February 21, 2024
Discharge Monitoring Report #244
(117-031645-24002.02)

Ms. Julie Maas, Pretreatment Program Coordinator
Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, WI 53713-3398

RE: January 2024 Discharge Monitoring Report, Hydraulic Barrier System, Hydrite Chemical Co., Cottage Grove, Wisconsin

Dear Ms. Maas:

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 January 2024. 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: January 23, 2024, at 1:20 pm.

- The person that collected the sample: Laura Dykstra, Geologist, 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:	*Date Analyzed*
1. Volatile Organic Compounds (VOCs) by EPA Method 8260:	January 25, 2024
2. Chloride by EPA Method 300.0:	January 25, 2024

TETRA TECH
13555 Bishops Ct, Suite 201, Brookfield, WI 53005
Tel 262.792.1282 Fax 262.792.1310 www.tetratech.com

Analysis performed in the field by Tetra Tech personnel:

1. Field pH, January 23, 2024.
   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 January 23, 2024, effluent sample collected from the hydraulic barrier system are summarized on Table 1.

- 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)**
January 2024 Discharge Volume (December 31, 2023 to January 31, 2024)	4,702,992
Cumulative Total Discharge Volume (October 8, 2003, through January 31, 2024)	1,173,282,880

<u>Hydraulic Barrier System Operation and Maintenance History for the Month of January 2024</u>

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 107 gallons per minute (gpm) in January. The lower-than-normal average pumping rate was because the pump motor in extraction well P-164 failed on January 25th. A new pump was ordered the same day by Tetra Tech personnel and the new pump was installed in P-164 by Hydrite Chemical personnel on February 8th.

Tetra Tech personnel treated extraction well P-164 with muriatic acid solution January 23rd to January 25th to maintain the sustainable pumping rate of the well at the target rate of 50 to 55 gallons per minute (gpm). Approximately 2 gallons of muriatic acid was poured into P-164 with the pump off followed by about 2 gallons of tap water. The pump was turned on for approximately 30 seconds about one hour after the muriatic acid was poured into the well to distribute the muriatic acid solution into the discharge pipe. The pump was kept off for approximately 44 hours to allow the muriatic solution to break down the slime bacteria build-up in the 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. The pump motor in P-164 failed about four hours after it was re-started on January 25th. As noted above, a new pump was installed in P-164 on February 8th and pumping from P-164 was re-started the same day at approximately 11:15 AM.

Based on the meter readings collected from the water meters in the manholes at extraction wells P-128, P-130 and P-164, 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 January 2024

- P-128: 30.4 to 32.4 gpm
- P-130: 32.3 to 34.3 gpm
- P-164: 0.0 to 58.7 gpm

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, January 2nd, Tuesday, January 23rd, and Tuesday, January 30th. 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.

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. (Electronic copy via email.)
Mr. Raymond R. Krueger - Michael, Best & Friedrich, LLP
Mr. Jon Bublitz - Village of Cottage Grove (Electronic copy via email.)
Mr. Luke Lampo – Wisconsin Department of Natural Resources (Electronic copy via email.)

TABLE
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					40273441001	
Date Sample Collected					01/23/24	
Dilution Factor for VOCs					25	
COMPOUND	Units	Target Detection Limits	NR140 ES	NR140 PAL		
1,1,1-Trichloroethane	ug/L	0.30	200	40	88.8	
2-Butanone (MEK)	ug/L	6.5	460	90		U
4-Methyl-2-Pentanone (MIBK)	ug/L	6.0	500	50		U
Acetone	ug/L	8.6	1000	200		U
cis-1,2-Dichloroethene	ug/L	0.47	70	7	1380	
Methylene chloride	ug/L	0.32	5.0	0.5	17.7	J
Tetrachloroethene	ug/L	0.41	5.0	0.5		U
Toluene	ug/L	0.29	1000	200	125	
Trichloroethene	ug/L	0.32	5.0	0.5	27.8	
Vinyl chloride	ug/L	0.17	0.2	0.02	87.5	
Xylenes (total)	ug/L	1.0	10000	1000	143	
TOTAL VOCs	ug/L				1869.8	
Total Chlorinated VOCs	ug/L				1601.8	
Chloride	mg/L	2.0	250	125	48.3	

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.
L1 - Analyte recovery in the laboratory control sample was above QC limits. Results may be biased high.
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.
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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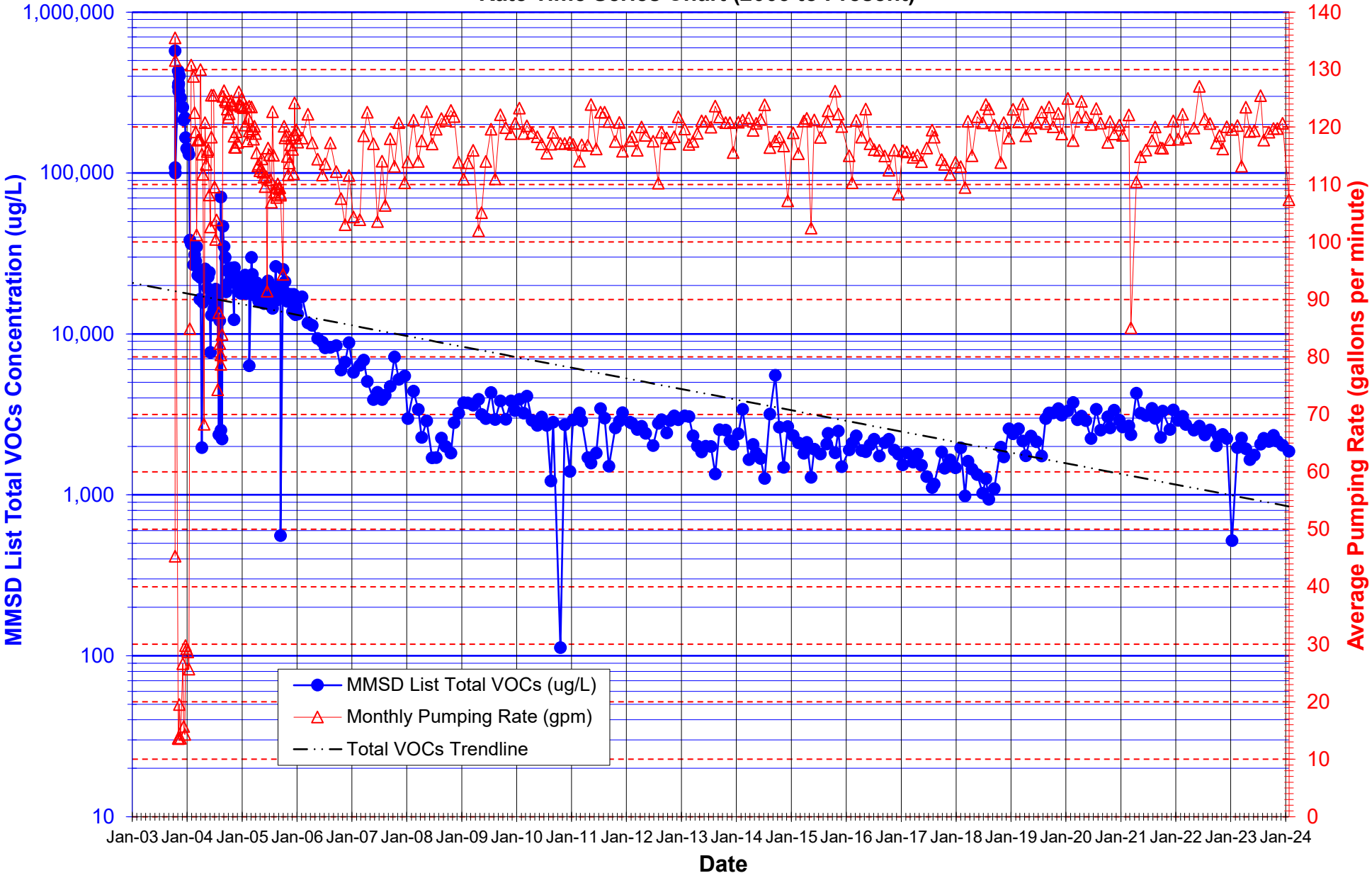
Chart 1. Hydrite Chemical Co. Hydraulic Barrier System MMSD List Total VOCs and Average Pumping Rate Time Series Chart (2003 to Present)



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TETRA TECH

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

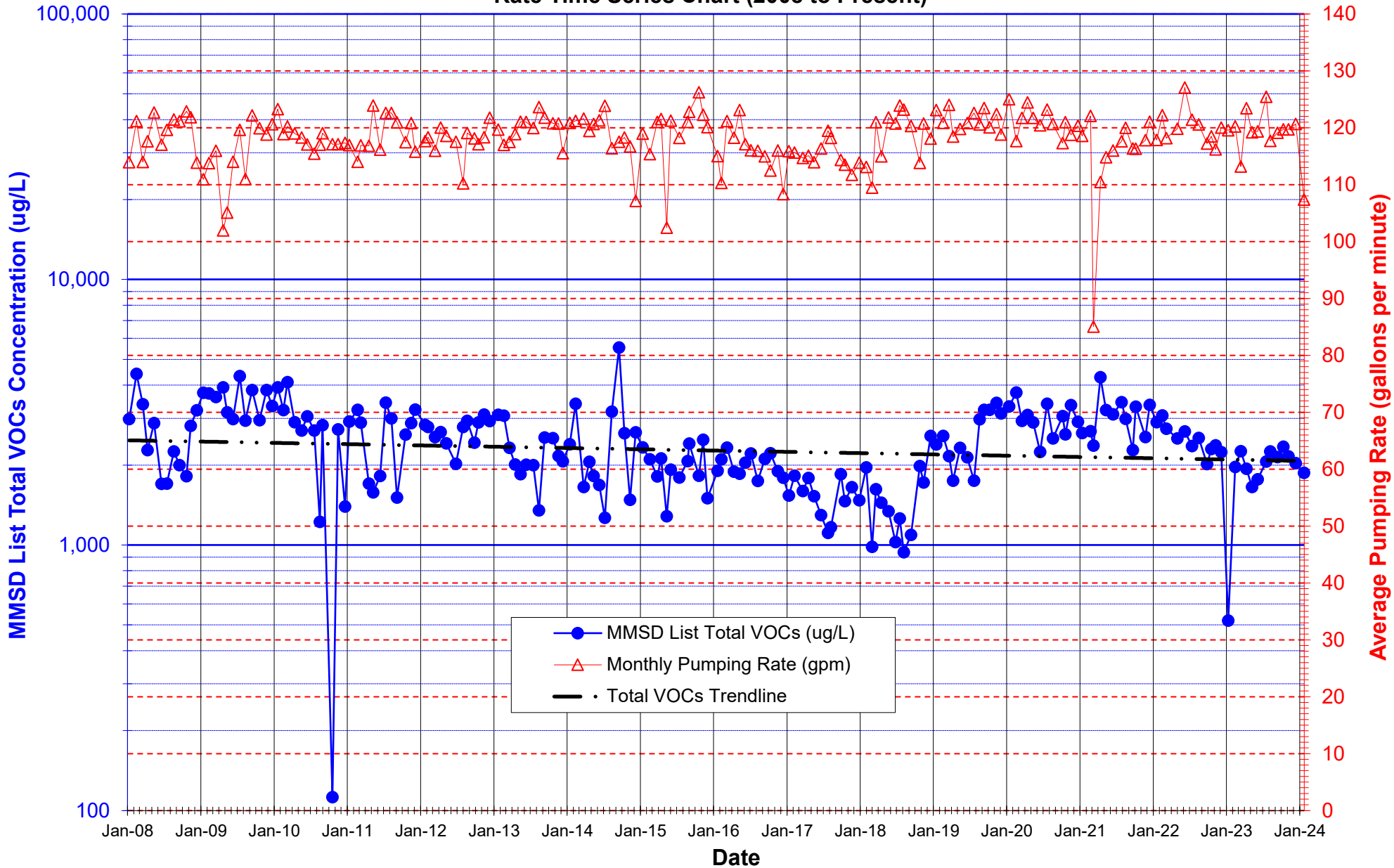

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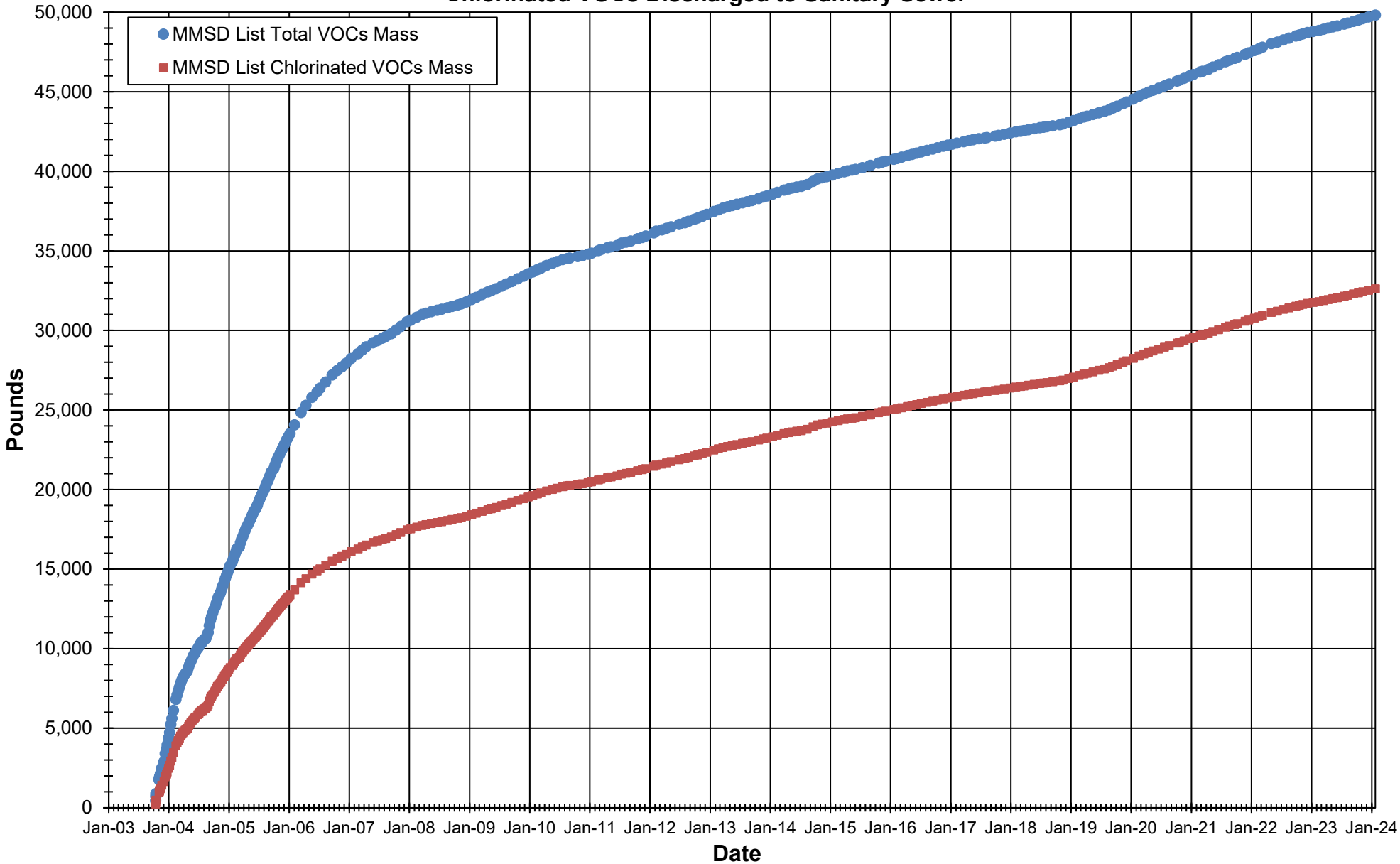
Chart 3. Hydrite Chemical Co. Hydraulic Barrier System Cumulative Mass of MMSD List Total Vocs and Chlorinated VOCs Discharged to Sanitary Sewer



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

TETRA TECH 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 Combo
PROJECT NO.	117-30050047A.600	Conductivity	Hanna Combo
LOCATION	Cottage Grove, WI	ORP	NA
PERSONNEL	LLD	DO	NA

SAMPLE ID	Effluent			
WATER TYPE	Groundwater			
DATE (month/day/year)	1-23-24			
CLOCK TIME (Military)	13:20			
FLOW METER READING (gallons)	43107488			
FLOW RATE (gpm)	116.74			
SAMPLING DEVICE	Sample Spigot on 6-inch discharge line			
FIELD TEMPERATURE (°C)	10.6			
pH	7.75			
ELECTRICAL CONDUCTIVITY at 25° C (µS/cm)	822			
ORP (mV)	NM			
DISSOLVED OXYGEN (ppm)	NM			
DISSOLVED OXYGEN (% Sat.)	NM			
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**			
NAME OF LABORATORY	Pace Analytical			
DATE SENT TO LAB	1/23/24			

TETRA TECH

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 30, 2024

Mark Manthey
Tetra Tech Geo
13555 Bishops Ct
Suite 201
Brookfield, WI 53005

RE: Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

Dear Mark Manthey:

Enclosed are the analytical results for sample(s) received by the laboratory on January 24, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

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: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

Pace Analytical Services Green Bay
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
South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

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SAMPLE SUMMARY

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40273441001	**EFFLUENT**	Water	01/23/24 13:20	01/24/24 09:10

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SAMPLE ANALYTE COUNT

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40273441001	**EFFLUENT**	EPA 8260	CXJ	39
		EPA 300.0	HMB	1

PASI-G = Pace Analytical Services - Green Bay

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ANALYTICAL RESULTS

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

Sample: EFFLUENT **Lab ID: 40273441001** Collected: 01/23/24 13:20 Received: 01/24/24 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Acetone	**<216**	ug/L	625	216	25		01/25/24 17:47	67-64-1	
Benzene	**<7.4**	ug/L	25.0	7.4	25		01/25/24 17:47	71-43-2	
Bromodichloromethane	**<10.4**	ug/L	25.0	10.4	25		01/25/24 17:47	75-27-4	
Bromoform	**<10.7**	ug/L	25.0	10.7	25		01/25/24 17:47	75-25-2	
Bromomethane	**<29.8**	ug/L	125	29.8	25		01/25/24 17:47	74-83-9	
2-Butanone (MEK)	**<163**	ug/L	625	163	25		01/25/24 17:47	78-93-3	
Carbon disulfide	**<16.2**	ug/L	25.0	16.2	25		01/25/24 17:47	75-15-0	
Carbon tetrachloride	**<9.2**	ug/L	25.0	9.2	25		01/25/24 17:47	56-23-5	
Chlorobenzene	**<21.4**	ug/L	25.0	21.4	25		01/25/24 17:47	108-90-7	
Chloroethane	**380**	ug/L	125	34.5	25		01/25/24 17:47	75-00-3	
Chloroform	**<12.6**	ug/L	125	12.6	25		01/25/24 17:47	67-66-3	
Chloromethane	**<40.9**	ug/L	125	40.9	25		01/25/24 17:47	74-87-3	
Dibromochloromethane	**<66.1**	ug/L	125	66.1	25		01/25/24 17:47	124-48-1	
1,1-Dichloroethane	**318**	ug/L	25.0	7.4	25		01/25/24 17:47	75-34-3	
1,2-Dichloroethane	**<7.3**	ug/L	25.0	7.3	25		01/25/24 17:47	107-06-2	
1,1-Dichloroethene	**97.1**	ug/L	25.0	14.6	25		01/25/24 17:47	75-35-4	
cis-1,2-Dichloroethene	**1380**	ug/L	25.0	11.8	25		01/25/24 17:47	156-59-2	
trans-1,2-Dichloroethene	**<13.2**	ug/L	25.0	13.2	25		01/25/24 17:47	156-60-5	
1,2-Dichloropropane	**<11.2**	ug/L	25.0	11.2	25		01/25/24 17:47	78-87-5	
cis-1,3-Dichloropropene	**<5.9**	ug/L	25.0	5.9	25		01/25/24 17:47	10061-01-5	
trans-1,3-Dichloropropene	**<6.6**	ug/L	25.0	6.6	25		01/25/24 17:47	10061-02-6	
Ethylbenzene	**24.5J**	ug/L	25.0	8.1	25		01/25/24 17:47	100-41-4	
2-Hexanone	**<157**	ug/L	625	157	25		01/25/24 17:47	591-78-6	
Methylene Chloride	**17.7J**	ug/L	125	8.0	25		01/25/24 17:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<149**	ug/L	625	149	25		01/25/24 17:47	108-10-1	
Methyl-tert-butyl ether	**<28.2**	ug/L	125	28.2	25		01/25/24 17:47	1634-04-4	
Styrene	**<8.9**	ug/L	25.0	8.9	25		01/25/24 17:47	100-42-5	
1,1,2,2-Tetrachloroethane	**<9.4**	ug/L	25.0	9.4	25		01/25/24 17:47	79-34-5	
Tetrachloroethene	**<10.2**	ug/L	25.0	10.2	25		01/25/24 17:47	127-18-4	
Toluene	**125**	ug/L	25.0	7.2	25		01/25/24 17:47	108-88-3	
1,1,1-Trichloroethane	**88.8**	ug/L	25.0	7.6	25		01/25/24 17:47	71-55-6	
1,1,2-Trichloroethane	**<8.6**	ug/L	25.0	8.6	25		01/25/24 17:47	79-00-5	
Trichloroethene	**27.8**	ug/L	25.0	8.0	25		01/25/24 17:47	79-01-6	
Vinyl acetate	**<33.2**	ug/L	125	33.2	25		01/25/24 17:47	108-05-4	
Vinyl chloride	**87.5**	ug/L	25.0	4.4	25		01/25/24 17:47	75-01-4	
Xylene (Total)	**143**	ug/L	75.0	26.2	25		01/25/24 17:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		25		01/25/24 17:47	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		25		01/25/24 17:47	2199-69-1	
Toluene-d8 (S)	104	%	70-130		25		01/25/24 17:47	2037-26-5	
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**48.3**	mg/L	10.0	3.0	5		01/25/24 21:22	16887-00-6	

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QUALITY CONTROL DATA

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

QC Batch: 465536
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40273441001

METHOD BLANK: 2668842
Matrix: Water
Associated Lab Samples: 40273441001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.30	1.0	01/25/24 09:58	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	01/25/24 09:58	
1,1,2-Trichloroethane	ug/L	<0.34	1.0	01/25/24 09:58	
1,1-Dichloroethane	ug/L	<0.30	1.0	01/25/24 09:58	
1,1-Dichloroethene	ug/L	<0.58	1.0	01/25/24 09:58	
1,2-Dichloroethane	ug/L	<0.29	1.0	01/25/24 09:58	
1,2-Dichloropropane	ug/L	<0.45	1.0	01/25/24 09:58	
2-Butanone (MEK)	ug/L	<6.5	25.0	01/25/24 09:58	
2-Hexanone	ug/L	<6.3	25.0	01/25/24 09:58	
4-Methyl-2-pentanone (MIBK)	ug/L	<6.0	25.0	01/25/24 09:58	
Acetone	ug/L	<8.6	25.0	01/25/24 09:58	
Benzene	ug/L	<0.30	1.0	01/25/24 09:58	
Bromodichloromethane	ug/L	<0.42	1.0	01/25/24 09:58	
Bromoform	ug/L	<0.43	1.0	01/25/24 09:58	
Bromomethane	ug/L	<1.2	5.0	01/25/24 09:58	
Carbon disulfide	ug/L	<0.65	1.0	01/25/24 09:58	
Carbon tetrachloride	ug/L	<0.37	1.0	01/25/24 09:58	
Chlorobenzene	ug/L	<0.86	1.0	01/25/24 09:58	
Chloroethane	ug/L	<1.4	5.0	01/25/24 09:58	
Chloroform	ug/L	<0.50	5.0	01/25/24 09:58	
Chloromethane	ug/L	<1.6	5.0	01/25/24 09:58	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	01/25/24 09:58	
cis-1,3-Dichloropropene	ug/L	<0.24	1.0	01/25/24 09:58	
Dibromochloromethane	ug/L	<2.6	5.0	01/25/24 09:58	
Ethylbenzene	ug/L	<0.33	1.0	01/25/24 09:58	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	01/25/24 09:58	
Methylene Chloride	ug/L	<0.32	5.0	01/25/24 09:58	
Styrene	ug/L	<0.36	1.0	01/25/24 09:58	
Tetrachloroethene	ug/L	<0.41	1.0	01/25/24 09:58	
Toluene	ug/L	<0.29	1.0	01/25/24 09:58	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	01/25/24 09:58	
trans-1,3-Dichloropropene	ug/L	<0.27	1.0	01/25/24 09:58	
Trichloroethene	ug/L	<0.32	1.0	01/25/24 09:58	
Vinyl acetate	ug/L	<1.3	5.0	01/25/24 09:58	
Vinyl chloride	ug/L	<0.17	1.0	01/25/24 09:58	
Xylene (Total)	ug/L	<1.0	3.0	01/25/24 09:58	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	01/25/24 09:58	
4-Bromofluorobenzene (S)	%	109	70-130	01/25/24 09:58	
Toluene-d8 (S)	%	104	70-130	01/25/24 09:58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

LABORATORY CONTROL SAMPLE: 2668843

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	46.9	94	70-132	
1,1,2,2-Tetrachloroethane	ug/L	50	59.6	119	70-130	
1,1,2-Trichloroethane	ug/L	50	52.7	105	70-130	
1,1-Dichloroethane	ug/L	50	48.6	97	70-130	
1,1-Dichloroethene	ug/L	50	50.6	101	73-140	
1,2-Dichloroethane	ug/L	50	56.6	113	70-130	
1,2-Dichloropropane	ug/L	50	53.9	108	77-127	
Benzene	ug/L	50	49.2	98	70-130	
Bromodichloromethane	ug/L	50	51.9	104	70-130	
Bromoform	ug/L	50	44.0	88	70-130	
Bromomethane	ug/L	50	47.5	95	22-141	
Carbon disulfide	ug/L	50	40.9	82	65-141	
Carbon tetrachloride	ug/L	50	42.2	84	70-135	
Chlorobenzene	ug/L	50	51.9	104	70-130	
Chloroethane	ug/L	50	48.3	97	59-141	
Chloroform	ug/L	50	48.5	97	80-124	
Chloromethane	ug/L	50	30.1	60	29-150	
cis-1,2-Dichloroethene	ug/L	50	44.8	90	70-130	
cis-1,3-Dichloropropene	ug/L	50	50.7	101	70-130	
Dibromochloromethane	ug/L	50	48.3	97	70-130	
Ethylbenzene	ug/L	50	55.2	110	80-125	
Methyl-tert-butyl ether	ug/L	50	43.2	86	64-131	
Methylene Chloride	ug/L	50	43.6	87	70-137	
Styrene	ug/L	50	58.6	117	70-130	
Tetrachloroethene	ug/L	50	48.8	98	70-130	
Toluene	ug/L	50	53.3	107	80-120	
trans-1,2-Dichloroethene	ug/L	50	42.3	85	70-131	
trans-1,3-Dichloropropene	ug/L	50	55.6	111	70-130	
Trichloroethene	ug/L	50	49.5	99	70-130	
Vinyl chloride	ug/L	50	34.3	69	51-145	
Xylene (Total)	ug/L	150	167	111	70-130	
1,2-Dichlorobenzene-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			116	70-130	
Toluene-d8 (S)	%			104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2669379 2669380

Parameter	Units	40273470039 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	<0.30	50	50	50.0	51.0	100	102	70-132	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	57.0	58.2	114	116	70-131	2	20	
1,1,2-Trichloroethane	ug/L	<0.34	50	50	50.8	51.6	102	103	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.30	50	50	52.9	53.0	106	106	70-131	0	20	
1,1-Dichloroethene	ug/L	<0.58	50	50	60.0	61.5	120	123	69-146	2	20	
1,2-Dichloroethane	ug/L	<0.29	50	50	54.8	60.8	110	122	70-130	10	20	

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Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2669379 2669380

Parameter	Units	40273470039 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloropropane	ug/L	<0.45	50	50	56.1	57.6	112	115	77-129	3	20	
Benzene	ug/L	0.72J	50	50	51.9	54.0	102	107	70-130	4	20	
Bromodichloromethane	ug/L	<0.42	50	50	51.6	54.9	103	110	70-130	6	20	
Bromoform	ug/L	<0.43	50	50	48.3	50.2	97	100	70-130	4	20	
Bromomethane	ug/L	<1.2	50	50	72.6	78.6	145	157	12-159	8	26	
Carbon disulfide	ug/L	<0.65	50	50	52.4	53.4	105	107	62-145	2	20	
Carbon tetrachloride	ug/L	<0.37	50	50	44.5	45.7	89	91	70-135	3	20	
Chlorobenzene	ug/L	<0.86	50	50	51.0	53.4	102	107	70-130	5	20	
Chloroethane	ug/L	<1.4	50	50	60.1	64.4	120	129	56-143	7	20	
Chloroform	ug/L	<0.50	50	50	49.8	51.0	100	102	80-126	2	20	
Chloromethane	ug/L	<1.6	50	50	63.0	66.3	126	133	22-156	5	20	
cis-1,2-Dichloroethene	ug/L	1.5	50	50	48.7	50.9	94	99	70-130	4	20	
cis-1,3-Dichloropropene	ug/L	<0.24	50	50	48.9	54.2	98	108	70-130	10	20	
Dibromochloromethane	ug/L	<2.6	50	50	45.9	48.9	92	98	70-130	6	20	
Ethylbenzene	ug/L	<0.33	50	50	56.7	57.9	113	116	80-126	2	20	
Methyl-tert-butyl ether	ug/L	<1.1	50	50	42.3	43.7	85	87	64-136	3	20	
Methylene Chloride	ug/L	<0.32	50	50	46.9	48.8	94	98	70-137	4	20	
Styrene	ug/L	<0.36	50	50	58.7	60.7	117	121	70-133	3	20	
Tetrachloroethene	ug/L	<0.41	50	50	49.3	50.6	99	101	70-131	3	20	
Toluene	ug/L	0.32J	50	50	53.4	53.3	106	106	80-121	0	20	
trans-1,2-Dichloroethene	ug/L	1.5	50	50	48.5	50.4	94	98	70-135	4	20	
trans-1,3-Dichloropropene	ug/L	<0.27	50	50	53.9	56.8	108	114	70-130	5	20	
Trichloroethene	ug/L	<0.32	50	50	51.6	53.8	103	108	70-130	4	20	
Vinyl chloride	ug/L	9.5	50	50	67.8	72.4	117	126	45-147	7	20	
Xylene (Total)	ug/L	<1.0	150	150	166	173	111	115	70-130	4	20	
1,2-Dichlorobenzene-d4 (S)	%						101	98	70-130			
4-Bromofluorobenzene (S)	%						114	112	70-130			
Toluene-d8 (S)	%						104	103	70-130			

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1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

QC Batch: 465582
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40273441001

METHOD BLANK: 2669126 Matrix: Water
Associated Lab Samples: 40273441001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	01/25/24 16:40	

LABORATORY CONTROL SAMPLE: 2669127

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2669128 2669129

Parameter	Units	40273470031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	81.6	200	200	296	298	107	108	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2669130 2669131

Parameter	Units	40273473005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	674	400	400	1050	1030	93	90	90-110	1	15	

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REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
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(920)469-2436

QUALIFIERS

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

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 - The reported result is an estimated value.

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.

DL - Adjusted Method Detection Limit.

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 - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

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.

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HYDRITE, COTTAGE GROVE
Pace Project No.: 40273441

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40273441001	**EFFLUENT**	EPA 8260	465536		
40273441001	**EFFLUENT**	EPA 300.0	465582		

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

40273441

ALL SHADED AREAS are for LAB USE ONLY

Company: Tetra Tech

Address:

Billing Information: 13555 Bishops Ct. Ste 201 Brookfield, WI

Report To: Mark Manthey

Email To: mark.manthey@tetratech.com

Copy To:

Site Collection Info/Address:

Customer Project Name/Number: Hydrite, Cottage Grove

State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 630-408-5161 Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Laura Dykstra

Purchase Order #: Quote #:

DW PWS ID #: DW Location Code:

Collected By (signature): Laura Dykstra

Turnaround Date Required: standard

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: ____

Lab Project Manager:

Container Preservative Type **: 3 U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Profile/Line:

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA
- Custody Signatures Present Y N NA
- Collector Signature Present Y N NA
- Bottles Intact Y N NA
- Correct Bottles Y N NA
- Sufficient Volume Y N NA
- Samples Received on Ice Y N NA
- VOA - Headspace Acceptable Y N NA
- USDA Regulated Soils Y N NA
- Samples in Holding Time Y N NA
- Residual Chlorine Present Y N NA
- Cl Strips: ____
- Sample pH Acceptable Y N NA
- pH Strips: ____
- Sulfide Present Y N NA
- Lead Acetate Strips: ____

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TCL VOCs SW846 8260B	Chloride (300)	Lab Sample # / Comments
Effluent	GW	G	1-23	13:20					3	1	001

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2909178

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Laura Dykstra	13:20 1-23-24		
CS Logistics	1/24/24 910	Pace	1/24/24 910

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Sample Preservation Receipt Form

Client Name: Tetra Tech

Project # 40273441

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

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted): Initial when completed: Date/Time:

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	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2							
001									1								3																	2.5 / 5
002																																		2.5 / 5
003																																		2.5 / 5
004																																		2.5 / 5
005																																		2.5 / 5
006																																		2.5 / 5
007																																		2.5 / 5
008																																		2.5 / 5
009																																		2.5 / 5
010																																		2.5 / 5
011																																		2.5 / 5
012																																		2.5 / 5
013																																		2.5 / 5
014																																		2.5 / 5
015																																		2.5 / 5
016																																		2.5 / 5
017																																		2.5 / 5
018																																		2.5 / 5
019																																		2.5 / 5
020																																		2.5 / 5

1/24/24 JW

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	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40273441

40273441

Client Name: Tetra Tech

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

Tracking #: _____

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 - 129 **Type of Ice:** Wet Blue Dry None ☐ Meltwater Only

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 if shipped on Dry Ice.

Person examining contents:
Date: 1/24/24 /Initials: TSW

Labeled By Initials: MH

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.
- DI 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: Correct Type: Pace Green Bay, Pace IR, Non-Pace	☒ Yes ☐ No	9.
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☒ Yes ☐ No ☐ N/A	12.
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: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 2