<26.0**	ug/L	86.7	26.0	10		06/21/19 18:31	124-48-1	
1,1-Dichloroethane	**411**	ug/L	10.0	2.7	10		06/21/19 18:31	75-34-3	
1,2-Dichloroethane	**<2.8**	ug/L	10.0	2.8	10		06/21/19 18:31	107-06-2	
1,1-Dichloroethene	**63.5**	ug/L	10.0	2.4	10		06/21/19 18:31	75-35-4	
cis-1,2-Dichloroethene	**1430**	ug/L	10.0	2.7	10		06/21/19 18:31	156-59-2	
trans-1,2-Dichloroethene	**28.6J**	ug/L	36.4	10.9	10		06/21/19 18:31	156-60-5	
1,2-Dichloropropane	**<2.8**	ug/L	10.0	2.8	10		06/21/19 18:31	78-87-5	
cis-1,3-Dichloropropene	**<36.3**	ug/L	121	36.3	10		06/21/19 18:31	10061-01-5	
trans-1,3-Dichloropropene	**<43.7**	ug/L	146	43.7	10		06/21/19 18:31	10061-02-6	
Ethylbenzene	**16.5**	ug/L	10.0	2.2	10		06/21/19 18:31	100-41-4	
2-Hexanone	**<24.6**	ug/L	81.9	24.6	10		06/21/19 18:31	591-78-6	
Methylene Chloride	**44.0J**	ug/L	50.0	5.8	10		06/21/19 18:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<15.3**	ug/L	51.0	15.3	10		06/21/19 18:31	108-10-1	
Styrene	**<4.7**	ug/L	15.5	4.7	10		06/21/19 18:31	100-42-5	
1,1,2,2-Tetrachloroethane	**<2.8**	ug/L	10.0	2.8	10		06/21/19 18:31	79-34-5	
Tetrachloroethene	**10.9**	ug/L	10.9	3.3	10		06/21/19 18:31	127-18-4	
Toluene	**159**	ug/L	50.0	1.7	10		06/21/19 18:31	108-88-3	
1,1,1-Trichloroethane	**359**	ug/L	10.0	2.4	10		06/21/19 18:31	71-55-6	
1,1,2-Trichloroethane	**<5.5**	ug/L	50.0	5.5	10		06/21/19 18:31	79-00-5	
Trichloroethene	**36.0**	ug/L	10.0	2.6	10		06/21/19 18:31	79-01-6	
Vinyl acetate	**<30.9**	ug/L	200	30.9	10		06/21/19 18:31	108-05-4	
Vinyl chloride	**42.8**	ug/L	10.0	1.7	10		06/21/19 18:31	75-01-4	
Xylene (Total)	**57.2**	ug/L	30.0	15.0	10		06/21/19 18:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		10		06/21/19 18:31	460-00-4	
Dibromofluoromethane (S)	112	%	70-130		10		06/21/19 18:31	1868-53-7	
Toluene-d8 (S)	95	%	70-130		10		06/21/19 18:31	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**<0.95**	mg/L	2.0	0.95	1		06/24/19 10:22		
5210B cBOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B								
Carbonaceous BOD, 5 day	**<2.0**	mg/L	2.0	2.0	1	06/21/19 10:25	06/26/19 11:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Sample: EFFLUENT **Lab ID: 40189820018** Collected: 06/19/19 12:50 Received: 06/20/19 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**37.9**	mg/L	10.0	2.5	5		06/27/19 14:23	16887-00-6	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	**<0.22**	mg/L	0.73	0.22	1	06/26/19 12:22	06/26/19 17:13	7727-37-9	M0
365.4 Total Phosphorus	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4								
Phosphorus	**<0.052**	mg/L	0.40	0.052	1	07/01/19 06:50	07/01/19 13:34	7723-14-0	1q

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QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

QC Batch: 325207 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV
Associated Lab Samples: 40189820018

METHOD BLANK: 1888016 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.24	1.0	06/21/19 09:17	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	06/21/19 09:17	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	06/21/19 09:17	
1,1-Dichloroethane	ug/L	<0.27	1.0	06/21/19 09:17	
1,1-Dichloroethene	ug/L	<0.24	1.0	06/21/19 09:17	
1,2-Dichloroethane	ug/L	<0.28	1.0	06/21/19 09:17	
1,2-Dichloropropane	ug/L	<0.28	1.0	06/21/19 09:17	
2-Butanone (MEK)	ug/L	<2.9	20.0	06/21/19 09:17	
2-Hexanone	ug/L	<2.5	8.2	06/21/19 09:17	
4-Methyl-2-pentanone (MIBK)	ug/L	<1.5	5.1	06/21/19 09:17	
Acetone	ug/L	<2.7	20.0	06/21/19 09:17	
Benzene	ug/L	<0.25	1.0	06/21/19 09:17	
Bromodichloromethane	ug/L	<0.36	1.2	06/21/19 09:17	
Bromoform	ug/L	<4.0	13.2	06/21/19 09:17	
Bromomethane	ug/L	<0.97	5.0	06/21/19 09:17	
Carbon disulfide	ug/L	<0.37	5.0	06/21/19 09:17	
Carbon tetrachloride	ug/L	<0.17	1.0	06/21/19 09:17	
Chlorobenzene	ug/L	<0.71	2.4	06/21/19 09:17	
Chloroethane	ug/L	<1.3	5.0	06/21/19 09:17	
Chloroform	ug/L	<1.3	5.0	06/21/19 09:17	
Chloromethane	ug/L	<2.2	7.3	06/21/19 09:17	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	06/21/19 09:17	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	06/21/19 09:17	
Dibromochloromethane	ug/L	<2.6	8.7	06/21/19 09:17	
Ethylbenzene	ug/L	<0.22	1.0	06/21/19 09:17	
Methylene Chloride	ug/L	<0.58	5.0	06/21/19 09:17	
Styrene	ug/L	<0.47	1.6	06/21/19 09:17	
Tetrachloroethene	ug/L	<0.33	1.1	06/21/19 09:17	
Toluene	ug/L	<0.17	5.0	06/21/19 09:17	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	06/21/19 09:17	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	06/21/19 09:17	
Trichloroethene	ug/L	<0.26	1.0	06/21/19 09:17	
Vinyl acetate	ug/L	<3.1	20.0	06/21/19 09:17	
Vinyl chloride	ug/L	<0.17	1.0	06/21/19 09:17	
Xylene (Total)	ug/L	<1.5	3.0	06/21/19 09:17	
4-Bromofluorobenzene (S)	%	90	70-130	06/21/19 09:17	
Dibromofluoromethane (S)	%	116	70-130	06/21/19 09:17	
Toluene-d8 (S)	%	93	70-130	06/21/19 09:17	

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(920)469-2436

QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

LABORATORY CONTROL SAMPLE: 1888017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.8	104	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.2	102	70-130	
1,1,2-Trichloroethane	ug/L	50	51.2	102	70-130	
1,1-Dichloroethane	ug/L	50	50.8	102	73-150	
1,1-Dichloroethene	ug/L	50	58.6	117	73-138	
1,2-Dichloroethane	ug/L	50	52.1	104	75-140	
1,2-Dichloropropane	ug/L	50	49.3	99	73-135	
Benzene	ug/L	50	56.2	112	70-130	
Bromodichloromethane	ug/L	50	52.0	104	70-130	
Bromoform	ug/L	50	41.4	83	68-129	
Bromomethane	ug/L	50	33.1	66	18-159	
Carbon disulfide	ug/L	50	65.0	130	69-132	
Carbon tetrachloride	ug/L	50	50.3	101	70-130	
Chlorobenzene	ug/L	50	49.8	100	70-130	
Chloroethane	ug/L	50	54.2	108	53-147	
Chloroform	ug/L	50	53.7	107	74-136	
Chloromethane	ug/L	50	31.5	63	29-115	
cis-1,2-Dichloroethene	ug/L	50	53.1	106	70-130	
cis-1,3-Dichloropropene	ug/L	50	44.5	89	70-130	
Dibromochloromethane	ug/L	50	44.1	88	70-130	
Ethylbenzene	ug/L	50	51.3	103	80-124	
Methylene Chloride	ug/L	50	51.7	103	73-138	
Styrene	ug/L	50	52.0	104	70-130	
Tetrachloroethene	ug/L	50	51.6	103	70-130	
Toluene	ug/L	50	50.7	101	80-126	
trans-1,2-Dichloroethene	ug/L	50	56.4	113	73-145	
trans-1,3-Dichloropropene	ug/L	50	40.7	81	70-130	
Trichloroethene	ug/L	50	54.3	109	70-130	
Vinyl chloride	ug/L	50	44.3	89	51-120	
Xylene (Total)	ug/L	150	156	104	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			106	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1888278 1888279

Parameter	Units	40189820004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	51.0	54.0	102	108	70-130	6	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	50.3	52.0	101	104	70-130	3	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	51.6	53.2	103	106	70-137	3	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	52.4	53.6	105	107	73-153	2	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	62.7	64.9	125	130	73-138	4	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	54.3	54.9	109	110	75-140	1	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	48.4	50.9	97	102	71-138	5	20	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1888278 1888279

Parameter	Units	40189820004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.25	50	50	56.7	58.3	113	117	70-130	3	20	
Bromodichloromethane	ug/L	<0.36	50	50	52.6	52.7	105	105	70-130	0	20	
Bromoform	ug/L	<4.0	50	50	40.9	40.9	82	82	68-129	0	20	
Bromomethane	ug/L	<0.97	50	50	46.6	51.8	93	104	15-170	11	20	
Carbon disulfide	ug/L	<0.37	50	50	74.3	74.1	149	148	66-145	0	20	M1
Carbon tetrachloride	ug/L	<0.17	50	50	51.3	52.5	103	105	70-130	2	20	
Chlorobenzene	ug/L	<0.71	50	50	49.3	51.9	99	104	70-130	5	20	
Chloroethane	ug/L	<1.3	50	50	63.0	64.4	126	129	51-148	2	20	
Chloroform	ug/L	<1.3	50	50	54.8	55.6	110	111	74-136	2	20	
Chloromethane	ug/L	<2.2	50	50	46.0	47.4	90	93	23-115	3	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	54.8	56.7	110	113	70-131	3	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	46.3	47.9	93	96	70-130	3	20	
Dibromochloromethane	ug/L	<2.6	50	50	43.8	45.2	88	90	70-130	3	20	
Ethylbenzene	ug/L	<0.22	50	50	50.7	52.9	101	106	80-125	4	20	
Methylene Chloride	ug/L	<0.58	50	50	54.4	56.6	109	113	73-140	4	20	
Styrene	ug/L	<0.47	50	50	50.7	55.2	101	110	70-130	8	20	
Tetrachloroethene	ug/L	<0.33	50	50	51.6	53.7	103	107	70-130	4	20	
Toluene	ug/L	<0.17	50	50	51.7	54.1	103	108	80-131	4	20	
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	57.9	57.9	116	116	73-148	0	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	41.1	42.5	82	85	70-130	3	20	
Trichloroethene	ug/L	<0.26	50	50	53.2	55.1	106	110	70-130	4	20	
Vinyl chloride	ug/L	<0.17	50	50	58.9	59.9	118	120	41-129	2	20	
Xylene (Total)	ug/L	<1.5	150	150	150	164	100	110	70-130	9	20	
4-Bromofluorobenzene (S)	%						99	103	70-130			
Dibromofluoromethane (S)	%						108	112	70-130			
Toluene-d8 (S)	%						96	100	70-130			

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(920)469-2436

QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

QC Batch: 325392 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 40189820018

METHOD BLANK: 1889604 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	06/24/19 10:22	

LABORATORY CONTROL SAMPLE: 1889605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	90.0	90	80-120	

SAMPLE DUPLICATE: 1889606

Parameter	Units	40189831002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	740	750	1	10	

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QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

QC Batch: 325315 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B cBOD, 5 day
Associated Lab Samples: 40189820018

METHOD BLANK: 1888809 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbonaceous BOD, 5 day	mg/L	<2.0	2.0	06/26/19 11:07	

METHOD BLANK: 1888815 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbonaceous BOD, 5 day	mg/L	<2.0	2.0	06/26/19 11:13	

LABORATORY CONTROL SAMPLE & LCSD: 1888811 1888812

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbonaceous BOD, 5 day	mg/L	198	219	198	111	100	84.6-115	10	20	

LABORATORY CONTROL SAMPLE & LCSD: 1888811 1888814

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbonaceous BOD, 5 day	mg/L	198	219	198	111	100	84.6-115	10	20	

SAMPLE DUPLICATE: 1888813

Parameter	Units	40189771001 Result	Dup Result	RPD	Max RPD	Qualifiers
Carbonaceous BOD, 5 day	mg/L	<2.0	<2.0		20	

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QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

QC Batch: 325318 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40189820018

METHOD BLANK: 1888977 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	06/27/19 10:47	

LABORATORY CONTROL SAMPLE: 1888978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	18.5	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1888979 1888980

Parameter	Units	40189805001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	474	400	400	800	773	82	75	90-110	4	15	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1888981 1888982

Parameter	Units	40189858011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.85J	20	20	21.2	21.3	102	102	90-110	0	15	

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QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

QC Batch: 325751 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Associated Lab Samples: 40189820018

METHOD BLANK: 1891280 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.22	0.73	06/26/19 16:58	

LABORATORY CONTROL SAMPLE: 1891281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	5	4.6	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1891282 1891283

Parameter	Units	40189701001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	19.5	20	20	37.7	38.6	91	95	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1891284 1891285

Parameter	Units	40189820018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	<0.22	5	5	4.4	4.5	89	91	90-110	2	20	M0

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QUALITY CONTROL DATA

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

QC Batch: 326133 | Analysis Method: EPA 365.4
QC Batch Method: EPA 365.4 | Analysis Description: 365.4 Phosphorus
Associated Lab Samples: 40189820018

METHOD BLANK: 1894086 | Matrix: Water
Associated Lab Samples: 40189820018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	<0.052	0.40	07/01/19 13:27	

LABORATORY CONTROL SAMPLE: 1894087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894088 1894089

Parameter	Units	40190036001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	<0.80	10	10	9.5	10.4	95	103	90-110	9	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894090 1894091

Parameter	Units	40190091002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	10.7	10	10	17.8	16.9	71	62	90-110	5	20	M0

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QUALIFIERS

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1q	Analyte was detected in the associated method blank at a concentration of -0.057mg/L.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 117-3005039.02 HYDRITE COTTAGE
Pace Project No.: 40189864

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40189820018	**EFFLUENT**	EPA 8260	325207		
40189820018	**EFFLUENT**	SM 2540D	325392		
40189820018	**EFFLUENT**	SM 5210B	325315	SM 5210B	325753
40189820018	**EFFLUENT**	EPA 300.0	325318		
40189820018	**EFFLUENT**	EPA 351.2	325751	EPA 351.2	325827
40189820018	**EFFLUENT**	EPA 365.4	326133	EPA 365.4	326221

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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

40189864 Page 1 of 2

~~40189820~~ 6-21-19

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)

Company Name:	TETRA TECH
Branch/Location:	BROOKFIELD
Project Contact:	MARK MONTHEY
Phone:	(262) 792-1282
Project Number:	117-3005039.02
Project Name:	HYDRE CITAGE GROVE
Project State:	WI.
Sampled By (Print):	TODD M. THOMSEN
Sampled By (Sign):	
PO #:	
Regulatory Program:	

Quote #:	
Mail To Contact:	MARK MONTHEY
Mail To Company:	TETRA TECH
Mail To Address:	18191 CORPORATE DR. SUITE 100 BROOKFIELD WI. 53045
Invoice To Contact:	SAME AS ABOVE
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO): N
PRESERVATION (CODE)*: B

Analyses Requested: TCL VOCs 8260

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE (20-19)	COLLECTION TIME	MATRIX	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	P-140	6-17	14:00	GW			
002	P-142	6-17	14:20		*NOTE*		
003	P-143	6-17	14:30		SEE BRIAN		
004	P-144	6-17	14:50		BOSTEN FOR		
005	P-105	6-17	15:20		SPECIAL TCL	MH	
006	P-133	6-17	15:30		VOC LIST.		
007	P-141	6-17	16:00				
008	P-130	6-18	12:15				
009	P-131	6-18	12:30				
010	P-94	6-18	12:50				
011	P-95	6-18	13:00				
012	P-129	6-18	13:15				
013	P-128	6-18	13:35				

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: STANDARD

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	6-19-19 17:00		
LS Logistics	6/20/19 0915		6/20/19 0915

PACE Project No.: ~~40189820~~ 6-21-19

Receipt Temp = 1.0 °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present

Intact / Not Intact

Version 6.6 06/14/06

C010c(27 Jun2006)

ORIGINAL

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~~40189800~~ ff 6-21-19

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CHAIN OF CUSTODY

(Please Print Clearly)

Company Name:	TETRA TECH
Branch/Location:	BROOKFIELD
Project Contact:	MARK MANTKEY
Phone:	(262) 792-1282
Project Number:	117-305039.02
Project Name:	HYDRITE COTTAGE GROVE
Project State:	WI
Sampled By (Print):	TODD M. THOMSEN
Sampled By (Sign):	
PO #:	
Regulatory Program:	

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	MARK MANTKEY
Mail To Company:	TETRA TECH
Mail To Address:	1515 CORPORATE DR. SUITE 100 BROOKFIELD, WI. 53045
Invoice To Contact:	SAME AS ABOVE
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: TCL VOCs 8260	CBOD	TSS & Chloride	TKN & TPO4	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	FILTERED? (YES/NO)				N	N	N	N			
	PRESERVATION (CODE)*				B	A	A	C			
014	P-104	6-18	14:05	GW	3				*NOTE*		
015	P-104 DUP	6-18	14:10		3				SEE BRIAN		
016	P-159	6-18	15:50		3				BOSTEN FOR		
017	P-160	6-18	16:00		3				SPECIAL TCL		
018	EFFLUENT	6-19	12:50		3	1	1	1	VOC LIST.		
019	TB-1	—	—	DI	2				LAB PREPARED		

40189864

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: STANDARD

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	6-19-19 17:00		
C.S. Logistics	6/20/19 0915	[signature]	6/20/19 0915

PACE Project No.: ~~40189826~~ ff 1-21-19

Receipt Temp = 1.0 °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present

Intact / Not Intact

Version 6.0 06/14/06

C019a(27 Jun2006)

ORIGINAL

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

40189864

Sample Preservation Receipt Form

Client Name: Tetra Tech

Project # ~~40189820~~ 6-21-19

All containers needing preservation have been checked and noted below: ☑Yes ☐No ☐N/A

Initial when completed: PG

Date/Time:

Lab Lot# of pH paper: 10253581

Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass							Plastic							Vials						Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN							
001																		3															2.5 / 5 / 10
002																		3															2.5 / 5 / 10
003																		3															2.5 / 5 / 10
004																		3															2.5 / 5 / 10
005																		3															2.5 / 5 / 10
006																		3															2.5 / 5 / 10
007																		3									1						2.5 / 5 / 10
008																		3									3						2.5 / 5 / 10
009																		3															2.5 / 5 / 10
010																		3															2.5 / 5 / 10
011																		3															2.5 / 5 / 10
012																		3															2.5 / 5 / 10
013																		3									2						2.5 / 5 / 10
014																		3															2.5 / 5 / 10
015																		3															2.5 / 5 / 10
016																		3															2.5 / 5 / 10
017																		3															2.5 / 5 / 10
018								2						1				3										1					2.5 / 5 / 10
019																		2									2						2.5 / 5 / 10
020																												6/20/19 PG					~~2.5~~ / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm) : ☑Yes ☐No ☐N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical 1241 Bellevue Street, Green Bay, WI 54302	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: 25Apr2018
	Document No.: **F-GB-C-031-Rev.07**	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #

WO# : 40189864

40189864

Client Name: Tetra Tech

Courier: ☑ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other:

Tracking #: 2262.061919

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - 30 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1.0 /Corr: 1.0

Temp Blank Present: ☐ yes ☑ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 6/20/19
Initials: PG

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD:	☐Yes ☑No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☑Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 6-21-19