29-Sep-2021

Cordell Renner
Tetra Tech EM Inc.
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

Re: **Burns Harbor** Work Order: **21092459**

Dear Cordell,

ALS Environmental received 2 samples on 27-Sep-2021 01:30 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 40.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: IL: 200076

ALS Group, USA

Date: 29-Sep-21

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Work Order: **21092459**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21092459-01	BH-SW01-092621	Surface Water		9/26/2021 23:15	9/27/2021 13:30	☐
21092459-02	BH-SW02-092721	Surface Water		9/27/2021 08:31	9/27/2021 13:30	☐

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Work Order: 21092459

Case Narrative

Samples for the above noted Work Order were received on 09/27/2021. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:

Batch R327651b, Method SW8260C, Samples 21092459-01A and -02A: The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: Chloromethane, Cyclohexane, Dichlorodifluoromethane, Methylcyclohexanone.

Batch R327651b, Method SW8260C, Samples 21092459-01A and -02A: The Continuing Calibration Verification did not meet acceptance criteria with low bias. Instrument sensitivity was verified as sufficient through the analysis of a low-level standard. The following non-detects are reported without qualification: 1,2-Dibromo-3-chloropropane.

Extractable Organics:
No other deviations or anomalies were noted.

Metals:

Batch 184482, Method SW6020B, Sample MBLK-184482: The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Aluminum.

Batch 184482, Method SW6020B, Sample 21092459-02B MS/MSD: The MS/MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Aluminum.

Batch 184482, Method SW6020B, Sample 21092459-02B MS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Calcium.

Batch 184482, Method SW6020B, Sample 21092459-02B MSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Sodium.

Wet Chemistry:

Batch R327656, Method SW9040C, Sample BH-SW01-092621 (21092459-01C): pH is considered a "field test" and, as such, the recommended sample holding time expired prior to sample receipt.

Batch R327656, Method SW9040C, Sample BH-SW02-092721 (21092459-02C): pH is considered a "field test" and, as such, the recommended sample holding time expired prior to sample receipt.

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
°C	Degrees Celcius
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
s.u.	Standard Units

ALS Group, USA

Date: *29-Sep-21*

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW01-092621
Collection Date: 9/26/2021 11:15 PM

Work Order: 21092459
Lab ID: 21092459-01
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS		Method: **SW8082**			Prep: SW3511 / 9/28/21		Analyst: **RM**
Aroclor 1016	U		0.090	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1221	U		0.090	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1232	U		0.090	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1242	U		0.090	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1248	U		0.090	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1254	U		0.091	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1260	U		0.091	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1262	U		0.091	0.20	µg/L	1	9/28/2021 14:48
Aroclor 1268	U		0.091	0.20	µg/L	1	9/28/2021 14:48
PCBs, Total	U		0.090	0.20	µg/L	1	9/28/2021 14:48
Surr: Decachlorobiphenyl	*89.5*			*30-150*	*%REC*	1	9/28/2021 14:48
Surr: Tetrachloro-m-xylene	*91.1*			*50-150*	*%REC*	1	9/28/2021 14:48
MERCURY BY CVAA		Method: **SW7470A**			Prep: SW7470 / 9/28/21		Analyst: **MTW**
Mercury	U		0.00016	0.00020	mg/L	1	9/28/2021 14:44
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3015A / 9/28/21		Analyst: **STP**
Aluminum	**0.12**	B	**0.0080**	**0.010**	**mg/L**	1	9/28/2021 15:28
Antimony	U		0.0020	0.0050	mg/L	1	9/28/2021 15:28
Arsenic	**0.00094**	J	**0.00019**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Barium	**0.017**		**0.0020**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Beryllium	U		0.00013	0.0020	mg/L	1	9/28/2021 15:28
Cadmium	U		0.00015	0.0020	mg/L	1	9/28/2021 15:28
Calcium	**120**		**0.25**	**0.50**	**mg/L**	1	9/28/2021 15:28
Chromium	**0.0038**	J	**0.0012**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Cobalt	**0.00023**	J	**0.00013**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Copper	**0.0044**	J	**0.0020**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Iron	**3.5**		**0.050**	**0.080**	**mg/L**	1	9/28/2021 15:28
Lead	U		0.00072	0.0050	mg/L	1	9/28/2021 15:28
Magnesium	**12**		**0.050**	**0.20**	**mg/L**	1	9/28/2021 15:28
Manganese	**0.29**		**0.0025**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Nickel	**0.0015**	J	**0.00090**	**0.0050**	**mg/L**	1	9/28/2021 15:28
Potassium	**2.1**		**0.096**	**0.20**	**mg/L**	1	9/28/2021 15:28
Selenium	U		0.00048	0.0050	mg/L	1	9/28/2021 15:28
Silver	U		0.00084	0.0050	mg/L	1	9/28/2021 15:28
Sodium	**65**		**0.18**	**0.20**	**mg/L**	1	9/28/2021 15:28
Thallium	U		0.00015	0.0050	mg/L	1	9/28/2021 15:28
Vanadium	U		0.00070	0.0050	mg/L	1	9/28/2021 15:28
Zinc	U		0.0047	0.010	mg/L	1	9/28/2021 15:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW01-092621
Collection Date: 9/26/2021 11:15 PM

Work Order: 21092459
Lab ID: 21092459-01
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS		Method: **SW846 8270D**			Prep: SW3510 / 9/28/21		Analyst: **EEW**
1,1`-Biphenyl	U		0.42	1.0	µg/L	1	9/28/2021 16:06
1,2,4,5-Tetrachlorobenzene	U		0.34	5.0	µg/L	1	9/28/2021 16:06
1,4-Dioxane	U		0.72	5.0	µg/L	1	9/28/2021 16:06
2,2`-Oxybis(1-chloropropane)	U		0.23	1.0	µg/L	1	9/28/2021 16:06
2,3,4,6-Tetrachlorophenol	U		0.45	1.0	µg/L	1	9/28/2021 16:06
2,4,5-Trichlorophenol	U		0.17	1.0	µg/L	1	9/28/2021 16:06
2,4,6-Trichlorophenol	U		0.25	1.0	µg/L	1	9/28/2021 16:06
2,4-Dichlorophenol	U		0.35	1.0	µg/L	1	9/28/2021 16:06
2,4-Dimethylphenol	U		0.36	1.0	µg/L	1	9/28/2021 16:06
2,4-Dinitrophenol	U		2.6	5.0	µg/L	1	9/28/2021 16:06
2,4-Dinitrotoluene	U		0.42	1.0	µg/L	1	9/28/2021 16:06
2,6-Dinitrotoluene	U		0.33	1.0	µg/L	1	9/28/2021 16:06
2-Chloronaphthalene	U		0.075	0.10	µg/L	1	9/28/2021 16:06
2-Chlorophenol	U		0.23	1.0	µg/L	1	9/28/2021 16:06
2-Methylnaphthalene	U		0.065	0.10	µg/L	1	9/28/2021 16:06
2-Methylphenol	U		0.25	1.0	µg/L	1	9/28/2021 16:06
2-Nitroaniline	U		0.21	1.0	µg/L	1	9/28/2021 16:06
2-Nitrophenol	U		0.34	1.0	µg/L	1	9/28/2021 16:06
3&4-Methylphenol	**0.34**	J	**0.21**	**1.0**	**µg/L**	1	9/28/2021 16:06
3,3´-Dichlorobenzidine	U		0.46	5.0	µg/L	1	9/28/2021 16:06
3-Nitroaniline	U		0.64	1.0	µg/L	1	9/28/2021 16:06
4,6-Dinitro-2-methylphenol	U		0.27	1.0	µg/L	1	9/28/2021 16:06
4-Bromophenyl phenyl ether	U		0.33	1.0	µg/L	1	9/28/2021 16:06
4-Chloro-3-methylphenol	U		0.26	1.0	µg/L	1	9/28/2021 16:06
4-Chloroaniline	U		0.34	1.0	µg/L	1	9/28/2021 16:06
4-Chlorophenyl phenyl ether	U		0.31	1.0	µg/L	1	9/28/2021 16:06
4-Nitroaniline	**0.66**	J	**0.57**	**1.0**	**µg/L**	1	9/28/2021 16:06
4-Nitrophenol	U		0.24	5.0	µg/L	1	9/28/2021 16:06
Acenaphthene	U		0.081	0.10	µg/L	1	9/28/2021 16:06
Acenaphthylene	U		0.075	0.10	µg/L	1	9/28/2021 16:06
Acetophenone	U		0.37	1.0	µg/L	1	9/28/2021 16:06
Anthracene	U		0.028	0.10	µg/L	1	9/28/2021 16:06
Atrazine	U		0.35	1.0	µg/L	1	9/28/2021 16:06
Benzaldehyde	**0.87**	J	**0.52**	**1.0**	**µg/L**	1	9/28/2021 16:06
Benzo(a)anthracene	U		0.099	0.10	µg/L	1	9/28/2021 16:06
Benzo(a)pyrene	U		0.044	0.10	µg/L	1	9/28/2021 16:06
Benzo(b)fluoranthene	U		0.051	0.10	µg/L	1	9/28/2021 16:06
Benzo(g,h,i)perylene	U		0.089	0.10	µg/L	1	9/28/2021 16:06

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW01-092621
Collection Date: 9/26/2021 11:15 PM

Work Order: 21092459
Lab ID: 21092459-01
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(k)fluoranthene	U		0.048	0.10	µg/L	1	9/28/2021 16:06
Bis(2-chloroethoxy)methane	U		0.29	1.0	µg/L	1	9/28/2021 16:06
Bis(2-chloroethyl)ether	U		0.37	1.0	µg/L	1	9/28/2021 16:06
Bis(2-chloroisopropyl)ether	U		0.23	1.0	µg/L	1	9/28/2021 16:06
Bis(2-ethylhexyl)phthalate	U		0.40	1.0	µg/L	1	9/28/2021 16:06
Butyl benzyl phthalate	U		0.30	1.0	µg/L	1	9/28/2021 16:06
Caprolactam	U		0.96	5.0	µg/L	1	9/28/2021 16:06
Carbazole	U		0.24	1.0	µg/L	1	9/28/2021 16:06
Chrysene	U		0.048	0.10	µg/L	1	9/28/2021 16:06
Dibenzo(a,h)anthracene	U		0.073	0.10	µg/L	1	9/28/2021 16:06
Dibenzofuran	U		0.23	1.0	µg/L	1	9/28/2021 16:06
Diethyl phthalate	**1.0**		**0.17**	**1.0**	**µg/L**	1	9/28/2021 16:06
Dimethyl phthalate	U		0.18	1.0	µg/L	1	9/28/2021 16:06
Di-n-butyl phthalate	**0.24**	J	**0.21**	**1.0**	**µg/L**	1	9/28/2021 16:06
Di-n-octyl phthalate	U		0.53	1.0	µg/L	1	9/28/2021 16:06
Fluoranthene	U		0.038	0.10	µg/L	1	9/28/2021 16:06
Fluorene	U		0.051	0.10	µg/L	1	9/28/2021 16:06
Hexachlorobenzene	U		0.44	1.0	µg/L	1	9/28/2021 16:06
Hexachlorobutadiene	U		0.63	1.0	µg/L	1	9/28/2021 16:06
Hexachlorocyclopentadiene	U		1.1	5.0	µg/L	1	9/28/2021 16:06
Hexachloroethane	U		0.62	1.0	µg/L	1	9/28/2021 16:06
Indeno(1,2,3-cd)pyrene	U		0.067	0.10	µg/L	1	9/28/2021 16:06
Isophorone	U		0.34	5.0	µg/L	1	9/28/2021 16:06
Naphthalene	U		0.067	0.10	µg/L	1	9/28/2021 16:06
Nitrobenzene	U		0.26	1.0	µg/L	1	9/28/2021 16:06
N-Nitrosodi-n-propylamine	U		0.35	1.0	µg/L	1	9/28/2021 16:06
N-Nitrosodiphenylamine	U		0.49	1.0	µg/L	1	9/28/2021 16:06
Pentachlorophenol	U		0.97	5.0	µg/L	1	9/28/2021 16:06
Phenanthrene	U		0.081	0.10	µg/L	1	9/28/2021 16:06
Phenol	**0.65**	J	**0.21**	**1.0**	**µg/L**	1	9/28/2021 16:06
Pyrene	U		0.036	0.10	µg/L	1	9/28/2021 16:06
Surr: 2,4,6-Tribromophenol	*73.2*			*27-83*	*%REC*	1	9/28/2021 16:06
Surr: 2-Fluorobiphenyl	*51.9*			*26-79*	*%REC*	1	9/28/2021 16:06
Surr: 2-Fluorophenol	*32.4*			*13-56*	*%REC*	1	9/28/2021 16:06
Surr: 4-Terphenyl-d14	*77.2*			*43-106*	*%REC*	1	9/28/2021 16:06
Surr: Nitrobenzene-d5	*41.9*			*29-80*	*%REC*	1	9/28/2021 16:06
Surr: Phenol-d6	*22.8*			*10-35*	*%REC*	1	9/28/2021 16:06
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260C**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	9/27/2021 18:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW01-092621
Collection Date: 9/26/2021 11:15 PM

Work Order: 21092459
Lab ID: 21092459-01
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	9/27/2021 18:19
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	9/27/2021 18:19
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	9/27/2021 18:19
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	9/27/2021 18:19
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	9/27/2021 18:19
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	9/27/2021 18:19
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	9/27/2021 18:19
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	9/27/2021 18:19
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	9/27/2021 18:19
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	9/27/2021 18:19
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	9/27/2021 18:19
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	9/27/2021 18:19
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	9/27/2021 18:19
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	9/27/2021 18:19
2-Butanone	U		0.52	5.0	µg/L	1	9/27/2021 18:19
2-Hexanone	U		0.59	5.0	µg/L	1	9/27/2021 18:19
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	9/27/2021 18:19
Acetone	U		6.2	10	µg/L	1	9/27/2021 18:19
Benzene	U		0.46	1.0	µg/L	1	9/27/2021 18:19
Bromochloromethane	U		0.45	1.0	µg/L	1	9/27/2021 18:19
Bromodichloromethane	**2.2**		**0.49**	**1.0**	**µg/L**	1	9/27/2021 18:19
Bromoform	U		0.56	1.0	µg/L	1	9/27/2021 18:19
Bromomethane	U		0.90	1.0	µg/L	1	9/27/2021 18:19
Carbon disulfide	U		0.49	1.0	µg/L	1	9/27/2021 18:19
Carbon tetrachloride	U		0.40	1.0	µg/L	1	9/27/2021 18:19
Chlorobenzene	U		0.40	1.0	µg/L	1	9/27/2021 18:19
Chloroethane	U		0.68	1.0	µg/L	1	9/27/2021 18:19
Chloroform	**2.6**		**0.46**	**1.0**	**µg/L**	1	9/27/2021 18:19
Chloromethane	U		0.83	1.0	µg/L	1	9/27/2021 18:19
cis-1,2-Dichloroethene	U		0.42	1.0	µg/L	1	9/27/2021 18:19
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	9/27/2021 18:19
Cyclohexane	U		0.63	2.0	µg/L	1	9/27/2021 18:19
Dibromochloromethane	**1.3**		**0.40**	**1.0**	**µg/L**	1	9/27/2021 18:19
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	9/27/2021 18:19
Ethylbenzene	U		0.34	1.0	µg/L	1	9/27/2021 18:19
Isopropylbenzene	U		0.35	1.0	µg/L	1	9/27/2021 18:19
m,p-Xylene	U		0.81	2.0	µg/L	1	9/27/2021 18:19
Methyl acetate	U		0.59	2.0	µg/L	1	9/27/2021 18:19
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	9/27/2021 18:19
Methylcyclohexane	U		0.35	1.0	µg/L	1	9/27/2021 18:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW01-092621
Collection Date: 9/26/2021 11:15 PM

Work Order: 21092459
Lab ID: 21092459-01
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.86	5.0	µg/L	1	9/27/2021 18:19
o-Xylene	U		0.31	1.0	µg/L	1	9/27/2021 18:19
Styrene	U		0.33	1.0	µg/L	1	9/27/2021 18:19
Tetrachloroethene	U		0.39	1.0	µg/L	1	9/27/2021 18:19
Toluene	U		0.45	1.0	µg/L	1	9/27/2021 18:19
trans-1,2-Dichloroethene	U		0.48	1.0	µg/L	1	9/27/2021 18:19
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	9/27/2021 18:19
Trichloroethene	U		0.43	1.0	µg/L	1	9/27/2021 18:19
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	9/27/2021 18:19
Vinyl chloride	U		0.53	1.0	µg/L	1	9/27/2021 18:19
Xylenes, Total	U		0.81	3.0	µg/L	1	9/27/2021 18:19
Surr: 1,2-Dichloroethane-d4	*105*			*75-120*	*%REC*	1	9/27/2021 18:19
Surr: 4-Bromofluorobenzene	*102*			*80-110*	*%REC*	1	9/27/2021 18:19
Surr: Dibromofluoromethane	*103*			*85-115*	*%REC*	1	9/27/2021 18:19
Surr: Toluene-d8	*93.4*			*85-110*	*%REC*	1	9/27/2021 18:19
CYANIDE, TOTAL		Method: **SW9012B**			Prep: SW9012B / 9/27/21		Analyst: **JMT**
Cyanide, Total	U		0.0047	0.0050	mg/L	1	9/27/2021 15:31
CHROMIUM, HEXAVALENT		Method: **SW7196A**					Analyst: **JB**
Chromium, Hexavalent	U		0.0029	0.0050	mg/L	1	9/27/2021 14:00
PH (LABORATORY)		Method: **SW9040C**					Analyst: **KNC**
pH (laboratory)	**7.13**	H	**0.10**	**0.10**	**s.u.**	1	9/27/2021 14:08
Temperature	**21.8**	H	**0.10**	**0.10**	**°C**	1	9/27/2021 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Sep-21*

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW02-092721
Collection Date: 9/27/2021 08:31 AM

Work Order: 21092459
Lab ID: 21092459-02
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS		Method: **SW8082**			Prep: SW3511 / 9/28/21		Analyst: **RM**
Aroclor 1016	U		0.090	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1221	U		0.090	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1232	U		0.090	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1242	U		0.090	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1248	U		0.090	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1254	U		0.091	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1260	U		0.091	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1262	U		0.091	0.20	µg/L	1	9/28/2021 15:02
Aroclor 1268	U		0.091	0.20	µg/L	1	9/28/2021 15:02
PCBs, Total	U		0.090	0.20	µg/L	1	9/28/2021 15:02
Surr: Decachlorobiphenyl	*69.2*			*30-150*	*%REC*	1	9/28/2021 15:02
Surr: Tetrachloro-m-xylene	*79.4*			*50-150*	*%REC*	1	9/28/2021 15:02
MERCURY BY CVAA		Method: **SW7470A**			Prep: SW7470 / 9/28/21		Analyst: **MTW**
Mercury	U		0.00016	0.00020	mg/L	1	9/28/2021 14:46
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3015A / 9/28/21		Analyst: **STP**
Aluminum	**0.11**	B	**0.0080**	**0.010**	**mg/L**	1	9/28/2021 15:29
Antimony	U		0.0020	0.0050	mg/L	1	9/28/2021 15:29
Arsenic	**0.00093**	J	**0.00019**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Barium	**0.018**		**0.0020**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Beryllium	U		0.00013	0.0020	mg/L	1	9/28/2021 15:29
Cadmium	U		0.00015	0.0020	mg/L	1	9/28/2021 15:29
Calcium	**76**		**0.25**	**0.50**	**mg/L**	1	9/28/2021 15:29
Chromium	**0.0032**	J	**0.0012**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Cobalt	**0.00037**	J	**0.00013**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Copper	**0.0024**	J	**0.0020**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Iron	**3.6**		**0.050**	**0.080**	**mg/L**	1	9/28/2021 15:29
Lead	U		0.00072	0.0050	mg/L	1	9/28/2021 15:29
Magnesium	**14**		**0.050**	**0.20**	**mg/L**	1	9/28/2021 15:29
Manganese	**0.26**		**0.0025**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Nickel	**0.0033**	J	**0.00090**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Potassium	**1.8**		**0.096**	**0.20**	**mg/L**	1	9/28/2021 15:29
Selenium	U		0.00048	0.0050	mg/L	1	9/28/2021 15:29
Silver	U		0.00084	0.0050	mg/L	1	9/28/2021 15:29
Sodium	**70**		**0.18**	**0.20**	**mg/L**	1	9/28/2021 15:29
Thallium	U		0.00015	0.0050	mg/L	1	9/28/2021 15:29
Vanadium	**0.00081**	J	**0.00070**	**0.0050**	**mg/L**	1	9/28/2021 15:29
Zinc	U		0.0047	0.010	mg/L	1	9/28/2021 15:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW02-092721
Collection Date: 9/27/2021 08:31 AM

Work Order: 21092459
Lab ID: 21092459-02
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS		Method: **SW846 8270D**			Prep: SW3510 / 9/28/21		Analyst: **EEW**
1,1`-Biphenyl	U		0.42	1.0	µg/L	1	9/28/2021 16:30
1,2,4,5-Tetrachlorobenzene	U		0.34	5.0	µg/L	1	9/28/2021 16:30
1,4-Dioxane	U		0.72	5.0	µg/L	1	9/28/2021 16:30
2,2`-Oxybis(1-chloropropane)	U		0.23	1.0	µg/L	1	9/28/2021 16:30
2,3,4,6-Tetrachlorophenol	U		0.45	1.0	µg/L	1	9/28/2021 16:30
2,4,5-Trichlorophenol	U		0.17	1.0	µg/L	1	9/28/2021 16:30
2,4,6-Trichlorophenol	U		0.25	1.0	µg/L	1	9/28/2021 16:30
2,4-Dichlorophenol	U		0.35	1.0	µg/L	1	9/28/2021 16:30
2,4-Dimethylphenol	U		0.36	1.0	µg/L	1	9/28/2021 16:30
2,4-Dinitrophenol	U		2.6	5.0	µg/L	1	9/28/2021 16:30
2,4-Dinitrotoluene	U		0.42	1.0	µg/L	1	9/28/2021 16:30
2,6-Dinitrotoluene	U		0.33	1.0	µg/L	1	9/28/2021 16:30
2-Chloronaphthalene	U		0.075	0.10	µg/L	1	9/28/2021 16:30
2-Chlorophenol	U		0.23	1.0	µg/L	1	9/28/2021 16:30
2-Methylnaphthalene	U		0.065	0.10	µg/L	1	9/28/2021 16:30
2-Methylphenol	U		0.25	1.0	µg/L	1	9/28/2021 16:30
2-Nitroaniline	U		0.21	1.0	µg/L	1	9/28/2021 16:30
2-Nitrophenol	U		0.34	1.0	µg/L	1	9/28/2021 16:30
3&4-Methylphenol	**0.47**	J	**0.21**	**1.0**	**µg/L**	1	9/28/2021 16:30
3,3´-Dichlorobenzidine	U		0.46	5.0	µg/L	1	9/28/2021 16:30
3-Nitroaniline	U		0.64	1.0	µg/L	1	9/28/2021 16:30
4,6-Dinitro-2-methylphenol	U		0.27	1.0	µg/L	1	9/28/2021 16:30
4-Bromophenyl phenyl ether	U		0.33	1.0	µg/L	1	9/28/2021 16:30
4-Chloro-3-methylphenol	U		0.26	1.0	µg/L	1	9/28/2021 16:30
4-Chloroaniline	U		0.34	1.0	µg/L	1	9/28/2021 16:30
4-Chlorophenyl phenyl ether	U		0.31	1.0	µg/L	1	9/28/2021 16:30
4-Nitroaniline	U		0.57	1.0	µg/L	1	9/28/2021 16:30
4-Nitrophenol	U		0.24	5.0	µg/L	1	9/28/2021 16:30
Acenaphthene	U		0.081	0.10	µg/L	1	9/28/2021 16:30
Acenaphthylene	U		0.075	0.10	µg/L	1	9/28/2021 16:30
Acetophenone	U		0.37	1.0	µg/L	1	9/28/2021 16:30
Anthracene	U		0.028	0.10	µg/L	1	9/28/2021 16:30
Atrazine	U		0.35	1.0	µg/L	1	9/28/2021 16:30
Benzaldehyde	U		0.52	1.0	µg/L	1	9/28/2021 16:30
Benzo(a)anthracene	U		0.099	0.10	µg/L	1	9/28/2021 16:30
Benzo(a)pyrene	U		0.044	0.10	µg/L	1	9/28/2021 16:30
Benzo(b)fluoranthene	U		0.051	0.10	µg/L	1	9/28/2021 16:30
Benzo(g,h,i)perylene	U		0.089	0.10	µg/L	1	9/28/2021 16:30

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW02-092721
Collection Date: 9/27/2021 08:31 AM

Work Order: 21092459
Lab ID: 21092459-02
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(k)fluoranthene	U		0.048	0.10	µg/L	1	9/28/2021 16:30
Bis(2-chloroethoxy)methane	U		0.29	1.0	µg/L	1	9/28/2021 16:30
Bis(2-chloroethyl)ether	U		0.37	1.0	µg/L	1	9/28/2021 16:30
Bis(2-chloroisopropyl)ether	U		0.23	1.0	µg/L	1	9/28/2021 16:30
Bis(2-ethylhexyl)phthalate	U		0.40	1.0	µg/L	1	9/28/2021 16:30
Butyl benzyl phthalate	U		0.30	1.0	µg/L	1	9/28/2021 16:30
Caprolactam	U		0.96	5.0	µg/L	1	9/28/2021 16:30
Carbazole	U		0.24	1.0	µg/L	1	9/28/2021 16:30
Chrysene	U		0.048	0.10	µg/L	1	9/28/2021 16:30
Dibenzo(a,h)anthracene	U		0.073	0.10	µg/L	1	9/28/2021 16:30
Dibenzofuran	U		0.23	1.0	µg/L	1	9/28/2021 16:30
Diethyl phthalate	**3.9**		**0.17**	**1.0**	**µg/L**	1	9/28/2021 16:30
Dimethyl phthalate	U		0.18	1.0	µg/L	1	9/28/2021 16:30
Di-n-butyl phthalate	U		0.21	1.0	µg/L	1	9/28/2021 16:30
Di-n-octyl phthalate	U		0.53	1.0	µg/L	1	9/28/2021 16:30
Fluoranthene	U		0.038	0.10	µg/L	1	9/28/2021 16:30
Fluorene	U		0.051	0.10	µg/L	1	9/28/2021 16:30
Hexachlorobenzene	U		0.44	1.0	µg/L	1	9/28/2021 16:30
Hexachlorobutadiene	U		0.63	1.0	µg/L	1	9/28/2021 16:30
Hexachlorocyclopentadiene	U		1.1	5.0	µg/L	1	9/28/2021 16:30
Hexachloroethane	U		0.62	1.0	µg/L	1	9/28/2021 16:30
Indeno(1,2,3-cd)pyrene	U		0.067	0.10	µg/L	1	9/28/2021 16:30
Isophorone	U		0.34	5.0	µg/L	1	9/28/2021 16:30
Naphthalene	U		0.067	0.10	µg/L	1	9/28/2021 16:30
Nitrobenzene	U		0.26	1.0	µg/L	1	9/28/2021 16:30
N-Nitrosodi-n-propylamine	U		0.35	1.0	µg/L	1	9/28/2021 16:30
N-Nitrosodiphenylamine	U		0.49	1.0	µg/L	1	9/28/2021 16:30
Pentachlorophenol	U		0.97	5.0	µg/L	1	9/28/2021 16:30
Phenanthrene	U		0.081	0.10	µg/L	1	9/28/2021 16:30
Phenol	**0.57**	J	**0.21**	**1.0**	**µg/L**	1	9/28/2021 16:30
Pyrene	U		0.036	0.10	µg/L	1	9/28/2021 16:30
Surr: 2,4,6-Tribromophenol	*76.5*			*27-83*	*%REC*	1	9/28/2021 16:30
Surr: 2-Fluorobiphenyl	*55.8*			*26-79*	*%REC*	1	9/28/2021 16:30
Surr: 2-Fluorophenol	*32.6*			*13-56*	*%REC*	1	9/28/2021 16:30
Surr: 4-Terphenyl-d14	*73.6*			*43-106*	*%REC*	1	9/28/2021 16:30
Surr: Nitrobenzene-d5	*45.1*			*29-80*	*%REC*	1	9/28/2021 16:30
Surr: Phenol-d6	*23.0*			*10-35*	*%REC*	1	9/28/2021 16:30
VOLATILE ORGANIC COMPOUNDS		Method: **SW8260C**					Analyst: **HJ**
1,1,1-Trichloroethane	U		0.46	1.0	µg/L	1	9/27/2021 18:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW02-092721
Collection Date: 9/27/2021 08:31 AM

Work Order: 21092459
Lab ID: 21092459-02
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2,2-Tetrachloroethane	U		0.40	1.0	µg/L	1	9/27/2021 18:43
1,1,2-Trichloroethane	U		0.46	1.0	µg/L	1	9/27/2021 18:43
1,1,2-Trichlorotrifluoroethane	U		0.52	1.0	µg/L	1	9/27/2021 18:43
1,1-Dichloroethane	U		0.44	1.0	µg/L	1	9/27/2021 18:43
1,1-Dichloroethene	U		0.40	1.0	µg/L	1	9/27/2021 18:43
1,2,3-Trichlorobenzene	U		0.42	1.0	µg/L	1	9/27/2021 18:43
1,2,4-Trichlorobenzene	U		0.45	1.0	µg/L	1	9/27/2021 18:43
1,2-Dibromo-3-chloropropane	U		0.43	1.0	µg/L	1	9/27/2021 18:43
1,2-Dibromoethane	U		0.41	1.0	µg/L	1	9/27/2021 18:43
1,2-Dichlorobenzene	U		0.32	1.0	µg/L	1	9/27/2021 18:43
1,2-Dichloroethane	U		0.44	1.0	µg/L	1	9/27/2021 18:43
1,2-Dichloropropane	U		0.48	1.0	µg/L	1	9/27/2021 18:43
1,3-Dichlorobenzene	U		0.33	1.0	µg/L	1	9/27/2021 18:43
1,4-Dichlorobenzene	U		0.35	1.0	µg/L	1	9/27/2021 18:43
2-Butanone	U		0.52	5.0	µg/L	1	9/27/2021 18:43
2-Hexanone	U		0.59	5.0	µg/L	1	9/27/2021 18:43
4-Methyl-2-pentanone	U		0.52	1.0	µg/L	1	9/27/2021 18:43
Acetone	U		6.2	10	µg/L	1	9/27/2021 18:43
Benzene	U		0.46	1.0	µg/L	1	9/27/2021 18:43
Bromochloromethane	U		0.45	1.0	µg/L	1	9/27/2021 18:43
Bromodichloromethane	U		0.49	1.0	µg/L	1	9/27/2021 18:43
Bromoform	U		0.56	1.0	µg/L	1	9/27/2021 18:43
Bromomethane	U		0.90	1.0	µg/L	1	9/27/2021 18:43
Carbon disulfide	U		0.49	1.0	µg/L	1	9/27/2021 18:43
Carbon tetrachloride	U		0.40	1.0	µg/L	1	9/27/2021 18:43
Chlorobenzene	U		0.40	1.0	µg/L	1	9/27/2021 18:43
Chloroethane	U		0.68	1.0	µg/L	1	9/27/2021 18:43
Chloroform	**0.72**	J	**0.46**	**1.0**	**µg/L**	1	9/27/2021 18:43
Chloromethane	U		0.83	1.0	µg/L	1	9/27/2021 18:43
cis-1,2-Dichloroethene	U		0.42	1.0	µg/L	1	9/27/2021 18:43
cis-1,3-Dichloropropene	U		0.57	1.0	µg/L	1	9/27/2021 18:43
Cyclohexane	U		0.63	2.0	µg/L	1	9/27/2021 18:43
Dibromochloromethane	U		0.40	1.0	µg/L	1	9/27/2021 18:43
Dichlorodifluoromethane	U		0.68	1.0	µg/L	1	9/27/2021 18:43
Ethylbenzene	U		0.34	1.0	µg/L	1	9/27/2021 18:43
Isopropylbenzene	U		0.35	1.0	µg/L	1	9/27/2021 18:43
m,p-Xylene	U		0.81	2.0	µg/L	1	9/27/2021 18:43
Methyl acetate	U		0.59	2.0	µg/L	1	9/27/2021 18:43
Methyl tert-butyl ether	U		0.45	1.0	µg/L	1	9/27/2021 18:43
Methylcyclohexane	U		0.35	1.0	µg/L	1	9/27/2021 18:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Burns Harbor
Sample ID: BH-SW02-092721
Collection Date: 9/27/2021 08:31 AM

Work Order: 21092459
Lab ID: 21092459-02
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylene chloride	U		0.86	5.0	µg/L	1	9/27/2021 18:43
o-Xylene	U		0.31	1.0	µg/L	1	9/27/2021 18:43
Styrene	U		0.33	1.0	µg/L	1	9/27/2021 18:43
Tetrachloroethene	U		0.39	1.0	µg/L	1	9/27/2021 18:43
Toluene	U		0.45	1.0	µg/L	1	9/27/2021 18:43
trans-1,2-Dichloroethene	U		0.48	1.0	µg/L	1	9/27/2021 18:43
trans-1,3-Dichloropropene	U		0.38	1.0	µg/L	1	9/27/2021 18:43
Trichloroethene	U		0.43	1.0	µg/L	1	9/27/2021 18:43
Trichlorofluoromethane	U		0.52	1.0	µg/L	1	9/27/2021 18:43
Vinyl chloride	U		0.53	1.0	µg/L	1	9/27/2021 18:43
Xylenes, Total	U		0.81	3.0	µg/L	1	9/27/2021 18:43
Surr: 1,2-Dichloroethane-d4	*102*			*75-120*	*%REC*	1	9/27/2021 18:43
Surr: 4-Bromofluorobenzene	*104*			*80-110*	*%REC*	1	9/27/2021 18:43
Surr: Dibromofluoromethane	*103*			*85-115*	*%REC*	1	9/27/2021 18:43
Surr: Toluene-d8	*92.2*			*85-110*	*%REC*	1	9/27/2021 18:43
CYANIDE, TOTAL		Method:	**SW9012B**		Prep: SW9012B / 9/27/21		Analyst: **JMT**
Cyanide, Total	**0.0051**		**0.0047**	**0.0050**	**mg/L**	1	9/27/2021 15:31
CHROMIUM, HEXAVALENT		Method:	**SW7196A**				Analyst: **JB**
Chromium, Hexavalent	U		0.0029	0.0050	mg/L	1	9/27/2021 14:00
PH (LABORATORY)		Method:	**SW9040C**				Analyst: **KNC**
pH (laboratory)	**7.32**	H	**0.10**	**0.10**	**s.u.**	1	9/27/2021 14:08
Temperature	**21.6**	H	**0.10**	**0.10**	**°C**	1	9/27/2021 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **184502** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKW1-184502-184502** Units: **µg/L** Analysis Date: **9/28/2021 01:53 PM**

Client ID: Run ID: **GC14_210928A** SeqNo: **7792528** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	0.20								
Aroclor 1221	U	0.20								
Aroclor 1232	U	0.20								
Aroclor 1242	U	0.20								
Aroclor 1248	U	0.20								
Aroclor 1254	U	0.20								
Aroclor 1260	U	0.20								
Aroclor 1262	U	0.20								
Aroclor 1268	U	0.20								
PCBs, Total	U	0.20								
Surr: Decachlorobiphenyl	*0.344*	0	*0.516*	0	*66.7*	*30-150*	0			
Surr: Tetrachloro-m-xylene	*0.355*	0	*0.516*	0	*68.8*	*50-150*	0			

LCS Sample ID: **PLCSW1-184502-184502** Units: **µg/L** Analysis Date: **9/28/2021 02:20 PM**

Client ID: Run ID: **GC14_210928A** SeqNo: **7792530** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	3.898	0.20	4.17	0	93.5	50-150	0			
Aroclor 1260	3.97	0.20	4.17	0	95.2	50-150	0			
Surr: Decachlorobiphenyl	*0.2233*	0	*0.208*	0	*107*	*30-150*	0			
Surr: Tetrachloro-m-xylene	*0.1668*	0	*0.208*	0	*80.2*	*50-150*	0			

LCSD Sample ID: **PLCSDW1-184502-184502** Units: **µg/L** Analysis Date: **9/28/2021 02:34 PM**

Client ID: Run ID: **GC14_210928A** SeqNo: **7792531** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	3.715	0.20	4.17	0	89.1	50-150	3.898	4.81	50	
Aroclor 1260	3.966	0.20	4.17	0	95.1	50-150	3.97	0.0925	50	
Surr: Decachlorobiphenyl	*0.2078*	0	*0.208*	0	*99.9*	*30-150*	0.2233	*7.19*	*50*	
Surr: Tetrachloro-m-xylene	*0.1702*	0	*0.208*	0	*81.8*	*50-150*	0.1668	*1.98*	*50*	

The following samples were analyzed in this batch: 21092459-01E 21092459-02E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184484** Instrument ID **HG4** Method: **SW7470A**

MBLK Sample ID: **MBLK-184484-184484** Units: **mg/L** Analysis Date: **9/28/2021 02:41 PM**
Client ID: Run ID: **HG4_210928A** SeqNo: **7791342** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020								

LCS Sample ID: **LCS-184484-184484** Units: **mg/L** Analysis Date: **9/28/2021 02:43 PM**
Client ID: Run ID: **HG4_210928A** SeqNo: **7791343** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.002205	0.00020	0.002	0	110	80-120	0			

MS Sample ID: **21091786-10BMS** Units: **mg/L** Analysis Date: **9/28/2021 03:06 PM**
Client ID: Run ID: **HG4_210928A** SeqNo: **7793126** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.002205	0.00020	0.002	-0.0000345	112	75-125	0			

MSD Sample ID: **21091786-10BMSD** Units: **mg/L** Analysis Date: **9/28/2021 03:07 PM**
Client ID: Run ID: **HG4_210928A** SeqNo: **7793127** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00198	0.00020	0.002	-0.0000345	101	75-125	0.002205	10.8	20	

The following samples were analyzed in this batch: 21092459-01B 21092459-02B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184482** Instrument ID **ICPMS4** Method: **SW6020B**

MBLK	Sample ID: **MBLK-184482-184482**				Units: **mg/L**			Analysis Date: **9/28/2021 03:23 PM**		
Client ID:		Run ID: **ICPMS4_210928A**			SeqNo: **7791499**		Prep Date: **9/28/2021**		DF: **1**	

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.01438	0.010								
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Calcium	U	0.50								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.080								
Lead	U	0.0050								
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Sodium	U	0.20								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	U	0.010								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184482** Instrument ID **ICPMS4** Method: **SW6020B**

LCS	Sample ID: **LCS-184482-184482**				Units: **mg/L**			Analysis Date: **9/28/2021 03:26 PM**			
Client ID:		Run ID: **ICPMS4_210928A**			SeqNo: **7791501**			Prep Date: **9/28/2021**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1053	0.010	0.1	0	105	80-120	0			B
Antimony	0.09684	0.0050	0.1	0	96.8	80-120	0			
Arsenic	0.1027	0.0050	0.1	0	103	80-120	0			
Barium	0.09875	0.0050	0.1	0	98.8	80-120	0			
Beryllium	0.1001	0.0020	0.1	0	100	80-120	0			
Cadmium	0.09934	0.0020	0.1	0	99.3	80-120	0			
Calcium	10.02	0.50	10	0	100	80-120	0			
Chromium	0.1035	0.0050	0.1	0	104	80-120	0			
Cobalt	0.1041	0.0050	0.1	0	104	80-120	0			
Copper	0.1068	0.0050	0.1	0	107	80-120	0			
Iron	10.03	0.080	10	0	100	80-120	0			
Lead	0.09774	0.0050	0.1	0	97.7	80-120	0			
Magnesium	10.01	0.20	10	0	100	80-120	0			
Manganese	0.0981	0.0050	0.1	0	98.1	80-120	0			
Nickel	0.1038	0.0050	0.1	0	104	80-120	0			
Potassium	9.838	0.20	10	0	98.4	80-120	0			
Selenium	0.09969	0.0050	0.1	0	99.7	80-120	0			
Silver	0.0977	0.0050	0.1	0	97.7	80-120	0			
Sodium	10.11	0.20	10	0	101	80-120	0			
Thallium	0.09711	0.0050	0.1	0	97.1	80-120	0			
Vanadium	0.102	0.0050	0.1	0	102	80-120	0			
Zinc	0.1019	0.010	0.1	0	102	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184482** Instrument ID **ICPMS4** Method: **SW6020B**

MS Sample ID: **21092459-02BMS** Units: **mg/L** Analysis Date: **9/28/2021 03:31 PM**
Client ID: **BH-SW02-092721** Run ID: **ICPMS4_210928A** SeqNo: **7791504** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.246	0.010	0.1	0.1068	139	75-125	0			BS
Antimony	0.1003	0.0050	0.1	0.0002882	100	75-125	0			
Arsenic	0.1028	0.0050	0.1	0.0009262	102	75-125	0			
Barium	0.1163	0.0050	0.1	0.01751	98.8	75-125	0			
Beryllium	0.101	0.0020	0.1	0.0000099	101	75-125	0			
Cadmium	0.1007	0.0020	0.1	0.0000099	101	75-125	0			
Calcium	82.87	0.50	10	76.47	64	75-125	0			SO
Chromium	0.1053	0.0050	0.1	0.003187	102	75-125	0			
Cobalt	0.1024	0.0050	0.1	0.0003718	102	75-125	0			
Copper	0.1039	0.0050	0.1	0.002436	101	75-125	0			
Iron	13.59	0.080	10	3.622	99.7	75-125	0			
Lead	0.09949	0.0050	0.1	0.0001705	99.3	75-125	0			
Magnesium	23.49	0.20	10	13.98	95.1	75-125	0			
Manganese	0.3425	0.0050	0.1	0.2588	83.7	75-125	0			
Nickel	0.104	0.0050	0.1	0.003288	101	75-125	0			
Potassium	11.64	0.20	10	1.802	98.4	75-125	0			
Selenium	0.1014	0.0050	0.1	-0.0006875	102	75-125	0			
Silver	0.09694	0.0050	0.1	0.0000495	96.9	75-125	0			
Sodium	78.22	0.20	10	70.28	79.3	75-125	0			O
Thallium	0.09913	0.0050	0.1	0.0000176	99.1	75-125	0			
Vanadium	0.1035	0.0050	0.1	0.0008096	103	75-125	0			
Zinc	0.1063	0.010	0.1	0.003508	103	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184482** Instrument ID **ICPMS4** Method: **SW6020B**

MSD Sample ID: **21092459-02BMSD** Units: **mg/L** Analysis Date: **9/28/2021 03:33 PM**
Client ID: **BH-SW02-092721** Run ID: **ICPMS4_210928A** SeqNo: **7791505** Prep Date: **9/28/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2374	0.010	0.1	0.1068	131	75-125	0.246	3.54	20	BS
Antimony	0.09891	0.0050	0.1	0.0002882	98.6	75-125	0.1003	1.38	20	
Arsenic	0.1015	0.0050	0.1	0.0009262	101	75-125	0.1028	1.26	20	
Barium	0.1203	0.0050	0.1	0.01751	103	75-125	0.1163	3.37	20	
Beryllium	0.1034	0.0020	0.1	0.0000099	103	75-125	0.101	2.39	20	
Cadmium	0.1029	0.0020	0.1	0.0000099	103	75-125	0.1007	2.12	20	
Calcium	86.35	0.50	10	76.47	98.7	75-125	82.87	4.11	20	O
Chromium	0.1035	0.0050	0.1	0.003187	100	75-125	0.1053	1.71	20	
Cobalt	0.1001	0.0050	0.1	0.0003718	99.7	75-125	0.1024	2.34	20	
Copper	0.1029	0.0050	0.1	0.002436	100	75-125	0.1039	0.98	20	
Iron	13.34	0.080	10	3.622	97.2	75-125	13.59	1.83	20	
Lead	0.101	0.0050	0.1	0.0001705	101	75-125	0.09949	1.55	20	
Magnesium	23.45	0.20	10	13.98	94.7	75-125	23.49	0.169	20	
Manganese	0.3547	0.0050	0.1	0.2588	95.9	75-125	0.3425	3.51	20	
Nickel	0.1031	0.0050	0.1	0.003288	99.9	75-125	0.104	0.793	20	
Potassium	11.41	0.20	10	1.802	96.1	75-125	11.64	1.98	20	
Selenium	0.09793	0.0050	0.1	-0.0006875	98.6	75-125	0.1014	3.52	20	
Silver	0.09564	0.0050	0.1	0.0000495	95.6	75-125	0.09694	1.35	20	
Sodium	77.47	0.20	10	70.28	71.8	75-125	78.22	0.962	20	SO
Thallium	0.1009	0.0050	0.1	0.0000176	101	75-125	0.09913	1.77	20	
Vanadium	0.1021	0.0050	0.1	0.0008096	101	75-125	0.1035	1.45	20	
Zinc	0.1024	0.010	0.1	0.003508	98.9	75-125	0.1063	3.73	20	

The following samples were analyzed in this batch: 21092459-01B 21092459-02B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **184473** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK	Sample ID: **SBLKW1-184473-184473**			Units: **µg/L**		Analysis Date: **9/28/2021 05:27 PM**			
Client ID:	Run ID: **SVMS8_210928A**			SeqNo: **7794250**		Prep Date: **9/28/2021**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	U	5.0								
1,2,4,5-Tetrachlorobenzene	U	10								
1,4-Dioxane	U	5.0								
2,2`-Oxybis(1-chloropropane)	U	5.0								
2,3,4,6-Tetrachlorophenol	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	5.0								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	5.0								
2-Methylphenol	U	5.0								
2-Nitroaniline	U	5.0								
2-Nitrophenol	U	5.0								
3&4-Methylphenol	U	5.0								
3,3´-Dichlorobenzidine	U	5.0								
3-Nitroaniline	U	5.0								
4,6-Dinitro-2-methylphenol	U	5.0								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chloroaniline	U	5.0								
4-Chlorophenyl phenyl ether	U	5.0								
4-Nitroaniline	U	5.0								
4-Nitrophenol	U	5.0								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	1.0								
Anthracene	U	5.0								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	5.0								
Benzo(a)pyrene	U	5.0								
Benzo(b)fluoranthene	U	5.0								
Benzo(g,h,i)perylene	U	5.0								
Benzo(k)fluoranthene	U	5.0								
Bis(2-chloroethoxy)methane	U	5.0								
Bis(2-chloroethyl)ether	U	5.0								
Bis(2-chloroisopropyl)ether	U	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **184473** Instrument ID **SVMS8** Method: **SW846 8270D**

Bis(2-ethylhexyl)phthalate	U	5.0					
Butyl benzyl phthalate	U	5.0					
Caprolactam	U	10					
Carbazole	U	5.0					
Chrysene	U	5.0					
Dibenzo(a,h)anthracene	U	5.0					
Dibenzofuran	U	5.0					
Diethyl phthalate	U	5.0					
Dimethyl phthalate	U	5.0					
Di-n-butyl phthalate	U	5.0					
Di-n-octyl phthalate	U	5.0					
Fluoranthene	U	5.0					
Fluorene	U	5.0					
Hexachlorobenzene	U	5.0					
Hexachlorobutadiene	U	5.0					
Hexachlorocyclopentadiene	U	5.0					
Hexachloroethane	U	5.0					
Indeno(1,2,3-cd)pyrene	U	5.0					
Isophorone	U	5.0					
Naphthalene	U	5.0					
Nitrobenzene	U	5.0					
N-Nitrosodi-n-propylamine	U	5.0					
N-Nitrosodiphenylamine	U	5.0					
Pentachlorophenol	U	5.0					
Phenanthrene	U	5.0					
Phenol	U	5.0					
Pyrene	U	5.0					
Surr: 2,4,6-Tribromophenol	*32.05*	0	*50*	0	*64.1*	*27-83*	0
Surr: 2-Fluorobiphenyl	*32.66*	0	*50*	0	*65.3*	*26-79*	0
Surr: 2-Fluorophenol	*23.36*	0	*50*	0	*46.7*	*13-56*	0
Surr: 4-Terphenyl-d14	*36.55*	0	*50*	0	*73.1*	*43-106*	0
Surr: Nitrobenzene-d5	*31.76*	0	*50*	0	*63.5*	*29-80*	0
Surr: Phenol-d6	*14.53*	0	*50*	0	*29.1*	*10-35*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184473** Instrument ID **SVMS8** Method: **SW846 8270D**

LCS	Sample ID: **SLCSW1-184473-184473**				Units: **µg/L**			Analysis Date: **9/28/2021 05:48 PM**			
Client ID:		Run ID: **SVMS8_210928A**			SeqNo: **7794251**			Prep Date: **9/28/2021**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	12.24	5.0	20	0	61.2	40-85	0			
1,2,4,5-Tetrachlorobenzene	11.94	10	20	0	59.7	34-82	0			
2,2`-Oxybis(1-chloropropane)	11.22	5.0	20	0	56.1	33-83	0			
2,3,4,6-Tetrachlorophenol	12.3	5.0	20	0	61.5	43-104	0			
2,4,5-Trichlorophenol	12.98	5.0	20	0	64.9	47-84	0			
2,4,6-Trichlorophenol	12.52	5.0	20	0	62.6	45-83	0			
2,4-Dichlorophenol	11.69	5.0	20	0	58.4	39-84	0			
2,4-Dimethylphenol	12.29	5.0	20	0	61.4	34-79	0			
2,4-Dinitrophenol	4.93	5.0	20	0	24.6	11-117	0			J
2,4-Dinitrotoluene	12.11	5.0	20	0	60.6	54-93	0			
2,6-Dinitrotoluene	12.03	5.0	20	0	60.2	51-90	0			
2-Chloronaphthalene	11.82	5.0	20	0	59.1	37-84	0			
2-Chlorophenol	10.93	5.0	20	0	54.6	38-83	0			
2-Methylnaphthalene	11.34	5.0	20	0	56.7	33-85	0			
2-Methylphenol	10.71	5.0	20	0	53.6	29-76	0			
2-Nitroaniline	11.89	5.0	20	0	59.4	45-94	0			
2-Nitrophenol	10.96	5.0	20	0	54.8	41-84	0			
3&4-Methylphenol	10.06	5.0	20	0	50.3	24-70	0			
3,3´-Dichlorobenzidine	11.13	5.0	20	0	55.6	39-96	0			
3-Nitroaniline	13.51	5.0	20	0	67.6	50-93	0			
4,6-Dinitro-2-methylphenol	9.62	5.0	20	0	48.1	23-116	0			
4-Bromophenyl phenyl ether	12.98	5.0	20	0	64.9	51-93	0			
4-Chloro-3-methylphenol	12.75	5.0	20	0	63.8	41-86	0			
4-Chloroaniline	14.19	5.0	20	0	71	44-92	0			
4-Chlorophenyl phenyl ether	12.48	5.0	20	0	62.4	49-89	0			
4-Nitroaniline	12.32	5.0	20	0	61.6	47-98	0			
4-Nitrophenol	4.29	5.0	20	0	21.4	10-43	0			J
Acenaphthene	11.67	5.0	20	0	58.4	42-85	0			
Acenaphthylene	11.64	5.0	20	0	58.2	42-88	0			
Acetophenone	11.94	1.0	20	0	59.7	39-91	0			
Anthracene	12.71	5.0	20	0	63.6	55-93	0			
Atrazine	12.93	1.0	20	0	64.6	52-100	0			
Benzaldehyde	11.79	1.0	20	0	59	42-110	0			
Benzo(a)anthracene	12.82	5.0	20	0	64.1	56-91	0			
Benzo(a)pyrene	12.73	5.0	20	0	63.6	55-96	0			
Benzo(b)fluoranthene	12.02	5.0	20	0	60.1	55-99	0			
Benzo(g,h,i)perylene	13.17	5.0	20	0	65.8	44-102	0			
Benzo(k)fluoranthene	13.51	5.0	20	0	67.6	57-96	0			
Bis(2-chloroethoxy)methane	12.65	5.0	20	0	63.2	39-88	0			
Bis(2-chloroethyl)ether	11.37	5.0	20	0	56.8	36-91	0			
Bis(2-chloroisopropyl)ether	11.22	5.0	20	0	56.1	33-83	0			
Bis(2-ethylhexyl)phthalate	11.72	5.0	20	0	58.6	39-113	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **184473** Instrument ID **SVMS8** Method: **SW846 8270D**

Butyl benzyl phthalate	10.71	5.0	20	0	53.6	49-97	0
Carbazole	13.47	5.0	20	0	67.4	59-92	0
Chrysene	13.58	5.0	20	0	67.9	55-92	0
Dibenzo(a,h)anthracene	12.53	5.0	20	0	62.6	47-100	0
Dibenzofuran	12.44	5.0	20	0	62.2	44-89	0
Diethyl phthalate	12.92	5.0	20	0	64.6	54-95	0
Dimethyl phthalate	12.68	5.0	20	0	63.4	51-92	0
Di-n-butyl phthalate	13.54	5.0	20	0	67.7	57-98	0
Di-n-octyl phthalate	9.6	5.0	20	0	48	36-117	0
Fluoranthene	13.57	5.0	20	0	67.8	59-93	0
Fluorene	12.06	5.0	20	0	60.3	47-91	0
Hexachlorobenzene	12.85	5.0	20	0	64.2	53-89	0
Hexachlorobutadiene	11.62	5.0	20	0	58.1	11-83	0
Hexachlorocyclopentadiene	8.79	5.0	20	0	44	14-75	0
Hexachloroethane	11.18	5.0	20	0	55.9	10-85	0
Indeno(1,2,3-cd)pyrene	12.59	5.0	20	0	63	46-102	0
Isophorone	12.81	5.0	20	0	64	42-90	0
Naphthalene	11.32	5.0	20	0	56.6	26-78	0
Nitrobenzene	12.26	5.0	20	0	61.3	38-86	0
N-Nitrosodi-n-propylamine	12.2	5.0	20	0	61	39-95	0
N-Nitrosodiphenylamine	12.88	5.0	20	0	64.4	47-94	0
Pentachlorophenol	7.67	5.0	20	0	38.4	37-94	0
Phenanthrene	12.48	5.0	20	0	62.4	51-90	0
Phenol	5.62	5.0	20	0	28.1	10-40	0
Pyrene	12.05	5.0	20	0	60.2	48-98	0
Surr: 2,4,6-Tribromophenol	*35.22*	0	*50*	0	*70.4*	*27-83*	0
Surr: 2-Fluorobiphenyl	*30.14*	0	*50*	0	*60.3*	*26-79*	0
Surr: 2-Fluorophenol	*20.81*	0	*50*	0	*41.6*	*13-56*	0
Surr: 4-Terphenyl-d14	*34.38*	0	*50*	0	*68.8*	*43-106*	0
Surr: Nitrobenzene-d5	*30.32*	0	*50*	0	*60.6*	*29-80*	0
Surr: Phenol-d6	*13.53*	0	*50*	0	*27.1*	*10-35*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184473** Instrument ID **SVMS8** Method: **SW846 8270D**

LCSD	Sample ID: **SLCSDW1-184473-184473**				Units: **µg/L**			Analysis Date: **9/28/2021 06:10 PM**			
Client ID:		Run ID: **SVMS8_210928A**			SeqNo: **7794252**			Prep Date: **9/28/2021**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	13.03	5.0	20	0	65.2	40-85	12.24	6.25	30	
1,2,4,5-Tetrachlorobenzene	12.41	10	20	0	62	34-82	11.94	3.86	30	
2,2`-Oxybis(1-chloropropane)	11.6	5.0	20	0	58	33-83	11.22	3.33	30	
2,3,4,6-Tetrachlorophenol	13.15	5.0	20	0	65.8	43-104	12.3	6.68	30	
2,4,5-Trichlorophenol	13.51	5.0	20	0	67.6	47-84	12.98	4	30	
2,4,6-Trichlorophenol	12.93	5.0	20	0	64.6	45-83	12.52	3.22	30	
2,4-Dichlorophenol	12.41	5.0	20	0	62	39-84	11.69	5.98	30	
2,4-Dimethylphenol	12.71	5.0	20	0	63.6	34-79	12.29	3.36	30	
2,4-Dinitrophenol	6.08	5.0	20	0	30.4	11-117	4.93	20.9	30	
2,4-Dinitrotoluene	12.68	5.0	20	0	63.4	54-93	12.11	4.6	30	
2,6-Dinitrotoluene	12.76	5.0	20	0	63.8	51-90	12.03	5.89	30	
2-Chloronaphthalene	11.84	5.0	20	0	59.2	37-84	11.82	0.169	30	
2-Chlorophenol	11.58	5.0	20	0	57.9	38-83	10.93	5.78	30	
2-Methylnaphthalene	12	5.0	20	0	60	33-85	11.34	5.66	30	
2-Methylphenol	11.05	5.0	20	0	55.2	29-76	10.71	3.12	30	
2-Nitroaniline	12.62	5.0	20	0	63.1	45-94	11.89	5.96	30	
2-Nitrophenol	12.02	5.0	20	0	60.1	41-84	10.96	9.23	30	
3&4-Methylphenol	10.5	5.0	20	0	52.5	24-70	10.06	4.28	30	
3,3´-Dichlorobenzidine	10.86	5.0	20	0	54.3	39-96	11.13	2.46	30	
3-Nitroaniline	14.17	5.0	20	0	70.8	50-93	13.51	4.77	30	
4,6-Dinitro-2-methylphenol	10.91	5.0	20	0	54.6	23-116	9.62	12.6	30	
4-Bromophenyl phenyl ether	14.03	5.0	20	0	70.2	51-93	12.98	7.77	30	
4-Chloro-3-methylphenol	13.47	5.0	20	0	67.4	41-86	12.75	5.49	30	
4-Chloroaniline	14.66	5.0	20	0	73.3	44-92	14.19	3.26	30	
4-Chlorophenyl phenyl ether	13.18	5.0	20	0	65.9	49-89	12.48	5.46	30	
4-Nitroaniline	13.17	5.0	20	0	65.8	47-98	12.32	6.67	30	
4-Nitrophenol	4.36	5.0	20	0	21.8	10-43	4.29	0	30	J
Acenaphthene	12.31	5.0	20	0	61.6	42-85	11.67	5.34	30	
Acenaphthylene	12.39	5.0	20	0	62	42-88	11.64	6.24	30	
Acetophenone	12.64	1.0	20	0	63.2	39-91	11.94	5.7	30	
Anthracene	13.2	5.0	20	0	66	55-93	12.71	3.78	30	
Atrazine	13.35	1.0	20	0	66.8	52-100	12.93	3.2	30	
Benzaldehyde	12.22	1.0	20	0	61.1	42-110	11.79	3.58	30	
Benzo(a)anthracene	13.11	5.0	20	0	65.6	56-91	12.82	2.24	30	
Benzo(a)pyrene	12.8	5.0	20	0	64	55-96	12.73	0.548	30	
Benzo(b)fluoranthene	12.5	5.0	20	0	62.5	55-99	12.02	3.92	30	
Benzo(g,h,i)perylene	12.56	5.0	20	0	62.8	44-102	13.17	4.74	30	
Benzo(k)fluoranthene	13.63	5.0	20	0	68.2	57-96	13.51	0.884	30	
Bis(2-chloroethoxy)methane	13.17	5.0	20	0	65.8	39-88	12.65	4.03	30	
Bis(2-chloroethyl)ether	11.57	5.0	20	0	57.8	36-91	11.37	1.74	30	
Bis(2-chloroisopropyl)ether	11.6	5.0	20	0	58	33-83	11.22	3.33	30	
Bis(2-ethylhexyl)phthalate	12.31	5.0	20	0	61.6	39-113	11.72	4.91	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **184473** Instrument ID **SVMS8** Method: **SW846 8270D**

Butyl benzyl phthalate	11.7	5.0	20	0	58.5	49-97	10.71	8.84	30
Carbazole	13.62	5.0	20	0	68.1	59-92	13.47	1.11	30
Chrysene	13.59	5.0	20	0	68	55-92	13.58	0.0736	30
Dibenzo(a,h)anthracene	12	5.0	20	0	60	47-100	12.53	4.32	30
Dibenzofuran	13.02	5.0	20	0	65.1	44-89	12.44	4.56	30
Diethyl phthalate	13.31	5.0	20	0	66.6	54-95	12.92	2.97	30
Dimethyl phthalate	13.13	5.0	20	0	65.6	51-92	12.68	3.49	30
Di-n-butyl phthalate	13.83	5.0	20	0	69.2	57-98	13.54	2.12	30
Di-n-octyl phthalate	10.47	5.0	20	0	52.4	36-117	9.6	8.67	30
Fluoranthene	13.53	5.0	20	0	67.6	59-93	13.57	0.295	30
Fluorene	12.75	5.0	20	0	63.8	47-91	12.06	5.56	30
Hexachlorobenzene	13.76	5.0	20	0	68.8	53-89	12.85	6.84	30
Hexachlorobutadiene	11.7	5.0	20	0	58.5	11-83	11.62	0.686	30
Hexachlorocyclopentadiene	9.64	5.0	20	0	48.2	14-75	8.79	9.22	30
Hexachloroethane	11.19	5.0	20	0	56	10-85	11.18	0.0894	30
Indeno(1,2,3-cd)pyrene	12.26	5.0	20	0	61.3	46-102	12.59	2.66	30
Isophorone	13.56	5.0	20	0	67.8	42-90	12.81	5.69	30
Naphthalene	11.75	5.0	20	0	58.8	26-78	11.32	3.73	30
Nitrobenzene	12.72	5.0	20	0	63.6	38-86	12.26	3.68	30
N-Nitrosodi-n-propylamine	12.76	5.0	20	0	63.8	39-95	12.2	4.49	30
N-Nitrosodiphenylamine	13.77	5.0	20	0	68.8	47-94	12.88	6.68	30
Pentachlorophenol	9.07	5.0	20	0	45.4	37-94	7.67	16.7	30
Phenanthrene	13.23	5.0	20	0	66.2	51-90	12.48	5.83	30
Phenol	5.76	5.0	20	0	28.8	10-40	5.62	2.46	30
Pyrene	13.48	5.0	20	0	67.4	48-98	12.05	11.2	30
Surr: 2,4,6-Tribromophenol	*36*	0	*50*	0	*72*	*27-83*	35.22	*2.19*	*40*
Surr: 2-Fluorobiphenyl	*31.12*	0	*50*	0	*62.2*	*26-79*	30.14	*3.2*	*40*
Surr: 2-Fluorophenol	*21.06*	0	*50*	0	*42.1*	*13-56*	20.81	*1.19*	*40*
Surr: 4-Terphenyl-d14	*36.51*	0	*50*	0	*73*	*43-106*	34.38	*6.01*	*40*
Surr: Nitrobenzene-d5	*31.02*	0	*50*	0	*62*	*29-80*	30.32	*2.28*	*40*
Surr: Phenol-d6	*13.49*	0	*50*	0	*27*	*10-35*	13.53	*0.296*	*40*

The following samples were analyzed in this batch: 21092459-01F 21092459-02F

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

MBLK Sample ID: **12V-BLKW1-210927-R327651b** Units: **µg/L** Analysis Date: **9/27/2021 05:30 PM**

Client ID: Run ID: **VMS12_210927A** SeqNo: **7789146** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,3-Trichlorobenzene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	1.0								
1,3-Dichlorobenzene	U	1.0								
1,4-Dichlorobenzene	U	1.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	1.0								
Acetone	U	10								
Benzene	U	1.0								
Bromochloromethane	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	1.0								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	2.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
m,p-Xylene	U	2.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	1.0								
Methylcyclohexane	U	1.0								
Methylene chloride	U	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

o-Xylene	U	1.0					
Styrene	U	1.0					
Tetrachloroethene	U	1.0					
Toluene	U	1.0					
trans-1,2-Dichloroethene	U	1.0					
trans-1,3-Dichloropropene	U	1.0					
Trichloroethene	U	1.0					
Trichlorofluoromethane	U	1.0					
Vinyl chloride	U	1.0					
Xylenes, Total	U	3.0					
Surr: 1,2-Dichloroethane-d4	*20.82*	0	*20*	0	*104*	*75-120*	0
Surr: 4-Bromofluorobenzene	*20.28*	0	*20*	0	*101*	*80-110*	0
Surr: Dibromofluoromethane	*19.55*	0	*20*	0	*97.8*	*85-115*	0
Surr: Toluene-d8	*18.9*	0	*20*	0	*94.5*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

LCS	Sample ID: **12V-LCSW1-21097-R327651b**				Units: **µg/L**			Analysis Date: **9/27/2021 04:41 PM**			
Client ID:		Run ID: **VMS12_210927A**			SeqNo: **7789145**			Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21.03	1.0	20	0	105	75-130	0			
1,1,2,2-Tetrachloroethane	18.3	1.0	20	0	91.5	75-130	0			
1,1,2-Trichloroethane	18.39	1.0	20	0	92	75-125	0			
1,1-Dichloroethane	20.96	1.0	20	0	105	68-142	0			
1,1-Dichloroethene	19.75	1.0	20	0	98.8	70-145	0			
1,2,3-Trichlorobenzene	17.82	1.0	20	0	89.1	70-140	0			
1,2,4-Trichlorobenzene	17.57	1.0	20	0	87.8	70-135	0			
1,2-Dibromo-3-chloropropane	13.95	1.0	20	0	69.8	60-130	0			
1,2-Dibromoethane	19.58	1.0	20	0	97.9	67-155	0			
1,2-Dichlorobenzene	18.99	1.0	20	0	95	70-130	0			
1,2-Dichloroethane	21.28	1.0	20	0	106	78-125	0			
1,2-Dichloropropane	20.83	1.0	20	0	104	75-125	0			
1,3-Dichlorobenzene	19.77	1.0	20	0	98.8	75-130	0			
1,4-Dichlorobenzene	19.3	1.0	20	0	96.5	75-130	0			
2-Butanone	18.09	5.0	20	0	90.4	55-150	0			
2-Hexanone	17.91	5.0	20	0	89.6	60-135	0			
4-Methyl-2-pentanone	21.72	1.0	20	0	109	77-178	0			
Acetone	18.29	10	20	0	91.4	60-160	0			
Benzene	20.25	1.0	20	0	101	70-130	0			
Bromochloromethane	21.32	1.0	20	0	107	72-141	0			
Bromodichloromethane	22.44	1.0	20	0	112	75-125	0			
Bromoform	16.23	1.0	20	0	81.2	60-125	0			
Bromomethane	19.93	1.0	20	0	99.6	30-185	0			
Carbon disulfide	23.56	1.0	20	0	118	60-165	0			
Carbon tetrachloride	20.11	1.0	20	0	101	65-140	0			
Chlorobenzene	19.4	1.0	20	0	97	80-120	0			
Chloroethane	19.83	1.0	20	0	99.2	31-172	0			
Chloroform	21	1.0	20	0	105	66-135	0			
Chloromethane	21.77	1.0	20	0	109	46-148	0			
cis-1,2-Dichloroethene	21.38	1.0	20	0	107	75-134	0			
cis-1,3-Dichloropropene	19.38	1.0	20	0	96.9	70-130	0			
Dibromochloromethane	16.82	1.0	20	0	84.1	60-115	0			
Dichlorodifluoromethane	19.97	1.0	20	0	99.8	10-180	0			
Ethylbenzene	18.49	1.0	20	0	92.4	76-123	0			
Isopropylbenzene	18.63	1.0	20	0	93.2	80-127	0			
m,p-Xylene	38.36	2.0	40	0	95.9	75-130	0			
Methyl tert-butyl ether	19.64	1.0	20	0	98.2	68-129	0			
Methylene chloride	21.95	5.0	20	0	110	72-125	0			
o-Xylene	19.22	1.0	20	0	96.1	76-127	0			
Styrene	19.54	1.0	20	0	97.7	79-117	0			
Tetrachloroethene	19.54	1.0	20	0	97.7	68-166	0			
Toluene	19.14	1.0	20	0	95.7	76-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

trans-1,2-Dichloroethene	21.35	1.0	20	0	107	80-140	0
trans-1,3-Dichloropropene	16.96	1.0	20	0	84.8	56-132	0
Trichloroethene	19.27	1.0	20	0	96.4	77-125	0
Trichlorofluoromethane	19.3	1.0	20	0	96.5	60-140	0
Vinyl chloride	18.89	1.0	20	0	94.4	50-136	0
Xylenes, Total	57.58	3.0	60	0	96	76-127	0
Surr: 1,2-Dichloroethane-d4	*19.11*	0	*20*	0	*95.6*	*75-120*	0
Surr: 4-Bromofluorobenzene	*21.9*	0	*20*	0	*110*	*80-110*	0
Surr: Dibromofluoromethane	*19.93*	0	*20*	0	*99.6*	*85-115*	0
Surr: Toluene-d8	*19.03*	0	*20*	0	*95.2*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

MS Sample ID: **21091493-01A MS** Units: **µg/L** Analysis Date: **9/28/2021 01:56 AM**
Client ID: Run ID: **VMS12_210927A** SeqNo: **7789167** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	236	10	200	0	118	75-130	0			
1,1,2,2-Tetrachloroethane	160.8	10	200	0	80.4	75-130	0			
1,1,2-Trichloroethane	175.9	10	200	0	88	75-125	0			
1,1-Dichloroethane	242.7	10	200	0	121	68-142	0			
1,1-Dichloroethene	233.4	10	200	0	117	70-145	0			
1,2,3-Trichlorobenzene	133.8	10	200	0	66.9	70-140	0			S
1,2,4-Trichlorobenzene	142.7	10	200	0	71.4	70-135	0			
1,2-Dibromo-3-chloropropane	97.1	10	200	0	48.6	60-130	0			S
1,2-Dibromoethane	181.6	10	200	0	90.8	67-155	0			
1,2-Dichlorobenzene	184.1	10	200	0	92	70-130	0			
1,2-Dichloroethane	212.9	10	200	0	106	78-125	0			
1,2-Dichloropropane	227.8	10	200	0	114	75-125	0			
1,3-Dichlorobenzene	195	10	200	0	97.5	75-130	0			
1,4-Dichlorobenzene	192.4	10	200	0	96.2	75-130	0			
2-Butanone	175.7	50	200	0	87.8	55-150	0			
2-Hexanone	149.4	50	200	0	74.7	60-135	0			
4-Methyl-2-pentanone	183.7	10	200	0	91.8	77-178	0			
Acetone	1981	100	200	2069	-43.6	60-160	0			SEO
Benzene	223.1	10	200	0	112	70-130	0			
Bromochloromethane	231.9	10	200	0	116	72-141	0			
Bromodichloromethane	297.6	10	200	70.9	113	75-125	0			
Bromoform	888.8	10	200	799.6	44.6	60-125	0			S
Bromomethane	183.6	10	200	40.7	71.4	30-185	0			
Carbon disulfide	279.4	10	200	27.4	126	60-165	0			
Carbon tetrachloride	230.1	10	200	0	115	65-140	0			
Chlorobenzene	197.8	10	200	0	98.9	80-120	0			
Chloroethane	226.1	10	200	0	113	31-172	0			
Chloroform	284	10	200	48.2	118	66-135	0			
Chloromethane	253.9	10	200	9.6	122	46-148	0			
cis-1,2-Dichloroethene	231.7	10	200	0	116	75-134	0			
cis-1,3-Dichloropropene	183	10	200	0	91.5	70-130	0			
Dibromochloromethane	262.1	10	200	112.7	74.7	60-115	0			
Dichlorodifluoromethane	266.2	10	200	0	133	10-180	0			
Ethylbenzene	194	10	200	0	97	76-123	0			
Isopropylbenzene	193.9	10	200	0	97	80-127	0			
m,p-Xylene	401.8	20	400	3.2	99.6	75-130	0			
Methyl tert-butyl ether	198.6	10	200	0	99.3	68-129	0			
Methylene chloride	256	50	200	0	128	72-125	0			S
o-Xylene	199.4	10	200	0	99.7	76-127	0			
Styrene	187.3	10	200	0	93.6	79-117	0			
Tetrachloroethene	207.8	10	200	0	104	68-166	0			
Toluene	201.1	10	200	0	101	76-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

trans-1,2-Dichloroethene	239.8	10	200	0	120	80-140	0
trans-1,3-Dichloropropene	146.3	10	200	0	73.2	56-132	0
Trichloroethene	208.9	10	200	0	104	77-125	0
Trichlorofluoromethane	228	10	200	0	114	60-140	0
Vinyl chloride	233	10	200	0	116	50-136	0
Xylenes, Total	601.2	30	600	0	100	76-127	0
Surr: 1,2-Dichloroethane-d4	*195.3*	0	*200*	0	*97.6*	*75-120*	0
Surr: 4-Bromofluorobenzene	*214.3*	0	*200*	0	*107*	*80-110*	0
Surr: Dibromofluoromethane	*209.1*	0	*200*	0	*105*	*85-115*	0
Surr: Toluene-d8	*189.1*	0	*200*	0	*94.6*	*85-110*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

MSD Sample ID: **21091493-01A MSD** Units: **µg/L** Analysis Date: **9/28/2021 02:20 AM**

Client ID: Run ID: **VMS12_210927A** SeqNo: **7789168** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	238.2	10	200	0	119	75-130	236	0.928	30	
1,1,2,2-Tetrachloroethane	170.7	10	200	0	85.4	75-130	160.8	5.97	30	
1,1,2-Trichloroethane	180.3	10	200	0	90.2	75-125	175.9	2.47	30	
1,1-Dichloroethane	235.1	10	200	0	118	68-142	242.7	3.18	30	
1,1-Dichloroethene	224.5	10	200	0	112	70-145	233.4	3.89	30	
1,2,3-Trichlorobenzene	138.7	10	200	0	69.4	70-140	133.8	3.6	30	S
1,2,4-Trichlorobenzene	146.9	10	200	0	73.4	70-135	142.7	2.9	30	
1,2-Dibromo-3-chloropropane	105	10	200	0	52.5	60-130	97.1	7.82	30	S
1,2-Dibromoethane	191.1	10	200	0	95.6	67-155	181.6	5.1	30	
1,2-Dichlorobenzene	184.4	10	200	0	92.2	70-130	184.1	0.163	30	
1,2-Dichloroethane	217	10	200	0	108	78-125	212.9	1.91	30	
1,2-Dichloropropane	225.9	10	200	0	113	75-125	227.8	0.838	30	
1,3-Dichlorobenzene	201.5	10	200	0	101	75-130	195	3.28	30	
1,4-Dichlorobenzene	197.2	10	200	0	98.6	75-130	192.4	2.46	30	
2-Butanone	172.5	50	200	0	86.2	55-150	175.7	1.84	30	
2-Hexanone	161.6	50	200	0	80.8	60-135	149.4	7.85	30	
4-Methyl-2-pentanone	188.3	10	200	0	94.2	77-178	183.7	2.47	30	
Acetone	1990	100	200	2069	-39.2	60-160	1981	0.443	30	SEO
Benzene	221.1	10	200	0	111	70-130	223.1	0.9	30	
Bromochloromethane	231.5	10	200	0	116	72-141	231.9	0.173	30	
Bromodichloromethane	302.2	10	200	70.9	116	75-125	297.6	1.53	30	
Bromoform	949.2	10	200	799.6	74.8	60-125	888.8	6.57	30	
Bromomethane	213.5	10	200	40.7	86.4	30-185	183.6	15.1	30	
Carbon disulfide	278.4	10	200	27.4	126	60-165	279.4	0.359	30	
Carbon tetrachloride	228.1	10	200	0	114	65-140	230.1	0.873	30	
Chlorobenzene	202.2	10	200	0	101	80-120	197.8	2.2	30	
Chloroethane	230.9	10	200	0	115	31-172	226.1	2.1	30	
Chloroform	275.3	10	200	48.2	114	66-135	284	3.11	30	
Chloromethane	247.2	10	200	9.6	119	46-148	253.9	2.67	30	
cis-1,2-Dichloroethene	227.7	10	200	0	114	75-134	231.7	1.74	30	
cis-1,3-Dichloropropene	187.9	10	200	0	94	70-130	183	2.64	30	
Dibromochloromethane	277.2	10	200	112.7	82.2	60-115	262.1	5.6	30	
Dichlorodifluoromethane	255.8	10	200	0	128	10-180	266.2	3.98	30	
Ethylbenzene	198.2	10	200	0	99.1	76-123	194	2.14	30	
Isopropylbenzene	198.5	10	200	0	99.2	80-127	193.9	2.34	30	
m,p-Xylene	409.9	20	400	3.2	102	75-130	401.8	2	30	
Methyl tert-butyl ether	193.8	10	200	0	96.9	68-129	198.6	2.45	30	
Methylene chloride	249.9	50	200	0	125	72-125	256	2.41	30	
o-Xylene	204.3	10	200	0	102	76-127	199.4	2.43	30	
Styrene	193	10	200	0	96.5	79-117	187.3	3	30	
Tetrachloroethene	213.7	10	200	0	107	68-166	207.8	2.8	30	
Toluene	204.8	10	200	0	102	76-125	201.1	1.82	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R327651b** Instrument ID **VMS12** Method: **SW8260C**

trans-1,2-Dichloroethene	241.2	10	200	0	121	80-140	239.8	0.582	30
trans-1,3-Dichloropropene	157.1	10	200	0	78.6	56-132	146.3	7.12	30
Trichloroethene	210.3	10	200	0	105	77-125	208.9	0.668	30
Trichlorofluoromethane	229.8	10	200	0	115	60-140	228	0.786	30
Vinyl chloride	226.3	10	200	0	113	50-136	233	2.92	30
Xylenes, Total	614.2	30	600	0	102	76-127	601.2	2.14	30
Surr: 1,2-Dichloroethane-d4	*194.6*	0	*200*	0	*97.3*	*75-120*	195.3	*0.359*	*30*
Surr: 4-Bromofluorobenzene	*217.9*	0	*200*	0	*109*	*80-110*	214.3	*1.67*	*30*
Surr: Dibromofluoromethane	*200.2*	0	*200*	0	*100*	*85-115*	209.1	*4.35*	*30*
Surr: Toluene-d8	*190.4*	0	*200*	0	*95.2*	*85-110*	189.1	*0.685*	*30*

The following samples were analyzed in this batch: 21092459-01A 21092459-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **184430** Instrument ID **LACHAT2** Method: **SW9012B**

MBLK Sample ID: **MBLK-184430-184430** Units: **mg/L** Analysis Date: **9/27/2021 03:04 PM**
Client ID: Run ID: **LACHAT2_210927B** SeqNo: **7786451** Prep Date: **9/27/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	U	0.0050								

LCS Sample ID: **LCS-184430-184430** Units: **mg/L** Analysis Date: **9/27/2021 03:05 PM**
Client ID: Run ID: **LACHAT2_210927B** SeqNo: **7786452** Prep Date: **9/27/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.2589	0.0050	0.25	0	104	88-116	0			

MS Sample ID: **21092372-10D MS** Units: **mg/L** Analysis Date: **9/27/2021 03:19 PM**
Client ID: Run ID: **LACHAT2_210927B** SeqNo: **7786468** Prep Date: **9/27/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.2558	0.0050	0.25	0.002252	101	88-116	0			

MS Sample ID: **21092377-01C MS** Units: **mg/L** Analysis Date: **9/27/2021 03:22 PM**
Client ID: Run ID: **LACHAT2_210927B** SeqNo: **7786471** Prep Date: **9/27/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.264	0.0050	0.25	0.003002	104	88-116	0			

MSD Sample ID: **21092372-10D MSD** Units: **mg/L** Analysis Date: **9/27/2021 03:20 PM**
Client ID: Run ID: **LACHAT2_210927B** SeqNo: **7786469** Prep Date: **9/27/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.27	0.0050	0.25	0.002252	107	88-116	0.2558	5.4	12	

MSD Sample ID: **21092377-01C MSD** Units: **mg/L** Analysis Date: **9/27/2021 03:23 PM**
Client ID: Run ID: **LACHAT2_210927B** SeqNo: **7786472** Prep Date: **9/27/2021** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.2724	0.0050	0.25	0.003002	108	88-116	0.264	3.13	12	

The following samples were analyzed in this batch: 21092459-01D 21092459-02D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **R327617** Instrument ID **SPEC-03** Method: **A3500-Cr B-11**

MBLK Sample ID: **MB-R327617-R327617** Units: **mg/L** Analysis Date: **9/27/2021 02:00 PM**
Client ID: Run ID: **SPEC-03_210927A** SeqNo: **7785996** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	U	0.0050								

MBLK Sample ID: **MB-R327617-R327617** Units: **mg/L** Analysis Date: **9/27/2021 02:00 PM**
Client ID: Run ID: **SPEC-03_210927A** SeqNo: **7786012** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	U	0.0050								

LCS Sample ID: **LCS-R327617-R327617** Units: **mg/L** Analysis Date: **9/27/2021 02:00 PM**
Client ID: Run ID: **SPEC-03_210927A** SeqNo: **7785997** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.2007	0.0050	0.2	0	100	91-113	0			

LCS Sample ID: **LCS-R327617-R327617** Units: **mg/L** Analysis Date: **9/27/2021 02:00 PM**
Client ID: Run ID: **SPEC-03_210927A** SeqNo: **7786013** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.2007	0.0050	0.2	0	100	91-113	0			

MS Sample ID: **21092459-02C MS** Units: **mg/L** Analysis Date: **9/27/2021 02:00 PM**
Client ID: **BH-SW02-092721** Run ID: **SPEC-03_210927A** SeqNo: **7786016** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.2031	0.0050	0.2	-0.0018	102	91-113	0			

MSD Sample ID: **21092459-02C MSD** Units: **mg/L** Analysis Date: **9/27/2021 02:00 PM**
Client ID: **BH-SW02-092721** Run ID: **SPEC-03_210927A** SeqNo: **7786017** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.2092	0.0050	0.2	-0.0018	106	91-113	0.2031	2.96	10	

The following samples were analyzed in this batch: 21092459-01C 21092459-02C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 21092459
Project: Burns Harbor

QC BATCH REPORT

Batch ID: **R327656** Instrument ID **Titrator 1** Method: **SW9040C**

LCS Sample ID: **LCS-R327656-R327656** Units: **s.u.** Analysis Date: **9/27/2021 02:08 PM**
Client ID: Run ID: **TITRATOR 1_210927B** SeqNo: **7787639** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH (laboratory)	4.01	0.10	4	0	100	92-108	0			

DUP Sample ID: **21092459-01C DUP** Units: **s.u.** Analysis Date: **9/27/2021 02:08 PM**
Client ID: **BH-SW01-092621** Run ID: **TITRATOR 1_210927B** SeqNo: **7787641** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH (laboratory)	7.12	0.10	0	0	0	0-0	7.13	0.14	5	H
Temperature	21.61	0.10	0	0	0		21.83	1.01		H

The following samples were analyzed in this batch: 21092459-01C 21092459-02C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 223906

ALS Project Manager: | ALS Work Order #: 2109 2459

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	BURNS HARBOR	A	VOCs
Work Order		Project Number		B	TAL Metals (~~no Hg~~)
Company Name	Tetra Tech EM Inc	Bill To Company	Tetra Tech EM Inc	C	Hexavalent Chromium
Send Report To	Cordell Renner	Invoice Attn	Accounts Payable	D	pH
Address	1 South Wacker Dr Suite 3700	Address	1 South Wacker Dr Suite 3700	E	Cyanide
				F	PCB
City/State/Zip	Chicago, IL 60606	City/State/Zip	Chicago, IL 60606	G	SVOC
Phone	(312) 201-7411	Phone	(312) 201-7411	H	
Fax	(312) 938-0118	Fax	(312) 938-0118	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	~~BURNS HARBOR~~ BH-SW01-092621	9/26/21	2315	SURFACE WATER	2,1,8	9	X	X	X	X	X	X	X				
2	BH-SW02-092721	9/27/21	0831	SW	2,1,8	9	X	X	X	X	X	X	X				
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Lucas Stamps, Kelly Dvorak

Shipment Method: Courier

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ Other ☒ 24Hour

Results Due Date: ASAP

Relinquished by:	Date:	Time:	Received by:
	9/27/21	0945	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	9-27-21	1040	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Scribe EDD

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☒ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and condi
3. The Chain of Custody is a legal document. All information must be completed accurately.

mental.

COOLER TEMPS 09/27/2021
1.1 1.8 0.6 4.6 0.1 0.5 3.3

ALS Group, USA

Sample Receipt Checklist

Client Name: **TETRATECH-EM-CHI** Date/Time Received: **27-Sep-21 13:30**

Work Order: **21092459** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 27-Sep-21 (Date) Reviewed by: Chad Whelton (eSignature) 28-Sep-21 (Date)

Matrices: Surface Water
Carrier name: ALSHN

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.2/2.2 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	9/27/2021 1:46:49 PM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: