

ANALYTICAL REPORT

Preliminary Data

PREPARED FOR

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Generated 2/15/2023 5:06:52 PM

JOB DESCRIPTION

East Palestine

JOB NUMBER

240-180257-1

Eurofins Canton

Job Notes

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Authorization

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Preliminary Data

Definitions/Glossary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

Glossary

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

Case Narrative

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Job ID: 240-180257-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-180257-1

Comments

No additional comments.

Receipt

The samples were received on 2/10/2023 8:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 7.2° C and 9.7° C.

GC/MS VOA

Method 524.2: PW202-20230210 (240-180257-2): The sample (pH 6) was outside the method pH limit of 2. Data impact is unknown. The sample container indicated the sample was unpreserved. [Analytical Batch 810-47591]

Method 524.2: PW201-20230210 (240-180257-1), PW202-20230210 (240-180257-2), PW203-20230210 (240-180257-3), PW204-20230210 (240-180257-4), FB-20230210 (240-180257-5) and TB-20230210 (240-180257-6): The sample chromatogram was searched for isobutene (CAS #115-11-7) and (+/-)-2-ethylhexyl acrylate (CAS #103-11-7), which were observed to elute at 1.4 minutes and 16.05 minutes, respectively, in a spiked blank. 2-Butoxyethyl acetate (CAS #112-07-2) was not searched for by this method as it was not observed in the spiked blank. Isobutene and (+/-)-2-ethylhexyl acrylate were not observed in this sample. [Analytical Batch 810-47591]

Method 524.2: PW201-20230210 (240-180257-1): The sample (pH 6.0) was outside the method pH limit of 2. Data impact is unknown. The sample container indicated the sample was unpreserved. [Analytical Batch 810-47575]

Method 524.2: PW203-20230210 (240-180257-3): The sample (pH 6.0) was outside the method pH limit of 2. Data impact is unknown. The sample container indicated the sample was unpreserved. [Analytical Batch 810-47575]

Method 524.2: PW204-20230210 (240-180257-4): The sample (pH 6.0) was outside the method pH limit of 2. Data impact is unknown. The sample container indicated the sample was unpreserved. [Analytical Batch 810-47575]

Method 524.2: FB-20230210 (240-180257-5): The sample (pH 4.5) was outside the method pH limit of 2. Data impact is unknown. The sample container indicated the sample was unpreserved. [Analytical Batch 810-47575]

Method 524.2: (CCVIS 810-47883/3): The continuing calibration verification (CCVIS) associated with batch 810-47883 recovered above the upper control limit for tert-butyl alcohol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 524.2: PW202-20230210 (240-180257-2): The sample contained a large air bubble in its vial, while the EPA method requires that sample bottles should not have any trapped air bubbles when sealed. Results were reported as secondary results. The impact of this on the data is unknown. [Analytical Batch 810-47883]

Method 524.2: The continuing calibration verification (CCV) associated with batch 810-47876 recovered outside acceptance criteria, low biased, for Methyl iodide (67%). Methyl iodide was not detected in any of the associated field samples.

Method 524.2: PW202-20230210 (240-180257-2): The sample chromatogram was searched (+/-)-2-ethylhexyl acrylate (CAS #103-11-7), which were observed to elute at 16.05 minutes in a spiked blank. (+/-)-2-ethylhexyl acrylate was not observed in this sample. [Analytical Batch 810-47883]

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

GC/MS Semi VOA

Method 525.2: The laboratory control sample (LCS) for preparation batch 810-47583 and analytical batch 47668 recovered outside control limits (70-130%) for the following analytes: 2,6-Dinitrotoluene (66%) and 2,4-Dinitrotoluene (68%). These analytes recovered low due to unknown reasons. Data impact would be potentially low biased results for these analytes.

Case Narrative

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Job ID: 240-180257-1 (Continued)

Laboratory: Eurofins Canton (Continued)

(LCS 810-47583/2-A)

Method 525.2: The laboratory control sample (LCS) for preparation batch 810-47583 and analytical batch 810-47668 recovered outside control limits (70-130%) for the following analytes: Prometon (18%). Prometon is known to have low extraction recovery under acidic conditions per table 6B of our SOP. Neutral pH extraction is required. See EPA Method 525.2 Rev 2.0 Section 8.2.2.

(LCS 810-47583/2-A)

Method 525.2: The matrix spike (MS) recoveries for Prometon (18%) for preparation batch 810-47583 and analytical batch 810-47668 were outside control limits (70-130%). Prometon is known to have low extraction recovery under acidic conditions per table 6B of our SOP. Neutral pH extraction is required. See EPA Method 525.2 Rev 2.0 Section 8.2.2.

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

Organic Prep

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

Preliminary Data

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Method Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	EA SB
524.2 Ext	Volatile Organic Compounds (GC/MS)	EPA-DW	EA SB
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA SB
525.2	Extraction of Semivolatile Compounds	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Preliminary Data

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Sample Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-180257-1	PW201-20230210	Water	02/10/23 16:50	02/10/23 20:50
240-180257-2	PW202-20230210	Water	02/10/23 17:05	02/10/23 20:50
240-180257-3	PW203-20230210	Water	02/10/23 17:40	02/10/23 20:50
240-180257-4	PW204-20230210	Water	02/10/23 18:00	02/10/23 20:50
240-180257-5	FB-20230210	Water	02/10/23 16:25	02/10/23 20:50
240-180257-6	TB-20230210	Water	02/10/23 00:00	02/10/23 20:50

Preliminary Data

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Detection Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Di-n-butyl phthalate	0.79	J	2.0	0.071	ug/L	1		525.2	Total/NA

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	1.1		0.50	0.20	ug/L	1		524.2	Total/NA
Di-n-butyl phthalate	0.63	J	2.0	0.070	ug/L	1		525.2	Total/NA

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Di-n-butyl phthalate	0.11	J	2.0	0.070	ug/L	1		525.2	Total/NA

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

No Detections.

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	5.0	2.0	ug/L	1		524.2	Total/NA

Client Sample ID: TB-20230210

Lab Sample ID: 240-180257-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrahydrofuran	1.8	J	5.0	1.4	ug/L	1		524.2	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Date Collected: 02/10/23 16:50

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 Ext - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	10	5.0	ug/L			02/13/23 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	96		70 - 130					02/13/23 17:15	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					02/13/23 17:15	1
Toluene-d8 (Surr)	99		70 - 130					02/13/23 17:15	1
4-Bromofluorobenzene (Surr)	99		70 - 130					02/13/23 17:15	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/15/23 10:53	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Styrene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/13/23 12:15	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/15/23 10:53	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/13/23 12:15	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/15/23 10:53	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/15/23 10:53	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/15/23 10:53	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/15/23 10:53	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
Toluene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/13/23 12:15	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/15/23 10:53	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/15/23 10:53	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/15/23 10:53	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/13/23 12:15	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/15/23 10:53	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/13/23 12:15	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/13/23 12:15	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/13/23 12:15	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/15/23 10:53	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/15/23 10:53	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1

Eurofins Canton

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Date Collected: 02/10/23 16:50

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/15/23 10:53	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/15/23 10:53	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 12:15	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 10:53	1
Benzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/15/23 10:53	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/15/23 10:53	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/15/23 10:53	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/15/23 10:53	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/13/23 12:15	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/15/23 10:53	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 10:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/15/23 10:53	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/15/23 10:53	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/15/23 10:53	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 10:53	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/15/23 10:53	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/15/23 10:53	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/15/23 10:53	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/15/23 10:53	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 10:53	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/15/23 10:53	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/13/23 12:15	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Date Collected: 02/10/23 16:50

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	1.3	U	5.0	1.3	ug/L			02/15/23 10:53	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/13/23 12:15	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 12:15	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/13/23 12:15	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/15/23 10:53	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 12:15	1
Acetone	2.0	U	5.0	2.0	ug/L			02/15/23 10:53	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:53	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/15/23 10:53	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/15/23 10:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		02/13/23 12:15	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		02/15/23 10:53	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		02/15/23 10:53	1
Toluene-d8 (Surr)	93		70 - 130		02/13/23 12:15	1
Toluene-d8 (Surr)	98		70 - 130		02/15/23 10:53	1
Toluene-d8 (Surr)	100		70 - 130		02/15/23 10:53	1
4-Bromofluorobenzene (Surr)	89		70 - 130		02/13/23 12:15	1
4-Bromofluorobenzene (Surr)	88		70 - 130		02/15/23 10:53	1
4-Bromofluorobenzene (Surr)	105		70 - 130		02/15/23 10:53	1
1,2-Dichlorobenzene-d4 (Surr)	86		70 - 130		02/13/23 12:15	1
1,2-Dichlorobenzene-d4 (Surr)	85		70 - 130		02/15/23 10:53	1
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130		02/15/23 10:53	1

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U *	0.51	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Acenaphthylene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Alachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Aldrin	0.0082	U	0.10	0.0082	ug/L		02/13/23 08:25	02/13/23 23:15	1
Anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Atrazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
alpha-Chlordane	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Benzo[a]anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Benzo[a]pyrene	0.012	U	0.020	0.012	ug/L		02/13/23 08:25	02/13/23 23:15	1
Benzo[b]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Benzo[g,h,i]perylene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Benzo[k]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Bromacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Butachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Butylbenzylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Chrysene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Di(2-ethylhexyl)adipate	0.020	U	0.61	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Di (2-ethylhexyl)phthalate	0.10	U	0.61	0.10	ug/L		02/13/23 08:25	02/13/23 23:15	1
Di-n-butyl phthalate	0.79	J	2.0	0.071	ug/L		02/13/23 08:25	02/13/23 23:15	1
Diazinon	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/13/23 23:15	1
Dibenz(a,h)anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Dieldrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Date Collected: 02/10/23 16:50

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Dimethoate	0.030	U	0.51	0.030	ug/L		02/13/23 08:25	02/13/23 23:15	1
Dimethylphthalate	0.30	U	1.0	0.30	ug/L		02/13/23 08:25	02/13/23 23:15	1
Endrin	0.010	U	0.010	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Fluorene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
gamma-BHC (Lindane)	0.0085	U	0.020	0.0085	ug/L		02/13/23 08:25	02/13/23 23:15	1
Heptachlor	0.0044	U	0.040	0.0044	ug/L		02/13/23 08:25	02/13/23 23:15	1
Heptachlor epoxide	0.0040	U	0.020	0.0040	ug/L		02/13/23 08:25	02/13/23 23:15	1
Hexachlorobenzene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Hexachlorocyclopentadiene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Indeno[1,2,3-cd]pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Isophorone	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Methoxychlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Metolachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Metribuzin	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Molinate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Phenanthrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Propachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Simazine	0.030	U	0.071	0.030	ug/L		02/13/23 08:25	02/13/23 23:15	1
gamma-Chlordane	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Trifluralin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
trans-Nonachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Thiobencarb	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
1-Methylnaphthalene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
2-Methylnaphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
4,4'-DDD	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
4,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
4,4'-DDT	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Acenaphthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Chlorothalonil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Di-n-octyl phthalate	0.020	U	2.0	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
EPTC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Malathion	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Naphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Parathion	0.091	U	0.51	0.091	ug/L		02/13/23 08:25	02/13/23 23:15	1
Terbacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Endrin aldehyde	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/13/23 23:15	1
2,4'-DDD	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
2,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
2,4'-DDT	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
2,6-Dinitrotoluene	0.040	U *	0.10	0.040	ug/L		02/13/23 08:25	02/13/23 23:15	1
Acetochlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
alpha-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
beta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Chlorobenzilate	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/13/23 23:15	1
Chloroneb	0.071	U	0.10	0.071	ug/L		02/13/23 08:25	02/13/23 23:15	1
Chlorpyrifos	0.020	U	0.051	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Date Collected: 02/10/23 16:50

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Dichlorvos	0.010	U	0.051	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Endosulfan I	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/13/23 23:15	1
Endosulfan II	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/13/23 23:15	1
Endosulfan sulfate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
cis-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
trans-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Caffeine	0.020	U	0.051	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Pendimethalin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Terbutylazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Hexazinone	0.051	U	0.10	0.051	ug/L		02/13/23 08:25	02/13/23 23:15	1
Permethrin	0.020	U	0.20	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Chlordane (n.o.s.)	0.010	U	0.051	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Cyanazine	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Prometon	0.010	U *-	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Desethylatrazine	0.010	U	1.0	0.010	ug/L		02/13/23 08:25	02/13/23 23:15	1
Deisopropylatrazine	0.040	U	1.0	0.040	ug/L		02/13/23 08:25	02/13/23 23:15	1
Prometryn	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenylphosphate (Surr)	100		70 - 130				02/13/23 08:25	02/13/23 23:15	1
Perylene-d12 (Surr)	94		70 - 130				02/13/23 08:25	02/13/23 23:15	1
2-Nitro-m-xylene (Surr)	99		70 - 130				02/13/23 08:25	02/13/23 23:15	1

Preliminary Data

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Date Collected: 02/10/23 17:05

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 Ext - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	10	5.0	ug/L			02/13/23 17:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	100		70 - 130					02/13/23 17:40	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130					02/13/23 17:40	1
Toluene-d8 (Surr)	100		70 - 130					02/13/23 17:40	1
4-Bromofluorobenzene (Surr)	100		70 - 130					02/13/23 17:40	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/13/23 12:34	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Styrene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/15/23 09:34	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/13/23 12:34	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/15/23 09:34	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/13/23 12:34	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/13/23 12:34	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/13/23 12:34	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/13/23 12:34	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
Toluene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/15/23 09:34	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/13/23 12:34	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/13/23 12:34	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/13/23 12:34	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/15/23 09:34	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/13/23 12:34	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/15/23 09:34	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/15/23 09:34	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/15/23 09:34	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/13/23 12:34	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/13/23 12:34	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Date Collected: 02/10/23 17:05

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/13/23 12:34	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/13/23 12:34	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/15/23 09:34	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 12:34	1
Benzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/13/23 12:34	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/13/23 12:34	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/13/23 12:34	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/13/23 12:34	1
Carbon disulfide	1.1		0.50	0.20	ug/L			02/13/23 12:34	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/15/23 09:34	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/13/23 12:34	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 12:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/13/23 12:34	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/13/23 12:34	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/13/23 12:34	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 12:34	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/13/23 12:34	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/13/23 12:34	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/13/23 12:34	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/13/23 12:34	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 12:34	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/13/23 12:34	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/15/23 09:34	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Date Collected: 02/10/23 17:05

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	1.3	U	5.0	1.3	ug/L			02/13/23 12:34	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/15/23 09:34	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/15/23 09:34	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/15/23 09:34	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/13/23 12:34	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/15/23 09:34	1
Acetone	2.0	U	5.0	2.0	ug/L			02/13/23 12:34	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/13/23 12:34	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/13/23 12:34	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/13/23 12:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		02/13/23 12:34	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		02/13/23 12:34	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		02/15/23 09:34	1
Toluene-d8 (Surr)	98		70 - 130		02/13/23 12:34	1
Toluene-d8 (Surr)	99		70 - 130		02/13/23 12:34	1
Toluene-d8 (Surr)	96		70 - 130		02/15/23 09:34	1
4-Bromofluorobenzene (Surr)	88		70 - 130		02/13/23 12:34	1
4-Bromofluorobenzene (Surr)	104		70 - 130		02/13/23 12:34	1
4-Bromofluorobenzene (Surr)	91		70 - 130		02/15/23 09:34	1
1,2-Dichlorobenzene-d4 (Surr)	84		70 - 130		02/13/23 12:34	1
1,2-Dichlorobenzene-d4 (Surr)	99		70 - 130		02/13/23 12:34	1
1,2-Dichlorobenzene-d4 (Surr)	87		70 - 130		02/15/23 09:34	1

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U *	0.50	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Acenaphthylene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Alachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Aldrin	0.0081	U	0.10	0.0081	ug/L		02/13/23 08:25	02/13/23 23:40	1
Anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Atrazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
alpha-Chlordane	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Benzo[a]anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Benzo[a]pyrene	0.012	U	0.020	0.012	ug/L		02/13/23 08:25	02/13/23 23:40	1
Benzo[b]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Benzo[g,h,i]perylene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Benzo[k]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Bromacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Butachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Butylbenzylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Chrysene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Di(2-ethylhexyl)adipate	0.020	U	0.60	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Di (2-ethylhexyl)phthalate	0.10	U	0.60	0.10	ug/L		02/13/23 08:25	02/13/23 23:40	1
Di-n-butyl phthalate	0.63	J	2.0	0.070	ug/L		02/13/23 08:25	02/13/23 23:40	1
Diazinon	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/13/23 23:40	1
Dibenz(a,h)anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Dieldrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Date Collected: 02/10/23 17:05

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Dimethoate	0.030	U	0.50	0.030	ug/L		02/13/23 08:25	02/13/23 23:40	1
Dimethylphthalate	0.30	U	1.0	0.30	ug/L		02/13/23 08:25	02/13/23 23:40	1
Endrin	0.0099	U	0.010	0.0099	ug/L		02/13/23 08:25	02/13/23 23:40	1
Fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Fluorene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
gamma-BHC (Lindane)	0.0084	U	0.020	0.0084	ug/L		02/13/23 08:25	02/13/23 23:40	1
Heptachlor	0.0044	U	0.040	0.0044	ug/L		02/13/23 08:25	02/13/23 23:40	1
Heptachlor epoxide	0.0040	U	0.020	0.0040	ug/L		02/13/23 08:25	02/13/23 23:40	1
Hexachlorobenzene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Hexachlorocyclopentadiene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Indeno[1,2,3-cd]pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Isophorone	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Methoxychlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Metolachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Metribuzin	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Molinate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Phenanthrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Propachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Simazine	0.030	U	0.070	0.030	ug/L		02/13/23 08:25	02/13/23 23:40	1
gamma-Chlordane	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Trifluralin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
trans-Nonachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Thiobencarb	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
1-Methylnaphthalene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
2-Methylnaphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
4,4'-DDD	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
4,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
4,4'-DDT	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Acenaphthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Chlorothalonil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Di-n-octyl phthalate	0.020	U	2.0	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
EPTC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Malathion	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Naphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Parathion	0.090	U	0.50	0.090	ug/L		02/13/23 08:25	02/13/23 23:40	1
Terbacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Endrin aldehyde	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/13/23 23:40	1
2,4'-DDD	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
2,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
2,4'-DDT	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
2,6-Dinitrotoluene	0.040	U *	0.10	0.040	ug/L		02/13/23 08:25	02/13/23 23:40	1
Acetochlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
alpha-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
beta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Chlorobenzilate	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/13/23 23:40	1
Chloroneb	0.070	U	0.10	0.070	ug/L		02/13/23 08:25	02/13/23 23:40	1
Chlorpyrifos	0.020	U	0.050	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Date Collected: 02/10/23 17:05

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Dichlorvos	0.010	U	0.050	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Endosulfan I	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/13/23 23:40	1
Endosulfan II	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/13/23 23:40	1
Endosulfan sulfate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
cis-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
trans-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Caffeine	0.020	U	0.050	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Pendimethalin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Terbutylazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Hexazinone	0.050	U	0.10	0.050	ug/L		02/13/23 08:25	02/13/23 23:40	1
Permethrin	0.020	U	0.20	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Chlordane (n.o.s.)	0.010	U	0.050	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Cyanazine	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Prometon	0.010	U *-	0.10	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Desethylatrazine	0.010	U	1.0	0.010	ug/L		02/13/23 08:25	02/13/23 23:40	1
Deisopropylatrazine	0.040	U	1.0	0.040	ug/L		02/13/23 08:25	02/13/23 23:40	1
Prometryn	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/13/23 23:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenylphosphate (Surr)	105		70 - 130				02/13/23 08:25	02/13/23 23:40	1
Perylene-d12 (Surr)	95		70 - 130				02/13/23 08:25	02/13/23 23:40	1
2-Nitro-m-xylene (Surr)	100		70 - 130				02/13/23 08:25	02/13/23 23:40	1

Preliminary Data

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Date Collected: 02/10/23 17:40

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 Ext - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	10	5.0	ug/L			02/13/23 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	97		70 - 130					02/13/23 18:04	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130					02/13/23 18:04	1
Toluene-d8 (Surr)	101		70 - 130					02/13/23 18:04	1
4-Bromofluorobenzene (Surr)	100		70 - 130					02/13/23 18:04	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/15/23 11:19	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Styrene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/13/23 13:03	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/15/23 11:19	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/13/23 13:03	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/15/23 11:19	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/15/23 11:19	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/15/23 11:19	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/15/23 11:19	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
Toluene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/13/23 13:03	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/15/23 11:19	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/15/23 11:19	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/15/23 11:19	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/13/23 13:03	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/15/23 11:19	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/13/23 13:03	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/13/23 13:03	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/13/23 13:03	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/15/23 11:19	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/15/23 11:19	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Date Collected: 02/10/23 17:40

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/15/23 11:19	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/15/23 11:19	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 13:03	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 11:19	1
Benzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/15/23 11:19	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/15/23 11:19	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/15/23 11:19	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/15/23 11:19	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/13/23 13:03	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/15/23 11:19	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 11:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/15/23 11:19	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/15/23 11:19	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/15/23 11:19	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 11:19	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/15/23 11:19	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/15/23 11:19	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/15/23 11:19	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/15/23 11:19	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 11:19	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/15/23 11:19	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/13/23 13:03	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Date Collected: 02/10/23 17:40

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	1.3	U	5.0	1.3	ug/L			02/15/23 11:19	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/13/23 13:03	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 13:03	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/13/23 13:03	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/15/23 11:19	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 13:03	1
Acetone	2.0	U	5.0	2.0	ug/L			02/15/23 11:19	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:19	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/15/23 11:19	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/15/23 11:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		02/13/23 13:03	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 130		02/15/23 11:19	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 130		02/15/23 11:19	1
Toluene-d8 (Surr)	93		70 - 130		02/13/23 13:03	1
Toluene-d8 (Surr)	99		70 - 130		02/15/23 11:19	1
Toluene-d8 (Surr)	98		70 - 130		02/15/23 11:19	1
4-Bromofluorobenzene (Surr)	89		70 - 130		02/13/23 13:03	1
4-Bromofluorobenzene (Surr)	88		70 - 130		02/15/23 11:19	1
4-Bromofluorobenzene (Surr)	104		70 - 130		02/15/23 11:19	1
1,2-Dichlorobenzene-d4 (Surr)	87		70 - 130		02/13/23 13:03	1
1,2-Dichlorobenzene-d4 (Surr)	86		70 - 130		02/15/23 11:19	1
1,2-Dichlorobenzene-d4 (Surr)	102		70 - 130		02/15/23 11:19	1

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U *	0.50	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Acenaphthylene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Alachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Aldrin	0.0081	U	0.10	0.0081	ug/L		02/13/23 08:25	02/14/23 00:05	1
Anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Atrazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
alpha-Chlordane	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Benzo[a]anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Benzo[a]pyrene	0.012	U	0.020	0.012	ug/L		02/13/23 08:25	02/14/23 00:05	1
Benzo[b]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Benzo[g,h,i]perylene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Benzo[k]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Bromacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Butachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Butylbenzylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Chrysene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Di(2-ethylhexyl)adipate	0.020	U	0.60	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Di (2-ethylhexyl)phthalate	0.10	U	0.60	0.10	ug/L		02/13/23 08:25	02/14/23 00:05	1
Di-n-butyl phthalate	0.11	J	2.0	0.070	ug/L		02/13/23 08:25	02/14/23 00:05	1
Diazinon	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 00:05	1
Dibenz(a,h)anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Dieldrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Date Collected: 02/10/23 17:40

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Dimethoate	0.030	U	0.50	0.030	ug/L		02/13/23 08:25	02/14/23 00:05	1
Dimethylphthalate	0.30	U	1.0	0.30	ug/L		02/13/23 08:25	02/14/23 00:05	1
Endrin	0.0099	U	0.010	0.0099	ug/L		02/13/23 08:25	02/14/23 00:05	1
Fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Fluorene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
gamma-BHC (Lindane)	0.0084	U	0.020	0.0084	ug/L		02/13/23 08:25	02/14/23 00:05	1
Heptachlor	0.0044	U	0.040	0.0044	ug/L		02/13/23 08:25	02/14/23 00:05	1
Heptachlor epoxide	0.0040	U	0.020	0.0040	ug/L		02/13/23 08:25	02/14/23 00:05	1
Hexachlorobenzene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Hexachlorocyclopentadiene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Indeno[1,2,3-cd]pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Isophorone	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Methoxychlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Metolachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Metribuzin	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Molinate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Phenanthrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Propachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Simazine	0.030	U	0.070	0.030	ug/L		02/13/23 08:25	02/14/23 00:05	1
gamma-Chlordane	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Trifluralin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
trans-Nonachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Thiobencarb	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
1-Methylnaphthalene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
2-Methylnaphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
4,4'-DDD	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
4,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
4,4'-DDT	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Acenaphthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Chlorothalonil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Di-n-octyl phthalate	0.020	U	2.0	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
EPTC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Malathion	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Naphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Parathion	0.090	U	0.50	0.090	ug/L		02/13/23 08:25	02/14/23 00:05	1
Terbacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Endrin aldehyde	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 00:05	1
2,4'-DDD	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
2,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
2,4'-DDT	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
2,6-Dinitrotoluene	0.040	U *	0.10	0.040	ug/L		02/13/23 08:25	02/14/23 00:05	1
Acetochlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
alpha-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
beta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Chlorobenzilate	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 00:05	1
Chloroneb	0.070	U	0.10	0.070	ug/L		02/13/23 08:25	02/14/23 00:05	1
Chlorpyrifos	0.020	U	0.050	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1

Eurofins Canton

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Date Collected: 02/10/23 17:40

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Dichlorvos	0.010	U	0.050	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Endosulfan I	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/14/23 00:05	1
Endosulfan II	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/14/23 00:05	1
Endosulfan sulfate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
cis-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
trans-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Caffeine	0.020	U	0.050	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Pendimethalin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Terbutylazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Hexazinone	0.050	U	0.10	0.050	ug/L		02/13/23 08:25	02/14/23 00:05	1
Permethrin	0.020	U	0.20	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Chlordane (n.o.s.)	0.010	U	0.050	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Cyanazine	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Prometon	0.010	U *- F1	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Desethylatrazine	0.010	U	1.0	0.010	ug/L		02/13/23 08:25	02/14/23 00:05	1
Deisopropylatrazine	0.040	U	1.0	0.040	ug/L		02/13/23 08:25	02/14/23 00:05	1
Prometryn	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenylphosphate (Surr)	106		70 - 130				02/13/23 08:25	02/14/23 00:05	1
Perylene-d12 (Surr)	95		70 - 130				02/13/23 08:25	02/14/23 00:05	1
2-Nitro-m-xylene (Surr)	94		70 - 130				02/13/23 08:25	02/14/23 00:05	1

Preliminary Data

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

Date Collected: 02/10/23 18:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 Ext - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	10	5.0	ug/L			02/13/23 18:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130					02/13/23 18:28	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130					02/13/23 18:28	1
Toluene-d8 (Surr)	99		70 - 130					02/13/23 18:28	1
4-Bromofluorobenzene (Surr)	98		70 - 130					02/13/23 18:28	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/15/23 11:44	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Styrene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/13/23 13:26	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/15/23 11:44	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/13/23 13:26	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/15/23 11:44	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/15/23 11:44	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/15/23 11:44	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/15/23 11:44	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
Toluene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/13/23 13:26	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/15/23 11:44	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/15/23 11:44	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/15/23 11:44	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/13/23 13:26	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/15/23 11:44	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/13/23 13:26	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/13/23 13:26	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/13/23 13:26	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/15/23 11:44	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/15/23 11:44	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

Date Collected: 02/10/23 18:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/15/23 11:44	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/15/23 11:44	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 13:26	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 11:44	1
Benzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/15/23 11:44	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/15/23 11:44	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/15/23 11:44	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/15/23 11:44	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/13/23 13:26	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/15/23 11:44	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 11:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/15/23 11:44	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/15/23 11:44	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/15/23 11:44	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 11:44	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/15/23 11:44	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/15/23 11:44	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/15/23 11:44	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/15/23 11:44	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 11:44	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/15/23 11:44	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/13/23 13:26	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

Date Collected: 02/10/23 18:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	1.3	U	5.0	1.3	ug/L			02/15/23 11:44	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/13/23 13:26	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 13:26	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/13/23 13:26	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/15/23 11:44	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 13:26	1
Acetone	2.0	U	5.0	2.0	ug/L			02/15/23 11:44	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/15/23 11:44	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/15/23 11:44	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/15/23 11:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		02/13/23 13:26	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 130		02/15/23 11:44	1
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		02/15/23 11:44	1
Toluene-d8 (Surr)	95		70 - 130		02/13/23 13:26	1
Toluene-d8 (Surr)	99		70 - 130		02/15/23 11:44	1
Toluene-d8 (Surr)	100		70 - 130		02/15/23 11:44	1
4-Bromofluorobenzene (Surr)	88		70 - 130		02/13/23 13:26	1
4-Bromofluorobenzene (Surr)	84		70 - 130		02/15/23 11:44	1
4-Bromofluorobenzene (Surr)	98		70 - 130		02/15/23 11:44	1
1,2-Dichlorobenzene-d4 (Surr)	90		70 - 130		02/13/23 13:26	1
1,2-Dichlorobenzene-d4 (Surr)	82		70 - 130		02/15/23 11:44	1
1,2-Dichlorobenzene-d4 (Surr)	96		70 - 130		02/15/23 11:44	1

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U *	0.51	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Acenaphthylene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Alachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Aldrin	0.0082	U	0.10	0.0082	ug/L		02/13/23 08:25	02/14/23 00:55	1
Anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Atrazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
alpha-Chlordane	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Benzo[a]anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Benzo[a]pyrene	0.012	U	0.020	0.012	ug/L		02/13/23 08:25	02/14/23 00:55	1
Benzo[b]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Benzo[g,h,i]perylene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Benzo[k]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Bromacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Butachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Butylbenzylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Chrysene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Di(2-ethylhexyl)adipate	0.020	U	0.61	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Di (2-ethylhexyl)phthalate	0.10	U	0.61	0.10	ug/L		02/13/23 08:25	02/14/23 00:55	1
Di-n-butyl phthalate	0.071	U	2.0	0.071	ug/L		02/13/23 08:25	02/14/23 00:55	1
Diazinon	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 00:55	1
Dibenz(a,h)anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Dieldrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

Date Collected: 02/10/23 18:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Dimethoate	0.030	U	0.51	0.030	ug/L		02/13/23 08:25	02/14/23 00:55	1
Dimethylphthalate	0.30	U	1.0	0.30	ug/L		02/13/23 08:25	02/14/23 00:55	1
Endrin	0.010	U	0.010	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Fluorene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
gamma-BHC (Lindane)	0.0085	U	0.020	0.0085	ug/L		02/13/23 08:25	02/14/23 00:55	1
Heptachlor	0.0045	U	0.041	0.0045	ug/L		02/13/23 08:25	02/14/23 00:55	1
Heptachlor epoxide	0.0041	U	0.020	0.0041	ug/L		02/13/23 08:25	02/14/23 00:55	1
Hexachlorobenzene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Hexachlorocyclopentadiene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Indeno[1,2,3-cd]pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Isophorone	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Methoxychlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Metolachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Metribuzin	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Molinate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Phenanthrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Propachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Simazine	0.030	U	0.071	0.030	ug/L		02/13/23 08:25	02/14/23 00:55	1
gamma-Chlordane	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Trifluralin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
trans-Nonachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Thiobencarb	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
1-Methylnaphthalene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
2-Methylnaphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
4,4'-DDD	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
4,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
4,4'-DDT	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Acenaphthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Chlorothalonil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Di-n-octyl phthalate	0.020	U	2.0	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
EPTC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Malathion	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Naphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Parathion	0.091	U	0.51	0.091	ug/L		02/13/23 08:25	02/14/23 00:55	1
Terbacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Endrin aldehyde	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 00:55	1
2,4'-DDD	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
2,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
2,4'-DDT	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
2,6-Dinitrotoluene	0.041	U *	0.10	0.041	ug/L		02/13/23 08:25	02/14/23 00:55	1
Acetochlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
alpha-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
beta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Chlorobenzilate	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 00:55	1
Chloroneb	0.071	U	0.10	0.071	ug/L		02/13/23 08:25	02/14/23 00:55	1
Chlorpyrifos	0.020	U	0.051	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

Date Collected: 02/10/23 18:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Dichlorvos	0.010	U	0.051	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Endosulfan I	0.041	U	0.10	0.041	ug/L		02/13/23 08:25	02/14/23 00:55	1
Endosulfan II	0.041	U	0.10	0.041	ug/L		02/13/23 08:25	02/14/23 00:55	1
Endosulfan sulfate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
cis-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
trans-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Caffeine	0.020	U	0.051	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Pendimethalin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Terbutylazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Hexazinone	0.051	U	0.10	0.051	ug/L		02/13/23 08:25	02/14/23 00:55	1
Permethrin	0.020	U	0.20	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Chlordane (n.o.s.)	0.010	U	0.051	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Cyanazine	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Prometon	0.010	U *-	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Desethylatrazine	0.010	U	1.0	0.010	ug/L		02/13/23 08:25	02/14/23 00:55	1
Deisopropylatrazine	0.041	U	1.0	0.041	ug/L		02/13/23 08:25	02/14/23 00:55	1
Prometryn	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenylphosphate (Surr)	99		70 - 130				02/13/23 08:25	02/14/23 00:55	1
Perylene-d12 (Surr)	94		70 - 130				02/13/23 08:25	02/14/23 00:55	1
2-Nitro-m-xylene (Surr)	95		70 - 130				02/13/23 08:25	02/14/23 00:55	1

Preliminary Data

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Date Collected: 02/10/23 16:25

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 Ext - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	5.0	U	10	5.0	ug/L			02/13/23 18:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	103		70 - 130					02/13/23 18:52	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130					02/13/23 18:52	1
Toluene-d8 (Surr)	100		70 - 130					02/13/23 18:52	1
4-Bromofluorobenzene (Surr)	100		70 - 130					02/13/23 18:52	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/13/23 13:49	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Styrene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/13/23 13:50	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/13/23 13:49	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/13/23 13:50	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/13/23 13:49	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/13/23 13:49	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/13/23 13:49	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/13/23 13:49	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
Toluene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/13/23 13:50	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/13/23 13:49	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/13/23 13:49	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/13/23 13:49	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/13/23 13:50	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/13/23 13:49	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/13/23 13:50	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/13/23 13:50	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/13/23 13:50	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/13/23 13:49	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/13/23 13:49	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Date Collected: 02/10/23 16:25

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/13/23 13:49	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/13/23 13:49	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 13:50	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 13:49	1
Benzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/13/23 13:49	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/13/23 13:49	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/13/23 13:49	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/13/23 13:49	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/13/23 13:50	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/13/23 13:49	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 13:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/13/23 13:49	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/13/23 13:49	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/13/23 13:49	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 13:49	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/13/23 13:49	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/13/23 13:49	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/13/23 13:49	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/13/23 13:49	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 13:49	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/13/23 13:49	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/13/23 13:50	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Date Collected: 02/10/23 16:25

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	1.3	U	5.0	1.3	ug/L			02/13/23 13:49	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/13/23 13:50	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 13:50	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/13/23 13:50	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/13/23 13:49	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 13:50	1
Acetone	3.0	J	5.0	2.0	ug/L			02/13/23 13:49	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/13/23 13:49	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/13/23 13:49	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/13/23 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		02/13/23 13:49	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		02/13/23 13:49	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		02/13/23 13:50	1
Toluene-d8 (Surr)	96		70 - 130		02/13/23 13:49	1
Toluene-d8 (Surr)	97		70 - 130		02/13/23 13:49	1
Toluene-d8 (Surr)	94		70 - 130		02/13/23 13:50	1
4-Bromofluorobenzene (Surr)	84		70 - 130		02/13/23 13:49	1
4-Bromofluorobenzene (Surr)	101		70 - 130		02/13/23 13:49	1
4-Bromofluorobenzene (Surr)	87		70 - 130		02/13/23 13:50	1
1,2-Dichlorobenzene-d4 (Surr)	87		70 - 130		02/13/23 13:49	1
1,2-Dichlorobenzene-d4 (Surr)	102		70 - 130		02/13/23 13:49	1
1,2-Dichlorobenzene-d4 (Surr)	87		70 - 130		02/13/23 13:50	1

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	0.020	U *	0.51	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Acenaphthylene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Alachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Aldrin	0.0082	U	0.10	0.0082	ug/L		02/13/23 08:25	02/14/23 01:46	1
Anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Atrazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
alpha-Chlordane	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Benzo[a]anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Benzo[a]pyrene	0.012	U	0.020	0.012	ug/L		02/13/23 08:25	02/14/23 01:46	1
Benzo[b]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Benzo[g,h,i]perylene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Benzo[k]fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Bromacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Butachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Butylbenzylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Chrysene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Di(2-ethylhexyl)adipate	0.020	U	0.61	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Di (2-ethylhexyl)phthalate	0.10	U	0.61	0.10	ug/L		02/13/23 08:25	02/14/23 01:46	1
Di-n-butyl phthalate	0.071	U	2.0	0.071	ug/L		02/13/23 08:25	02/14/23 01:46	1
Diazinon	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 01:46	1
Dibenz(a,h)anthracene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Dieldrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1

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Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Date Collected: 02/10/23 16:25

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	0.020	U	1.0	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Dimethoate	0.030	U	0.51	0.030	ug/L		02/13/23 08:25	02/14/23 01:46	1
Dimethylphthalate	0.30	U	1.0	0.30	ug/L		02/13/23 08:25	02/14/23 01:46	1
Endrin	0.010	U	0.010	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Fluoranthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Fluorene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
gamma-BHC (Lindane)	0.0085	U	0.020	0.0085	ug/L		02/13/23 08:25	02/14/23 01:46	1
Heptachlor	0.0045	U	0.040	0.0045	ug/L		02/13/23 08:25	02/14/23 01:46	1
Heptachlor epoxide	0.0040	U	0.020	0.0040	ug/L		02/13/23 08:25	02/14/23 01:46	1
Hexachlorobenzene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Hexachlorocyclopentadiene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Indeno[1,2,3-cd]pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Isophorone	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Methoxychlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Metolachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Metribuzin	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Molinate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Phenanthrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Propachlor	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Pyrene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Simazine	0.030	U	0.071	0.030	ug/L		02/13/23 08:25	02/14/23 01:46	1
gamma-Chlordane	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Trifluralin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
trans-Nonachlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Thiobencarb	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
1-Methylnaphthalene	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
2-Methylnaphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
4,4'-DDD	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
4,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
4,4'-DDT	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Acenaphthene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Chlorothalonil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Di-n-octyl phthalate	0.020	U	2.0	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
EPTC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Malathion	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Naphthalene	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Parathion	0.091	U	0.51	0.091	ug/L		02/13/23 08:25	02/14/23 01:46	1
Terbacil	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Endrin aldehyde	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 01:46	1
2,4'-DDD	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
2,4'-DDE	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
2,4'-DDT	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
2,6-Dinitrotoluene	0.040	U *	0.10	0.040	ug/L		02/13/23 08:25	02/14/23 01:46	1
Acetochlor	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
alpha-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
beta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Chlorobenzilate	0.030	U	0.10	0.030	ug/L		02/13/23 08:25	02/14/23 01:46	1
Chloroneb	0.071	U	0.10	0.071	ug/L		02/13/23 08:25	02/14/23 01:46	1
Chlorpyrifos	0.020	U	0.051	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1

Eurofins Canton

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Date Collected: 02/10/23 16:25

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Dichlorvos	0.010	U	0.051	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Endosulfan I	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/14/23 01:46	1
Endosulfan II	0.040	U	0.10	0.040	ug/L		02/13/23 08:25	02/14/23 01:46	1
Endosulfan sulfate	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
cis-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
trans-Permethrin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Caffeine	0.020	U	0.051	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Pendimethalin	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Terbutylazine	0.010	U	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Hexazinone	0.051	U	0.10	0.051	ug/L		02/13/23 08:25	02/14/23 01:46	1
Permethrin	0.020	U	0.20	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Chlordane (n.o.s.)	0.010	U	0.051	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Cyanazine	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Prometon	0.010	U *-	0.10	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Desethylatrazine	0.010	U	1.0	0.010	ug/L		02/13/23 08:25	02/14/23 01:46	1
Deisopropylatrazine	0.040	U	1.0	0.040	ug/L		02/13/23 08:25	02/14/23 01:46	1
Prometryn	0.020	U	0.10	0.020	ug/L		02/13/23 08:25	02/14/23 01:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenylphosphate (Surr)	97		70 - 130				02/13/23 08:25	02/14/23 01:46	1
Perylene-d12 (Surr)	92		70 - 130				02/13/23 08:25	02/14/23 01:46	1
2-Nitro-m-xylene (Surr)	98		70 - 130				02/13/23 08:25	02/14/23 01:46	1

Preliminary Data

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: TB-20230210

Lab Sample ID: 240-180257-6

Date Collected: 02/10/23 00:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/13/23 11:45	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Styrene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/13/23 14:14	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/13/23 11:45	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/13/23 14:14	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/13/23 11:45	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/13/23 11:45	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/13/23 11:45	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/13/23 11:45	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
Toluene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/13/23 14:14	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/13/23 11:45	1
Tetrahydrofuran	1.8	J	5.0	1.4	ug/L			02/13/23 11:45	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/13/23 11:45	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/13/23 14:14	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/13/23 11:45	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/13/23 14:14	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/13/23 14:14	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/13/23 14:14	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/13/23 11:45	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/13/23 11:45	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/13/23 11:45	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/13/23 11:45	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 14:14	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 11:45	1
Benzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: TB-20230210

Lab Sample ID: 240-180257-6

Date Collected: 02/10/23 00:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/13/23 11:45	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/13/23 11:45	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/13/23 11:45	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/13/23 11:45	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/13/23 14:14	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/13/23 11:45	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 11:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/13/23 11:45	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/13/23 11:45	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/13/23 11:45	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 11:45	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/13/23 11:45	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/13/23 11:45	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/13/23 11:45	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/13/23 11:45	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 11:45	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/13/23 11:45	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/13/23 14:14	1
Propionitrile	1.3	U	5.0	1.3	ug/L			02/13/23 11:45	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/13/23 14:14	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 14:14	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/13/23 14:14	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/13/23 11:45	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 14:14	1
Acetone	2.0	U	5.0	2.0	ug/L			02/13/23 11:45	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:45	1

Client Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: TB-20230210

Lab Sample ID: 240-180257-6

Date Collected: 02/10/23 00:00

Matrix: Water

Date Received: 02/10/23 20:50

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/13/23 11:45	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/13/23 11:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130					02/13/23 11:45	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130					02/13/23 11:45	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					02/13/23 14:14	1
Toluene-d8 (Surr)	100		70 - 130					02/13/23 11:45	1
Toluene-d8 (Surr)	101		70 - 130					02/13/23 11:45	1
Toluene-d8 (Surr)	94		70 - 130					02/13/23 14:14	1
4-Bromofluorobenzene (Surr)	89		70 - 130					02/13/23 11:45	1
4-Bromofluorobenzene (Surr)	103		70 - 130					02/13/23 11:45	1
4-Bromofluorobenzene (Surr)	85		70 - 130					02/13/23 14:14	1
1,2-Dichlorobenzene-d4 (Surr)	88		70 - 130					02/13/23 11:45	1
1,2-Dichlorobenzene-d4 (Surr)	105		70 - 130					02/13/23 11:45	1
1,2-Dichlorobenzene-d4 (Surr)	86		70 - 130					02/13/23 14:14	1

Preliminary Data



Surrogate Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)							
		DCA (70-130)	DCA (70-130)	TOL (70-130)	TOL (70-130)	BFB (70-130)	BFB (70-130)	DCZ (70-130)	DCZ (70-130)
240-180257-1	PW201-20230210	95	95	93	93	89	89	86	86
240-180257-1	PW201-20230210	104	104	98	98	88	88	85	85
240-180257-2	PW202-20230210	103	103	98	98	88	88	84	84
240-180257-2	PW202-20230210	101	101	96	96	91	91	87	87
240-180257-3	PW203-20230210	99	99	93	93	89	89	87	87
240-180257-3	PW203-20230210	111	111	99	99	88	88	86	86
240-180257-4	PW204-20230210	95	95	95	95	88	88	90	90
240-180257-4	PW204-20230210	110	110	99	99	84	84	82	82
240-180257-5	FB-20230210	106	106	96	96	84	84	87	87
240-180257-5	FB-20230210	95	95	94	94	87	87	87	87
240-180257-6	TB-20230210	106	106	100	100	89	89	88	88
240-180257-6	TB-20230210	98	98	94	94	85	85	86	86
MB 810-47575/6	Method Blank	100	100	97	97	88	88	85	85
MB 810-47576/6	Method Blank	98	98	98	98	104	104	100	100
MB 810-47591/6	Method Blank	100	100	94	94	86	86	82	82
MB 810-47875/6	Method Blank	106	106	96	96	84	84	83	83
MB 810-47876/6	Method Blank	104	104	97	97	99	99	98	98
MB 810-47883/4	Method Blank	104	104	95	95	89	89	90	90

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DCZ = 1,2-Dichlorobenzene-d4 (Surr)

Method: 524.2 Ext - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCZ (70-130)	DCA (70-130)	TOL (70-130)	BFB (70-130)
240-180257-1	PW201-20230210	96	99	99	99
240-180257-2	PW202-20230210	100	102	100	100
240-180257-3	PW203-20230210	97	102	101	100
240-180257-4	PW204-20230210	101	104	99	98
240-180257-5	FB-20230210	103	102	100	100
MB 810-47621/16	Method Blank	95	100	98	96

Surrogate Legend

DCZ = 1,2-Dichlorobenzene-d4 (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TPP (70-130)	PRY (70-130)	2NMX (70-130)
240-180257-1	PW201-20230210	100	94	99

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Surrogate Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TPP (70-130)	PRY (70-130)	2NMX (70-130)
240-180257-2	PW202-20230210	105	95	100
240-180257-3	PW203-20230210	106	95	94
240-180257-3 MS	PW203-20230210	103	98	98
240-180257-4	PW204-20230210	99	94	95
240-180257-4 DU	PW204-20230210	106	95	95
240-180257-5	FB-20230210	97	92	98
LCS 810-47583/2-A	Lab Control Sample	103	96	97
LLCS 810-47583/3-A	Lab Control Sample	102	95	95
MB 810-47583/1-A	Method Blank	102	90	97

Surrogate Legend

TPP = Triphenylphosphate (Surr)

PRY = Perylene-d12 (Surr)

2NMX = 2-Nitro-m-xylene (Surr)

Preliminary Data

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 810-47575/6

Matrix: Water

Analysis Batch: 47575

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/13/23 11:20	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Styrene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/13/23 11:20	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/13/23 11:20	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
Toluene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/13/23 11:20	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/13/23 11:20	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/13/23 11:20	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/13/23 11:20	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 11:20	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Benzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/13/23 11:20	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/13/23 11:20	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/13/23 11:20	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47575/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 47575

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/13/23 11:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/13/23 11:20	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/13/23 11:20	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/13/23 11:20	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/13/23 11:20	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/13/23 11:20	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/13/23 11:20	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/13/23 11:20	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 11:20	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 11:20	1
Acetone	2.0	U	5.0	2.0	ug/L			02/13/23 11:20	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/13/23 11:20	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/13/23 11:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		02/13/23 11:20	1
Toluene-d8 (Surr)	97		70 - 130		02/13/23 11:20	1
4-Bromofluorobenzene (Surr)	88		70 - 130		02/13/23 11:20	1
1,2-Dichlorobenzene-d4 (Surr)	85		70 - 130		02/13/23 11:20	1

Lab Sample ID: MB 810-47576/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 47576

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/13/23 11:20	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/13/23 11:20	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/13/23 11:20	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/13/23 11:20	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/13/23 11:20	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/13/23 11:20	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/13/23 11:20	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/13/23 11:20	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/13/23 11:20	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/13/23 11:20	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47576/6

Matrix: Water

Analysis Batch: 47576

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/13/23 11:20	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 11:20	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/13/23 11:20	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/13/23 11:20	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/13/23 11:20	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/13/23 11:20	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 11:20	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/13/23 11:20	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/13/23 11:20	1
Propionitrile	1.3	U	5.0	1.3	ug/L			02/13/23 11:20	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/13/23 11:20	1
Acetone	2.0	U	5.0	2.0	ug/L			02/13/23 11:20	1
Bromoethane	NC		0.50	0.10	ug/L			02/13/23 11:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		02/13/23 11:20	1
Toluene-d8 (Surr)	98		70 - 130		02/13/23 11:20	1
4-Bromofluorobenzene (Surr)	104		70 - 130		02/13/23 11:20	1
1,2-Dichlorobenzene-d4 (Surr)	100		70 - 130		02/13/23 11:20	1

Lab Sample ID: MB 810-47591/6

Matrix: Water

Analysis Batch: 47591

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/13/23 11:52	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/13/23 11:52	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/13/23 11:52	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/13/23 11:52	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/13/23 11:52	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/13/23 11:52	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/13/23 11:52	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/13/23 11:52	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/13/23 11:52	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/13/23 11:52	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/13/23 11:52	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/13/23 11:52	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/13/23 11:52	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/13/23 11:52	1
Acetone	2.0	U	5.0	2.0	ug/L			02/13/23 11:52	1
Bromoethane	NC		0.50	0.10	ug/L			02/13/23 11:52	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		02/13/23 11:52	1
Toluene-d8 (Surr)	94		70 - 130		02/13/23 11:52	1
4-Bromofluorobenzene (Surr)	86		70 - 130		02/13/23 11:52	1
1,2-Dichlorobenzene-d4 (Surr)	82		70 - 130		02/13/23 11:52	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47875/6

Matrix: Water

Analysis Batch: 47875

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	0.30	U	0.50	0.30	ug/L			02/15/23 10:28	1
Ethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Styrene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
cis-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
trans-1,3-Dichloropropylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
N-Propylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
n-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
4-Chlorotoluene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,4-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,2-Dibromoethane (EDB)	0.20	U	0.20	0.20	ug/L			02/15/23 10:28	1
1,2-Dichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/15/23 10:28	1
1,3,5-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Bromobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
Toluene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Chlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/15/23 10:28	1
1,2,4-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Dibromochloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
Tetrachloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,3-Dichloropropane	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
cis-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
trans-1,2-Dichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/15/23 10:28	1
m-Xylene & p-Xylene	0.50	U	0.50	0.50	ug/L			02/15/23 10:28	1
1,2,3-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,3-Dichlorobenzene	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
Carbon tetrachloride	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
1,1-Dichloropropene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/15/23 10:28	1
2,2-Dichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/15/23 10:28	1
Chloroform	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Benzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,1,1-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Bromomethane	0.40	U	0.50	0.40	ug/L			02/15/23 10:28	1
Chloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Dibromomethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Bromochloromethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Chloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Vinyl chloride	0.20	U	0.20	0.20	ug/L			02/15/23 10:28	1
Dichloromethane	0.40	U	0.50	0.40	ug/L			02/15/23 10:28	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Bromoform	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Bromodichloromethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
1,1-Dichloroethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
1,1-Dichloroethene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Trichlorofluoromethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47875/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 47875

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	0.30	U	0.50	0.30	ug/L			02/15/23 10:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.30	U	0.50	0.30	ug/L			02/15/23 10:28	1
1,2-Dichloropropane	0.20	U	0.25	0.20	ug/L			02/15/23 10:28	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/15/23 10:28	1
1,1,2-Trichloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Trichloroethylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,1,2,2-Tetrachloroethane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,2,3-Trichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Hexachlorobutadiene	0.20	U	0.25	0.20	ug/L			02/15/23 10:28	1
Naphthalene	0.30	U	0.50	0.30	ug/L			02/15/23 10:28	1
o-Xylene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
2-Chlorotoluene	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
1,2-Dichlorobenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,2,4-Trimethylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
1,2-Dibromo-3-Chloropropane	0.20	U	0.20	0.20	ug/L			02/15/23 10:28	1
1,2,3-Trichloropropane	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
tert-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Isopropylbenzene	0.20	U	0.25	0.20	ug/L			02/15/23 10:28	1
4-Isopropyltoluene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/15/23 10:28	1
sec-Butylbenzene	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/15/23 10:28	1
Acetone	2.0	U	5.0	2.0	ug/L			02/15/23 10:28	1
Bromoethane	0.10	U	0.50	0.10	ug/L			02/15/23 10:28	1
1,3-Dichloropropene, Total	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Xylenes, Total	0.50	U	0.50	0.50	ug/L			02/15/23 10:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		02/15/23 10:28	1
Toluene-d8 (Surr)	96		70 - 130		02/15/23 10:28	1
4-Bromofluorobenzene (Surr)	84		70 - 130		02/15/23 10:28	1
1,2-Dichlorobenzene-d4 (Surr)	83		70 - 130		02/15/23 10:28	1

Lab Sample ID: MB 810-47876/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 47876

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/15/23 10:28	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/15/23 10:28	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/15/23 10:28	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/15/23 10:28	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/15/23 10:28	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/15/23 10:28	1
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/15/23 10:28	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/15/23 10:28	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/15/23 10:28	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/15/23 10:28	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47876/6

Matrix: Water

Analysis Batch: 47876

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/15/23 10:28	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 10:28	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/15/23 10:28	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/15/23 10:28	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 10:28	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/15/23 10:28	1
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 10:28	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/15/23 10:28	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 10:28	1
Propionitrile	1.3	U	5.0	1.3	ug/L			02/15/23 10:28	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/15/23 10:28	1
Acetone	2.0	U	5.0	2.0	ug/L			02/15/23 10:28	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
%Recovery	Qualifier								
1,2-Dichloroethane-d4 (Surr)	104		70 - 130					02/15/23 10:28	1
Toluene-d8 (Surr)	97		70 - 130					02/15/23 10:28	1
4-Bromofluorobenzene (Surr)	99		70 - 130					02/15/23 10:28	1
1,2-Dichlorobenzene-d4 (Surr)	98		70 - 130					02/15/23 10:28	1

Lab Sample ID: MB 810-47883/4

Matrix: Water

Analysis Batch: 47883

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	NC		0.50	0.30	ug/L			02/15/23 09:08	1
Ethylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Styrene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
cis-1,3-Dichloropropylene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
trans-1,3-Dichloropropylene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
N-Propylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
n-Butylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
4-Chlorotoluene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
1,4-Dichlorobenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Epichlorohydrin	0.80	U	1.0	0.80	ug/L			02/15/23 09:08	1
1,2-Dibromoethane (EDB)	NC		0.20	0.20	ug/L			02/15/23 09:08	1
1,3-Butadiene	0.50	U	5.0	0.50	ug/L			02/15/23 09:08	1
Allyl chloride	1.1	U	5.0	1.1	ug/L			02/15/23 09:08	1
1,2-Dichloroethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Acrylonitrile	0.90	U	1.0	0.90	ug/L			02/15/23 09:08	1
Chloroacetonitrile	2.0	U	5.0	2.0	ug/L			02/15/23 09:08	1
4-Methyl-2-pentanone (MIBK)	1.5	U	2.0	1.5	ug/L			02/15/23 09:08	1
1,3,5-Trimethylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Bromobenzene	NC		0.50	0.10	ug/L			02/15/23 09:08	1
Toluene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Chlorobenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Cyclohexanone	2.0	U	5.0	2.0	ug/L			02/15/23 09:08	1
1-Chlorobutane	0.70	U	5.0	0.70	ug/L			02/15/23 09:08	1
Tetrahydrofuran	1.4	U	5.0	1.4	ug/L			02/15/23 09:08	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47883/4

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 47883

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,4-Dichloro-2-butylene	1.4	U	5.0	1.4	ug/L			02/15/23 09:08	1
Bis(2-chloroethyl)ether	0.80	U	2.0	0.80	ug/L			02/15/23 09:08	1
1,2,4-Trichlorobenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Dibromochloromethane	NC		0.50	0.10	ug/L			02/15/23 09:08	1
Methacrylonitrile	1.7	U	5.0	1.7	ug/L			02/15/23 09:08	1
Chloroprene	0.40	U	5.0	0.40	ug/L			02/15/23 09:08	1
Tetrachloroethene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Ethyl acrylate	0.40	U	1.0	0.40	ug/L			02/15/23 09:08	1
n-Butyl acrylate	0.50	U	1.0	0.50	ug/L			02/15/23 09:08	1
1,3-Dichloropropane	NC		0.50	0.10	ug/L			02/15/23 09:08	1
cis-1,2-Dichloroethylene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
trans-1,2-Dichloroethylene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Methyl-tert-butyl Ether (MTBE)	0.40	U	0.50	0.40	ug/L			02/15/23 09:08	1
m-Xylene & p-Xylene	NC		0.50	0.50	ug/L			02/15/23 09:08	1
1,2,3-Trimethylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
1,3-Dichlorobenzene	NC		0.50	0.10	ug/L			02/15/23 09:08	1
Carbon tetrachloride	NC		0.50	0.10	ug/L			02/15/23 09:08	1
1,1-Dichloropropene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
2-Hexanone	1.2	U	5.0	1.2	ug/L			02/15/23 09:08	1
2,2-Dichloropropane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Ethyl ether	0.30	U	2.0	0.30	ug/L			02/15/23 09:08	1
Ethyl tert-butyl ether	0.40	U	2.0	0.40	ug/L			02/15/23 09:08	1
Chloroform	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Hexachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 09:08	1
Benzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
1,1,1-Trichloroethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Bromomethane	NC		0.50	0.40	ug/L			02/15/23 09:08	1
Chloromethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Methyl iodide	2.0	U	2.0	2.0	ug/L			02/15/23 09:08	1
Dibromomethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Bromochloromethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Chloroethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Vinyl chloride	NC		0.20	0.20	ug/L			02/15/23 09:08	1
Dichloromethane	NC		0.50	0.40	ug/L			02/15/23 09:08	1
Carbon disulfide	0.20	U	0.50	0.20	ug/L			02/15/23 09:08	1
Bromoform	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Bromodichloromethane	NC		0.50	0.10	ug/L			02/15/23 09:08	1
1,1-Dichloroethane	NC		0.50	0.10	ug/L			02/15/23 09:08	1
1,1-Dichloroethene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
tert-Butyl alcohol	0.60	U	2.0	0.60	ug/L			02/15/23 09:08	1
Trichlorofluoromethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Dichlorodifluoromethane	NC		0.50	0.30	ug/L			02/15/23 09:08	1
Pentachloroethane	1.1	U	2.0	1.1	ug/L			02/15/23 09:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	NC		0.50	0.30	ug/L			02/15/23 09:08	1
1,2-Dichloropropane	NC		0.25	0.20	ug/L			02/15/23 09:08	1
2-Butanone (MEK)	2.0	U	5.0	2.0	ug/L			02/15/23 09:08	1
1,1,2-Trichloroethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Trichloroethylene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
1,1,2,2-Tetrachloroethane	NC		0.50	0.20	ug/L			02/15/23 09:08	1

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47883/4

Matrix: Water

Analysis Batch: 47883

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 09:08	1
1,2,3-Trichlorobenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Hexachlorobutadiene	NC		0.25	0.20	ug/L			02/15/23 09:08	1
Naphthalene	NC		0.50	0.30	ug/L			02/15/23 09:08	1
o-Xylene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
2-Chlorotoluene	NC		0.50	0.10	ug/L			02/15/23 09:08	1
1,2-Dichlorobenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
1,2,4-Trimethylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
1,2-Dibromo-3-Chloropropane	NC		0.20	0.20	ug/L			02/15/23 09:08	1
1,2,3-Trichloropropane	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Methyl acrylate	0.80	U	1.0	0.80	ug/L			02/15/23 09:08	1
Ethyl methacrylate	1.0	U	1.0	1.0	ug/L			02/15/23 09:08	1
tert-Butylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Isopropylbenzene	NC		0.25	0.20	ug/L			02/15/23 09:08	1
4-Isopropyltoluene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
Benzyl chloride	0.40	U	0.50	0.40	ug/L			02/15/23 09:08	1
Propionitrile	1.3	U	5.0	1.3	ug/L			02/15/23 09:08	1
Vinyl acetate	2.0	U	5.0	2.0	ug/L			02/15/23 09:08	1
Isopropyl ether	0.50	U	0.50	0.50	ug/L			02/15/23 09:08	1
1,4-Dioxane	2.0	U	5.0	2.0	ug/L			02/15/23 09:08	1
sec-Butylbenzene	NC		0.50	0.20	ug/L			02/15/23 09:08	1
2-Nitropropane	0.90	U	2.0	0.90	ug/L			02/15/23 09:08	1
t-Amyl methyl ether	0.60	U	3.0	0.60	ug/L			02/15/23 09:08	1
Acetone	2.0	U	5.0	2.0	ug/L			02/15/23 09:08	1
Bromoethane	NC		0.50	0.10	ug/L			02/15/23 09:08	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		02/15/23 09:08	1
Toluene-d8 (Surr)	95		70 - 130		02/15/23 09:08	1
4-Bromofluorobenzene (Surr)	89		70 - 130		02/15/23 09:08	1
1,2-Dichlorobenzene-d4 (Surr)	90		70 - 130		02/15/23 09:08	1

Method: 524.2 Ext - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 810-47621/16

Matrix: Water

Analysis Batch: 47621

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ethanol	5.0	U	10	5.0	ug/L			02/13/23 16:51	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichlorobenzene-d4 (Surr)	95		70 - 130		02/13/23 16:51	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		02/13/23 16:51	1
Toluene-d8 (Surr)	98		70 - 130		02/13/23 16:51	1
4-Bromofluorobenzene (Surr)	96		70 - 130		02/13/23 16:51	1

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 810-47583/1-A
Matrix: Water
Analysis Batch: 47668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47583

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-Dinitrotoluene	0.020	U	0.49	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Acenaphthylene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Alachlor	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Aldrin	0.0080	U	0.099	0.0080	ug/L		02/13/23 08:25	02/13/23 22:49	1
Anthracene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Atrazine	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
alpha-Chlordane	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Benzo[a]anthracene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Benzo[a]pyrene	0.012	U	0.020	0.012	ug/L		02/13/23 08:25	02/13/23 22:49	1
Benzo[b]fluoranthene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Benzo[g,h,i]perylene	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Benzo[k]fluoranthene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Bromacil	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Butachlor	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Butylbenzylphthalate	0.020	U	0.99	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Chrysene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Di(2-ethylhexyl)adipate	0.020	U	0.59	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Di (2-ethylhexyl)phthalate	0.099	U	0.59	0.099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Di-n-butyl phthalate	0.069	U	2.0	0.069	ug/L		02/13/23 08:25	02/13/23 22:49	1
Diazinon	0.030	U	0.099	0.030	ug/L		02/13/23 08:25	02/13/23 22:49	1
Dibenz(a,h)anthracene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Dieldrin	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Diethylphthalate	0.020	U	0.99	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Dimethoate	0.030	U	0.49	0.030	ug/L		02/13/23 08:25	02/13/23 22:49	1
Dimethylphthalate	0.30	U	0.99	0.30	ug/L		02/13/23 08:25	02/13/23 22:49	1
Endrin	0.0098	U	0.0099	0.0098	ug/L		02/13/23 08:25	02/13/23 22:49	1
Fluoranthene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Fluorene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
gamma-BHC (Lindane)	0.0083	U	0.020	0.0083	ug/L		02/13/23 08:25	02/13/23 22:49	1
Heptachlor	0.0043	U	0.039	0.0043	ug/L		02/13/23 08:25	02/13/23 22:49	1
Heptachlor epoxide	0.0039	U	0.020	0.0039	ug/L		02/13/23 08:25	02/13/23 22:49	1
Hexachlorobenzene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Hexachlorocyclopentadiene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Indeno[1,2,3-cd]pyrene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Isophorone	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Methoxychlor	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Metolachlor	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Metribuzin	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Molinate	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Phenanthrene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Propachlor	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Pyrene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Simazine	0.030	U	0.069	0.030	ug/L		02/13/23 08:25	02/13/23 22:49	1
gamma-Chlordane	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Trifluralin	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
trans-Nonachlor	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Thiobencarb	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
1-Methylnaphthalene	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 810-47583/1-A

Matrix: Water

Analysis Batch: 47668

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 47583

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Methylnaphthalene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
4,4'-DDD	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
4,4'-DDE	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
4,4'-DDT	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Acenaphthene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Chlorothalonil	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Di-n-octyl phthalate	0.020	U	2.0	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
EPTC	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Malathion	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Naphthalene	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Parathion	0.089	U	0.49	0.089	ug/L		02/13/23 08:25	02/13/23 22:49	1
Terbacil	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Endrin aldehyde	0.030	U	0.099	0.030	ug/L		02/13/23 08:25	02/13/23 22:49	1
2,4'-DDD	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
2,4'-DDE	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
2,4'-DDT	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
2,6-Dinitrotoluene	0.039	U	0.099	0.039	ug/L		02/13/23 08:25	02/13/23 22:49	1
Acetochlor	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
alpha-BHC	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
beta-BHC	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Chlorobenzilate	0.030	U	0.099	0.030	ug/L		02/13/23 08:25	02/13/23 22:49	1
Chloroneb	0.069	U	0.099	0.069	ug/L		02/13/23 08:25	02/13/23 22:49	1
Chlorpyrifos	0.020	U	0.049	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
delta-BHC	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Dichlorvos	0.0099	U	0.049	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Endosulfan I	0.039	U	0.099	0.039	ug/L		02/13/23 08:25	02/13/23 22:49	1
Endosulfan II	0.039	U	0.099	0.039	ug/L		02/13/23 08:25	02/13/23 22:49	1
Endosulfan sulfate	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
cis-Permethrin	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
trans-Permethrin	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Caffeine	0.020	U	0.049	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Pendimethalin	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Terbutylazine	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Hexazinone	0.049	U	0.099	0.049	ug/L		02/13/23 08:25	02/13/23 22:49	1
Permethrin	0.020	U	0.20	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Chlordane (n.o.s.)	0.0099	U	0.049	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Cyanazine	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1
Prometon	0.0099	U	0.099	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Desethylatrazine	0.0099	U	0.99	0.0099	ug/L		02/13/23 08:25	02/13/23 22:49	1
Deisopropylatrazine	0.039	U	0.99	0.039	ug/L		02/13/23 08:25	02/13/23 22:49	1
Prometryn	0.020	U	0.099	0.020	ug/L		02/13/23 08:25	02/13/23 22:49	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Triphenylphosphate (Surr)	102		70 - 130	02/13/23 08:25	02/13/23 22:49	1
Perylene-d12 (Surr)	90		70 - 130	02/13/23 08:25	02/13/23 22:49	1
2-Nitro-m-xylene (Surr)	97		70 - 130	02/13/23 08:25	02/13/23 22:49	1

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 810-47583/2-A

Matrix: Water

Analysis Batch: 47668

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.99	1.31	*-	ug/L		66	70 - 130
Aldrin	1.99	1.88		ug/L		94	70 - 130
alpha-Chlordane	1.99	1.75		ug/L		88	70 - 130
Bromacil	1.99	2.03		ug/L		102	70 - 130
Butachlor	1.99	2.37		ug/L		119	70 - 130
Chrysene	1.99	2.05		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.01		ug/L		101	70 - 130
Di (2-ethylhexyl)phthalate	1.99	1.97		ug/L		99	70 - 130
Di-n-butyl phthalate	1.99	2.03		ug/L		102	70 - 130
Diazinon	1.99	1.67		ug/L		84	70 - 130
Dibenz(a,h)anthracene	1.99	1.90		ug/L		96	70 - 130
Dieldrin	1.99	1.92		ug/L		97	70 - 130
Diethylphthalate	1.99	1.96		ug/L		99	70 - 130
Dimethoate	1.99	0.830		ug/L		42	28 - 85
Dimethylphthalate	1.99	1.96		ug/L		99	70 - 130
Endrin	1.99	1.97		ug/L		99	70 - 130
Fluoranthene	1.99	1.98		ug/L		100	70 - 130
Fluorene	1.99	1.97		ug/L		99	70 - 130
gamma-BHC (Lindane)	1.99	1.93		ug/L		97	70 - 130
Heptachlor	1.99	1.76		ug/L		88	70 - 130
Heptachlor epoxide	1.99	1.80		ug/L		91	70 - 130
Hexachlorobenzene	1.99	1.64		ug/L		82	70 - 130
Hexachlorocyclopentadiene	1.99	1.60		ug/L		81	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	1.82		ug/L		92	70 - 130
Isophorone	1.99	2.01		ug/L		101	70 - 130
Methoxychlor	1.99	1.95		ug/L		98	70 - 130
Metolachlor	1.99	2.01		ug/L		101	70 - 130
Metribuzin	1.99	1.95		ug/L		98	70 - 130
Molinate	1.99	1.95		ug/L		98	70 - 130
Phenanthrene	1.99	1.84		ug/L		92	70 - 130
Propachlor	1.99	1.96		ug/L		98	70 - 130
Pyrene	1.99	2.00		ug/L		101	70 - 130
Simazine	1.99	1.81		ug/L		91	70 - 130
gamma-Chlordane	1.99	1.77		ug/L		89	70 - 130
Trifluralin	1.99	1.82		ug/L		92	70 - 130
trans-Nonachlor	1.99	1.74		ug/L		87	70 - 130
Thiobencarb	1.99	1.98		ug/L		100	70 - 130
1-Methylnaphthalene	1.99	1.94		ug/L		97	70 - 130
2-Methylnaphthalene	1.99	1.80		ug/L		91	70 - 130
4,4'-DDD	1.99	1.94		ug/L		98	70 - 130
4,4'-DDE	1.99	1.98		ug/L		99	70 - 130
4,4'-DDT	1.99	1.95		ug/L		98	70 - 130
Acenaphthene	1.99	1.87		ug/L		94	70 - 130
Chlorothalonil	1.99	1.82		ug/L		92	70 - 130
Di-n-octyl phthalate	1.99	1.95	J	ug/L		98	60 - 122
EPTC	1.99	1.93		ug/L		97	70 - 130
Malathion	1.99	2.07		ug/L		104	80 - 134
Naphthalene	1.99	1.90		ug/L		96	70 - 130

Preliminary Data

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 810-47583/2-A

Matrix: Water

Analysis Batch: 47668

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Parathion	1.99	2.06		ug/L		104	80 - 134
Terbacil	1.99	1.96		ug/L		99	70 - 130
Endrin aldehyde	1.99	1.82		ug/L		91	64 - 125
2,4'-DDD	1.99	1.93		ug/L		97	70 - 130
2,4'-DDE	1.99	1.92		ug/L		97	70 - 130
2,4'-DDT	1.99	2.11		ug/L		106	70 - 130
2,6-Dinitrotoluene	1.99	1.35	*	ug/L		68	70 - 130
Acetochlor	1.99	2.16		ug/L		109	70 - 130
alpha-BHC	1.99	1.91		ug/L		96	70 - 130
beta-BHC	1.99	1.95		ug/L		98	70 - 130
Chlorobenzilate	1.99	2.29		ug/L		115	70 - 130
Chloroneb	1.99	2.16		ug/L		109	70 - 130
Chlorpyrifos	1.99	1.95		ug/L		98	70 - 130
delta-BHC	1.99	1.93		ug/L		97	70 - 130
Dichlorvos	1.99	1.97		ug/L		99	70 - 130
Endosulfan I	1.99	2.04		ug/L		102	70 - 130
Endosulfan II	1.99	2.14		ug/L		108	70 - 130
Endosulfan sulfate	1.99	1.81		ug/L		91	70 - 130
cis-Permethrin	1.99	2.03		ug/L		102	70 - 130
trans-Permethrin	1.99	1.98		ug/L		100	70 - 130
Caffeine	1.99	1.03		ug/L		52	41 - 110
Pendimethalin	1.99	2.03		ug/L		102	65 - 122
Terbutylazine	1.99	1.95		ug/L		98	70 - 130
Hexazinone	1.99	2.05		ug/L		103	70 - 130
Cyanazine	1.99	1.79		ug/L		90	70 - 130
Prometon	1.99	0.357	*-	ug/L		18	70 - 130
Desethylatrazine	1.99	0.756	J	ug/L		38	8 - 94
Deisopropylatrazine	1.99	0.214	J	ug/L		11	4 - 27
Prometryn	1.99	1.59		ug/L		80	70 - 130

Preliminary Data

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Triphenylphosphate (Surr)	103		70 - 130
Perylene-d12 (Surr)	96		70 - 130
2-Nitro-m-xylene (Surr)	97		70 - 130

Lab Sample ID: LLCS 810-47583/3-A

Matrix: Water

Analysis Batch: 47668

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Aldrin	0.0694	0.0591	J	ug/L		85	50 - 150
Butachlor	0.0991	0.0870	J	ug/L		88	50 - 150
Di(2-ethylhexyl)adipate	0.595	0.546	J	ug/L		92	50 - 150
Di (2-ethylhexyl)phthalate	0.595	0.632		ug/L		106	50 - 150
Dieldrin	0.0198	0.0263	J	ug/L		133	50 - 150
Endrin	0.00991	0.0124		ug/L		125	50 - 150
gamma-BHC (Lindane)	0.0198	0.0171	J	ug/L		86	50 - 150
Heptachlor	0.00991	0.00856	J	ug/L		86	50 - 150

Eurofins Canton

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LLCS 810-47583/3-A

Matrix: Water

Analysis Batch: 47668

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Spike	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Heptachlor epoxide	0.00991	0.00857	J	ug/L		86	50 - 150
Hexachlorobenzene	0.0991	0.0757	J	ug/L		76	50 - 150
Hexachlorocyclopentadiene	0.0991	0.0647	J	ug/L		65	50 - 150
Methoxychlor	0.0991	0.0672	J	ug/L		68	50 - 150
Metolachlor	0.0991	0.0859	J	ug/L		87	50 - 150
Metribuzin	0.0991	0.0817	J	ug/L		82	50 - 150
Propachlor	0.0991	0.0859	J	ug/L		87	50 - 150
Simazine	0.0694	0.0562	J	ug/L		81	50 - 150

Surrogate	LLCS	LLCS	Limits
	%Recovery	Qualifier	
Triphenylphosphate (Surr)	102		70 - 130
Perylene-d12 (Surr)	95		70 - 130
2-Nitro-m-xylene (Surr)	95		70 - 130

Lab Sample ID: 240-180257-3 MS

Matrix: Water

Analysis Batch: 47668

Client Sample ID: PW203-20230210

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
2,4-Dinitrotoluene	0.020	U*	2.01	1.54		ug/L		76	70 - 130
Aldrin	0.0081	U	2.01	1.81		ug/L		90	70 - 130
alpha-Chlordane	0.010	U	2.01	1.85		ug/L		92	70 - 130
Bromacil	0.020	U	2.01	2.07		ug/L		103	70 - 130
Butachlor	0.020	U	2.01	2.42		ug/L		120	70 - 130
Chrysene	0.010	U	2.01	2.06		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	0.020	U	2.01	2.01		ug/L		100	70 - 130
Di(2-ethylhexyl)phthalate	0.10	U	2.01	2.11		ug/L		105	70 - 130
Di-n-butyl phthalate	0.11	J	2.01	2.05		ug/L		96	70 - 130
Diazinon	0.030	U	2.01	1.81		ug/L		90	70 - 130
Dibenz(a,h)anthracene	0.010	U	2.01	1.88		ug/L		93	70 - 130
Dieldrin	0.020	U	2.01	2.03		ug/L		101	70 - 130
Diethylphthalate	0.020	U	2.01	1.99		ug/L		99	70 - 130
Dimethoate	0.030	U	2.01	1.13		ug/L		56	28 - 85
Dimethylphthalate	0.30	U	2.01	1.98		ug/L		99	70 - 130
Endrin	0.0099	U	2.01	2.02		ug/L		100	70 - 130
Fluoranthene	0.010	U	2.01	1.92		ug/L		95	70 - 130
Fluorene	0.010	U	2.01	1.91		ug/L		95	70 - 130
gamma-BHC (Lindane)	0.0084	U	2.01	1.90		ug/L		94	70 - 130
Heptachlor	0.0044	U	2.01	1.77		ug/L		88	70 - 130
Heptachlor epoxide	0.0040	U	2.01	1.95		ug/L		97	70 - 130
Hexachlorobenzene	0.010	U	2.01	1.73		ug/L		86	70 - 130
Hexachlorocyclopentadiene	0.010	U	2.01	1.77		ug/L		88	70 - 130
Indeno[1,2,3-cd]pyrene	0.010	U	2.01	1.85		ug/L		92	70 - 130
Isophorone	0.010	U	2.01	1.95		ug/L		97	70 - 130
Methoxychlor	0.010	U	2.01	1.99		ug/L		99	70 - 130
Metolachlor	0.010	U	2.01	2.03		ug/L		101	70 - 130
Metribuzin	0.010	U	2.01	1.98		ug/L		99	70 - 130
Molinate	0.020	U	2.01	1.98		ug/L		98	70 - 130

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-180257-3 MS

Matrix: Water

Analysis Batch: 47668

Client Sample ID: PW203-20230210

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Phenanthrene	0.010	U	2.01	1.87		ug/L		93	70 - 130
Propachlor	0.010	U	2.01	2.01		ug/L		100	70 - 130
Pyrene	0.010	U	2.01	2.02		ug/L		100	70 - 130
Simazine	0.030	U	2.01	1.73		ug/L		86	70 - 130
gamma-Chlordane	0.020	U	2.01	1.91		ug/L		95	70 - 130
Trifluralin	0.020	U	2.01	1.89		ug/L		94	70 - 130
trans-Nonachlor	0.020	U	2.01	1.88		ug/L		93	70 - 130
Thiobencarb	0.010	U	2.01	1.96		ug/L		97	70 - 130
1-Methylnaphthalene	0.020	U	2.01	1.96		ug/L		97	70 - 130
2-Methylnaphthalene	0.010	U	2.01	1.86		ug/L		93	70 - 130
4,4'-DDD	0.020	U	2.01	2.04		ug/L		101	70 - 130
4,4'-DDE	0.010	U	2.01	1.96		ug/L		98	70 - 130
4,4'-DDT	0.020	U	2.01	1.97		ug/L		98	70 - 130
Acenaphthene	0.010	U	2.01	1.91		ug/L		95	70 - 130
Chlorothalonil	0.020	U	2.01	1.78		ug/L		88	70 - 130
Di-n-octyl phthalate	0.020	U	2.01	1.90	J	ug/L		95	60 - 122
EPTC	0.010	U	2.01	2.00		ug/L		99	70 - 130
Malathion	0.010	U	2.01	2.09		ug/L		104	80 - 134
Naphthalene	0.010	U	2.01	1.86		ug/L		92	70 - 130
Parathion	0.090	U	2.01	1.93		ug/L		96	80 - 134
Terbacil	0.020	U	2.01	2.00		ug/L		99	70 - 130
Endrin aldehyde	0.030	U	2.01	1.95		ug/L		97	64 - 125
2,4'-DDD	0.010	U	2.01	1.88		ug/L		93	70 - 130
2,4'-DDE	0.010	U	2.01	1.96		ug/L		97	70 - 130
2,4'-DDT	0.010	U	2.01	1.87		ug/L		93	70 - 130
2,6-Dinitrotoluene	0.040	U *	2.01	1.59		ug/L		79	70 - 130
Acetochlor	0.020	U	2.01	2.13		ug/L		106	70 - 130
alpha-BHC	0.010	U	2.01	1.94		ug/L		96	70 - 130
beta-BHC	0.010	U	2.01	1.96		ug/L		97	70 - 130
Chlorobenzilate	0.030	U	2.01	2.52		ug/L		125	70 - 130
Chloroneb	0.070	U	2.01	2.23		ug/L		111	70 - 130
Chlorpyrifos	0.020	U	2.01	1.89		ug/L		94	70 - 130
delta-BHC	0.010	U	2.01	1.90		ug/L		94	70 - 130
Dichlorvos	0.010	U	2.01	1.99		ug/L		99	70 - 130
Endosulfan I	0.040	U	2.01	2.24		ug/L		111	70 - 130
Endosulfan II	0.040	U	2.01	2.21		ug/L		110	70 - 130
Endosulfan sulfate	0.020	U	2.01	1.88		ug/L		93	70 - 130
cis-Permethrin	0.020	U	2.01	2.07		ug/L		103	70 - 130
trans-Permethrin	0.020	U	2.01	2.02		ug/L		100	70 - 130
Caffeine	0.020	U	2.01	1.48		ug/L		74	41 - 110
Pendimethalin	0.020	U	2.01	2.13		ug/L		106	65 - 122
Terbutylazine	0.010	U	2.01	1.90		ug/L		94	70 - 130
Hexazinone	0.050	U	2.01	2.18		ug/L		108	70 - 130
Cyanazine	0.020	U	2.01	1.46		ug/L		72	70 - 130
Prometon	0.010	U * - F1	2.01	0.363	F1	ug/L		18	70 - 130
Desethylatrazine	0.010	U	2.01	0.985	J	ug/L		49	8 - 94
Deisopropylatrazine	0.040	U	2.01	0.282	J	ug/L		14	4 - 27
Prometryn	0.020	U	2.01	1.72		ug/L		85	70 - 130

QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-180257-3 MS

Matrix: Water

Analysis Batch: 47668

Client Sample ID: PW203-20230210

Prep Type: Total/NA

Prep Batch: 47583

Surrogate	MS %Recovery	MS Qualifier	Limits
Triphenylphosphate (Surr)	103		70 - 130
Perylene-d12 (Surr)	98		70 - 130
2-Nitro-m-xylene (Surr)	98		70 - 130

Lab Sample ID: 240-180257-4 DU

Matrix: Water

Analysis Batch: 47668

Client Sample ID: PW204-20230210

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
2,4-Dinitrotoluene	0.020	U *-	0.020	U *-	ug/L		NC	20
Acenaphthylene	0.010	U	0.010	U	ug/L		NC	34
Alachlor	0.010	U	0.010	U	ug/L		NC	15
Aldrin	0.0082	U	0.0081	U	ug/L		NC	18
Anthracene	0.010	U	0.010	U	ug/L		NC	52
Atrazine	0.010	U	0.010	U	ug/L		NC	17
alpha-Chlordane	0.010	U	0.010	U	ug/L		NC	15
Benzo[a]anthracene	0.010	U	0.010	U	ug/L		NC	14
Benzo[a]pyrene	0.012	U	0.012	U	ug/L		NC	26
Benzo[b]fluoranthene	0.010	U	0.010	U	ug/L		NC	20
Benzo[g,h,i]perylene	0.020	U	0.020	U	ug/L		NC	14
Benzo[k]fluoranthene	0.010	U	0.010	U	ug/L		NC	20
Bromacil	0.020	U	0.020	U	ug/L		NC	20
Butachlor	0.020	U	0.020	U	ug/L		NC	15
Butylbenzylphthalate	0.020	U	0.020	U	ug/L		NC	23
Chrysene	0.010	U	0.010	U	ug/L		NC	12
Di(2-ethylhexyl)adipate	0.020	U	0.020	U	ug/L		NC	16
Di(2-ethylhexyl)phthalate	0.10	U	0.10	U	ug/L		NC	18
Di-n-butyl phthalate	0.071	U	0.070	U	ug/L		NC	20
Diazinon	0.030	U	0.030	U	ug/L		NC	16
Dibenz(a,h)anthracene	0.010	U	0.010	U	ug/L		NC	19
Dieldrin	0.020	U	0.020	U	ug/L		NC	19
Diethylphthalate	0.020	U	0.020	U	ug/L		NC	21
Dimethoate	0.030	U	0.030	U	ug/L		NC	36
Dimethylphthalate	0.30	U	0.30	U	ug/L		NC	20
Endrin	0.010	U	0.0099	U	ug/L		NC	18
Fluoranthene	0.010	U	0.010	U	ug/L		NC	13
Fluorene	0.010	U	0.010	U	ug/L		NC	25
gamma-BHC (Lindane)	0.0085	U	0.0084	U	ug/L		NC	13
Heptachlor	0.0045	U	0.0044	U	ug/L		NC	15
Heptachlor epoxide	0.0041	U	0.0040	U	ug/L		NC	14
Hexachlorobenzene	0.010	U	0.010	U	ug/L		NC	14
Hexachlorocyclopentadiene	0.010	U	0.010	U	ug/L		NC	29
Indeno[1,2,3-cd]pyrene	0.010	U	0.010	U	ug/L		NC	25
Isophorone	0.010	U	0.010	U	ug/L		NC	44
Methoxychlor	0.010	U	0.010	U	ug/L		NC	14
Metolachlor	0.010	U	0.010	U	ug/L		NC	14
Metribuzin	0.010	U	0.010	U	ug/L		NC	24
Molinate	0.020	U	0.020	U	ug/L		NC	16

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-180257-4 DU

Matrix: Water

Analysis Batch: 47668

Client Sample ID: PW204-20230210

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Phenanthrene	0.010	U	0.010	U	ug/L		NC	14
Propachlor	0.010	U	0.010	U	ug/L		NC	12
Pyrene	0.010	U	0.010	U	ug/L		NC	15
Simazine	0.030	U	0.030	U	ug/L		NC	21
gamma-Chlordane	0.020	U	0.020	U	ug/L		NC	16
Trifluralin	0.020	U	0.020	U	ug/L		NC	19
trans-Nonachlor	0.020	U	0.020	U	ug/L		NC	17
Thiobencarb	0.010	U	0.010	U	ug/L		NC	11
1-Methylnaphthalene	0.020	U	0.020	U	ug/L		NC	20
2-Methylnaphthalene	0.010	U	0.010	U	ug/L		NC	20
4,4'-DDD	0.020	U	0.020	U	ug/L		NC	17
4,4'-DDE	0.010	U	0.010	U	ug/L		NC	19
4,4'-DDT	0.020	U	0.020	U	ug/L		NC	19
Acenaphthene	0.010	U	0.010	U	ug/L		NC	31
Chlorothalonil	0.020	U	0.020	U	ug/L		NC	15
Di-n-octyl phthalate	0.020	U	0.020	U	ug/L		NC	20
EPTC	0.010	U	0.010	U	ug/L		NC	18
Malathion	0.010	U	0.010	U	ug/L		NC	20
Naphthalene	0.010	U	0.010	U	ug/L		NC	46
Parathion	0.091	U	0.090	U	ug/L		NC	20
Terbacil	0.020	U	0.020	U	ug/L		NC	22
Endrin aldehyde	0.030	U	0.030	U	ug/L		NC	30
2,4'-DDD	0.010	U	0.010	U	ug/L		NC	30
2,4'-DDE	0.010	U	0.010	U	ug/L		NC	30
2,4'-DDT	0.010	U	0.010	U	ug/L		NC	30
2,6-Dinitrotoluene	0.041	U*-	0.040	U*-	ug/L		NC	30
Acetochlor	0.020	U	0.020	U	ug/L		NC	30
alpha-BHC	0.010	U	0.010	U	ug/L		NC	30
beta-BHC	0.010	U	0.010	U	ug/L		NC	30
Chlorobenzilate	0.030	U	0.030	U	ug/L		NC	30
Chloroneb	0.071	U	0.070	U	ug/L		NC	30
Chlorpyrifos	0.020	U	0.020	U	ug/L		NC	30
delta-BHC	0.010	U	0.010	U	ug/L		NC	30
Dichlorvos	0.010	U	0.010	U	ug/L		NC	30
Endosulfan I	0.041	U	0.040	U	ug/L		NC	30
Endosulfan II	0.041	U	0.040	U	ug/L		NC	30
Endosulfan sulfate	0.020	U	0.020	U	ug/L		NC	30
cis-Permethrin	0.020	U	0.020	U	ug/L		NC	30
trans-Permethrin	0.020	U	0.020	U	ug/L		NC	30
Caffeine	0.020	U	0.020	U	ug/L		NC	30
Pendimethalin	0.020	U	0.020	U	ug/L		NC	30
Terbutylazine	0.010	U	0.010	U	ug/L		NC	30
Hexazinone	0.051	U	0.050	U	ug/L		NC	30
Permethrin	0.020	U	0.020	U	ug/L		NC	
Chlordane (n.o.s.)	0.010	U	0.010	U	ug/L		NC	30
Cyanazine	0.020	U	0.020	U	ug/L		NC	20
Prometon	0.010	U*-	0.010	U*-	ug/L		NC	30
Desethylatrazine	0.010	U	0.010	U	ug/L		NC	51
Deisopropylatrazine	0.041	U	0.040	U	ug/L		NC	78

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QC Sample Results

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-180257-4 DU

Matrix: Water

Analysis Batch: 47668

Client Sample ID: PW204-20230210

Prep Type: Total/NA

Prep Batch: 47583

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Prometryn	0.020	U	0.020	U	ug/L		NC	25
Surrogate								
	%Recovery	DU Qualifier	Limits					
Triphenylphosphate (Surr)	106		70 - 130					
Perylene-d12 (Surr)	95		70 - 130					
2-Nitro-m-xylene (Surr)	95		70 - 130					

Preliminary Data

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QC Association Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

GC/MS VOA

Analysis Batch: 47575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-2	PW202-20230210	Total/NA	Water	524.2	
240-180257-5	FB-20230210	Total/NA	Water	524.2	
240-180257-6	TB-20230210	Total/NA	Water	524.2	
MB 810-47575/6	Method Blank	Total/NA	Water	524.2	

Analysis Batch: 47576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-2	PW202-20230210	Total/NA	Water	524.2	
240-180257-5	FB-20230210	Total/NA	Water	524.2	
240-180257-6	TB-20230210	Total/NA	Water	524.2	
MB 810-47576/6	Method Blank	Total/NA	Water	524.2	

Analysis Batch: 47591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-1	PW201-20230210	Total/NA	Water	524.2	
240-180257-3	PW203-20230210	Total/NA	Water	524.2	
240-180257-4	PW204-20230210	Total/NA	Water	524.2	
240-180257-5	FB-20230210	Total/NA	Water	524.2	
240-180257-6	TB-20230210	Total/NA	Water	524.2	
MB 810-47591/6	Method Blank	Total/NA	Water	524.2	

Analysis Batch: 47621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-1	PW201-20230210	Total/NA	Water	524.2 Ext	
240-180257-2	PW202-20230210	Total/NA	Water	524.2 Ext	
240-180257-3	PW203-20230210	Total/NA	Water	524.2 Ext	
240-180257-4	PW204-20230210	Total/NA	Water	524.2 Ext	
240-180257-5	FB-20230210	Total/NA	Water	524.2 Ext	
MB 810-47621/16	Method Blank	Total/NA	Water	524.2 Ext	

Analysis Batch: 47875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-1	PW201-20230210	Total/NA	Water	524.2	
240-180257-3	PW203-20230210	Total/NA	Water	524.2	
240-180257-4	PW204-20230210	Total/NA	Water	524.2	
MB 810-47875/6	Method Blank	Total/NA	Water	524.2	

Analysis Batch: 47876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-1	PW201-20230210	Total/NA	Water	524.2	
240-180257-3	PW203-20230210	Total/NA	Water	524.2	
240-180257-4	PW204-20230210	Total/NA	Water	524.2	
MB 810-47876/6	Method Blank	Total/NA	Water	524.2	

Analysis Batch: 47883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-2	PW202-20230210	Total/NA	Water	524.2	
MB 810-47883/4	Method Blank	Total/NA	Water	524.2	

QC Association Summary

Client: AECOM
 Project/Site: East Palestine

Job ID: 240-180257-1

GC/MS Semi VOA

Prep Batch: 47583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-1	PW201-20230210	Total/NA	Water	525.2	
240-180257-2	PW202-20230210	Total/NA	Water	525.2	
240-180257-3	PW203-20230210	Total/NA	Water	525.2	
240-180257-4	PW204-20230210	Total/NA	Water	525.2	
240-180257-5	FB-20230210	Total/NA	Water	525.2	
MB 810-47583/1-A	Method Blank	Total/NA	Water	525.2	
LCS 810-47583/2-A	Lab Control Sample	Total/NA	Water	525.2	
LLCS 810-47583/3-A	Lab Control Sample	Total/NA	Water	525.2	
240-180257-3 MS	PW203-20230210	Total/NA	Water	525.2	
240-180257-4 DU	PW204-20230210	Total/NA	Water	525.2	

Analysis Batch: 47668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-180257-1	PW201-20230210	Total/NA	Water	525.2	47583
240-180257-2	PW202-20230210	Total/NA	Water	525.2	47583
240-180257-3	PW203-20230210	Total/NA	Water	525.2	47583
240-180257-4	PW204-20230210	Total/NA	Water	525.2	47583
240-180257-5	FB-20230210	Total/NA	Water	525.2	47583
MB 810-47583/1-A	Method Blank	Total/NA	Water	525.2	47583
LCS 810-47583/2-A	Lab Control Sample	Total/NA	Water	525.2	47583
LLCS 810-47583/3-A	Lab Control Sample	Total/NA	Water	525.2	47583
240-180257-3 MS	PW203-20230210	Total/NA	Water	525.2	47583
240-180257-4 DU	PW204-20230210	Total/NA	Water	525.2	47583

Preliminary Data



Lab Chronicle

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: PW201-20230210

Lab Sample ID: 240-180257-1

Date Collected: 02/10/23 16:50

Matrix: Water

Date Received: 02/10/23 20:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47591	DC	EA SB	02/13/23 12:15
Total/NA	Analysis	524.2		1	47875	CM	EA SB	02/15/23 10:53
Total/NA	Analysis	524.2		1	47876	CM	EA SB	02/15/23 10:53
Total/NA	Analysis	524.2 Ext		1	47621	WD	EA SB	02/13/23 17:15
Total/NA	Prep	525.2			47583	HB	EA SB	02/13/23 08:25
Total/NA	Analysis	525.2		1	47668	TD	EA SB	02/13/23 23:15

Client Sample ID: PW202-20230210

Lab Sample ID: 240-180257-2

Date Collected: 02/10/23 17:05

Matrix: Water

Date Received: 02/10/23 20:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47883	DC	EA SB	02/15/23 09:34
Total/NA	Analysis	524.2		1	47575	CM	EA SB	02/13/23 12:34
Total/NA	Analysis	524.2		1	47576	CM	EA SB	02/13/23 12:34
Total/NA	Analysis	524.2 Ext		1	47621	WD	EA SB	02/13/23 17:40
Total/NA	Prep	525.2			47583	HB	EA SB	02/13/23 08:25
Total/NA	Analysis	525.2		1	47668	TD	EA SB	02/13/23 23:40

Client Sample ID: PW203-20230210

Lab Sample ID: 240-180257-3

Date Collected: 02/10/23 17:40

Matrix: Water

Date Received: 02/10/23 20:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47591	DC	EA SB	02/13/23 13:03
Total/NA	Analysis	524.2		1	47875	CM	EA SB	02/15/23 11:19
Total/NA	Analysis	524.2		1	47876	CM	EA SB	02/15/23 11:19
Total/NA	Analysis	524.2 Ext		1	47621	WD	EA SB	02/13/23 18:04
Total/NA	Prep	525.2			47583	HB	EA SB	02/13/23 08:25
Total/NA	Analysis	525.2		1	47668	TD	EA SB	02/14/23 00:05

Client Sample ID: PW204-20230210

Lab Sample ID: 240-180257-4

Date Collected: 02/10/23 18:00

Matrix: Water

Date Received: 02/10/23 20:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47591	DC	EA SB	02/13/23 13:26
Total/NA	Analysis	524.2		1	47875	CM	EA SB	02/15/23 11:44
Total/NA	Analysis	524.2		1	47876	CM	EA SB	02/15/23 11:44
Total/NA	Analysis	524.2 Ext		1	47621	WD	EA SB	02/13/23 18:28
Total/NA	Prep	525.2			47583	HB	EA SB	02/13/23 08:25
Total/NA	Analysis	525.2		1	47668	TD	EA SB	02/14/23 00:55

Lab Chronicle

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Client Sample ID: FB-20230210

Lab Sample ID: 240-180257-5

Date Collected: 02/10/23 16:25

Matrix: Water

Date Received: 02/10/23 20:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47591	DC	EA SB	02/13/23 13:50
Total/NA	Analysis	524.2		1	47575	CM	EA SB	02/13/23 13:49
Total/NA	Analysis	524.2		1	47576	CM	EA SB	02/13/23 13:49
Total/NA	Analysis	524.2 Ext		1	47621	WD	EA SB	02/13/23 18:52
Total/NA	Prep	525.2			47583	HB	EA SB	02/13/23 08:25
Total/NA	Analysis	525.2		1	47668	TD	EA SB	02/14/23 01:46

Client Sample ID: TB-20230210

Lab Sample ID: 240-180257-6

Date Collected: 02/10/23 00:00

Matrix: Water

Date Received: 02/10/23 20:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47591	DC	EA SB	02/13/23 14:14
Total/NA	Analysis	524.2		1	47575	CM	EA SB	02/13/23 11:45
Total/NA	Analysis	524.2		1	47576	CM	EA SB	02/13/23 11:45

Laboratory References:

EA SB = Eurofins Eaton South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Preliminary Data

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Accreditation/Certification Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Laboratory: Eurofins Eaton South Bend

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

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	5794.01	07-31-24
Alabama	State	40700	06-30-23
Alaska	State	IN00035	06-30-23
Arizona	State	AZ0432	07-26-23
Arkansas (DW)	State	EPA IN00035	06-30-23
California	State	2920	06-30-23
Colorado	State	IN00035	02-28-23
Connecticut	State	PH-0132	03-31-22 *
Delaware (DW)	State	IN00035	06-30-23
Florida	NELAP	E87775	06-30-23
Georgia (DW)	State	929	06-30-23
Hawaii	State	IN035	06-30-23
Idaho (DW)	State	IN00035	12-31-23
IL Dept. of Public Health (Micro)	State	17767	12-31-22 *
Illinois	NELAP	200001	09-30-23
Indiana	State	C-71-01	12-31-22 *
Indiana (Micro)	State	M-76-07	12-31-25
Iowa	State	IA Lab #098	11-01-23
Kansas	NELAP	E-10233	10-31-23
Kentucky (DW)	State	KY90056	12-31-22 *
Louisiana (DW)	State	LA014	12-31-23
Maine	State	IN00035	05-01-23
Maryland	State	209	03-31-23
Massachusetts	State	M-IN035	06-30-23
MI - RadChem Recognition	State	9926	06-30-23
Michigan	State	9926	12-31-22 *
Minnesota	NELAP	1989807	12-31-23
Mississippi	State	IN00035	06-30-22 *
Missouri	State	880	09-30-24
Montana (DW)	State	CERT0026	01-02-24
Nebraska	State	NE-OS-05-04	06-30-23
Nevada	State	IN000352021-2	07-31-23
New Hampshire	NELAP	2124	11-05-23
New Jersey	NELAP	IN598	06-30-23
New Mexico	State	IN00035	06-30-23
New York	NELAP	11398	04-01-23
North Carolina (DW)	State	18700	07-31-23
North Dakota	State	R-035	06-30-23
Ohio	State	87775	06-30-23
Oklahoma	NELAP	D9508	08-31-23
Oregon	NELAP	4156	09-16-23
Pennsylvania	NELAP	68-00466	04-30-23
Puerto Rico	State	IN00035	04-01-23
Rhode Island	State	LAO00343	12-30-22 *
South Carolina	State	95005001	06-30-23
South Dakota (DW)	State	IN00035	12-31-22 *
Tennessee	State	TN02973	06-30-23
Texas	NELAP	T104704187-22-16	12-31-23
Texas	TCEQ Water Supply	TX207	06-30-23
USEPA Reg X SDWA	US Federal Programs	IN00035	08-20-22 *

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

Accreditation/Certification Summary

Client: AECOM
Project/Site: East Palestine

Job ID: 240-180257-1

Laboratory: Eurofins Eaton South Bend (Continued)

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25
Utah	NELAP	IN00035	07-31-23
Vermont	State	VT-8775	11-15-23
Virginia	NELAP	460275	03-14-23
Washington	State	C837	01-01-23 *
West Virginia (DW)	State	9927 C	12-31-22 *
Wisconsin	State	999766900	08-31-23
Wisconsin (Micro)	State	10121	12-31-22 *
Wyoming	State	8TMS-L	06-30-23

Preliminary Data

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



Chain of Custody Record

Client Information		Sampler: Scott Logan		Lab PM: Brooks, Kris M	Carrier Tracking No(s): 240-104726-37549-1		COC No: 240-104726-37549-1
Client Contact: Stephanie Knight 919-495-5766		Phone: 419-787-9589		E-Mail: Kris.Brooks@et.eurofins.com	State of Origin: OH		Page: 1 of 1
Company: AECOM		PWSID:		Analysis Requested		Job #: 60696193	
Address: 40 S Market St		Due Date Requested:		Perform MSMSD (Yes or No)		Preservation Codes:	
City: East Palestine		TAT Requested (days):		Field Filtered Sample (Yes or No)		A - HCL B - Hexane N - None O - ASNO2 P - Na2O4S D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Z - other (specify)	
State, Zip: OH 44413		Compliance Project: Yes () No ()		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		M - HCL N - None O - ASNO2 P - Na2O4S R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Phone:		WO #:		Sample Date		Other:	
Email: Stephanie.Knight@aecom.com		Project #: 24030748		Sample Time		Special Instructions/Note:	
Project Name: East Palestine		SSOW#:		Sample Type (C=Comp, G=grab)		Total Number of Containers	
Site: PWS		Sample Date		Sample Time		6	
Sample Identification		Sample Date		Sample Time		6	
PW201 - 20230210		2/10/23		1650		6	
PW202 - 20230210		2/10/23		1705		6	
PW203 - 20230210		2/10/23		1740		6	
PW204 - 20230210		2/10/23		1800		6	
FB - 20230210		2/10/23		1625		6	
TB - 20230210		2/10/23		-		2	
Possible Hazard Identification		Date:		Time:		Special Instructions/Note:	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Date/Time: 02-10-2023 1900		Date/Time: 7:30		Request No. 2023 on labels as Na2SO3.	
Deliverable Requested: I, II, III, IV, Other (specify)		Date:		Time:		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Empty Kit Relinquished by:		Date:		Time:		Special Instructions/QC Requirements:	
Relinquished by: Scott Logan		Date/Time: 02-10-2023		Date/Time: 2-10-23		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Relinquished by: Stephanie Knight		Date/Time: 2-10-23		Date/Time: 20:50		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Relinquished by: Stephanie Knight		Date/Time: 2-10-23		Date/Time: 20:50		Company: AECOM	
Custody Seals Intact: Yes () No ()		Date/Time: 2-10-23		Date/Time: 20:50		Company: AECOM	
Custody Seal No.:		Date/Time: 2-10-23		Date/Time: 20:50		Company: AECOM	



Barberton Facility

Client AECOM

Site Name _____

Cooler unpacked by:

Cooler Received on 2-10-23

Opened on 2-10-23

(MK)

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off (Eurofins Courier) Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt See Multiple Cooler Form
 - IR GUN # IR-13 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 - IR GUN # IR-16 (CF -0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 - IR GUN # IR-17 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

- 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ea
 - Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
 - Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? (Yes) No NA
 - Were tamper/custody seals intact and uncompromised? (Yes) No NA
- 3. Shippers' packing slip attached to the cooler(s)? (Yes) No
- 4. Did custody papers accompany the sample(s)? (Yes) No
- 5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
- 6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
- 7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
- 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
- 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? (Yes) No
- 10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
- 11. Sufficient quantity received to perform indicated analyses? (Yes) No
- 12. Are these work share samples and all listed on the COC? (Yes) No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

If yes, Questions 13-17 have been checked at the originating laboratory.

- 13. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA)
- 14. Were VOAs on the COC? (Yes) No
- 15. Were air bubbles >6 mm in any VOA vials? (Yes) No NA
- 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered (Yes) No
- 17. Was a LL Hg or Me Hg trip blank present? (Yes) No

pH Strip Lot# HC203064-291590

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page

Samples processed by: _____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) 1x40 Ascorbic Pw 202, 2x40 Ascorbic Pw 202, 3x40 Ascorbic and 1x40 NP for FB. were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Eurofins - Canton Sample Receipt Multiple Cooler Form											
Cooler Description (Circle)				IR Gun # (Circle)			Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
EC	Client	Box	Other	IR-13	IR-16	IR-17	9.9	9.7	Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17	7.4	7.2	Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	
EC	Client	Box	Other	IR-13	IR-16	IR-17			Wet Ice	Blue Ice	Dry Ice
EC	Client	Box	Other	IR-13	IR-16	IR-17			Water	None	

See Temperature Excursion Form

Login Sample Receipt Checklist

Client: AECOM

Job Number: 240-180257-1

Login Number: 180257

List Source: Eurofins Eaton South Bend

List Number: 2

List Creation: 02/11/23 10:56 AM

Creator: Lippincott, Morgan

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	False	Client provided containers

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