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R5\_EastPalestine@epa.gov

March 10, 2023

Josh Peters  
On-Scene Coordinator  
U.S. Environmental Protection Agency, Region 5  
Superfund and Emergency Management Division  
2565 Plymouth Road  
Ann Arbor, MI 48105

**Subject: Data Validation Reports  
E Palestine Site - ER  
EPA Contract No.: 68HE0519D0005  
Task Order/Task Order Line Item No.: 68HE0520F0032/0001EB201  
Document Tracking No. 1680**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting these data validation reports for ten air samples collected at the E Palestine site. The samples were collected on February 22-25, 2023, and were analyzed for VOCs by ALS Environmental. The final laboratory data package was received on March 1, 2023.

Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

If you have any questions regarding these data validation reports, please call me at (509) 688-5957.

Sincerely,

A handwritten signature in blue ink that reads 'Debbie Kutsal'.

Deb Kutsal  
Senior Chemist


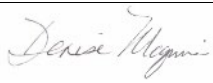
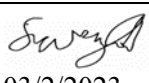
Enclosure

cc: Karl Schultz, Tetra Tech Program Manager  
Dustin Grams, Tetra Tech Project Manager  
Mayra Arroyo Ortiz, Tetra Tech Project Document Control Coordinator  
TO-TOLIN File

**ATTACHMENT**

**DATA VALIDATION REPORTS  
ALS ENVIRONMENTAL REPORT NOS. P2300788, P2300826,  
P2300840, AND P2300842**

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

<b>Site Name</b>	E Palestine Site - ER		<b>TO/TOLIN No.</b>	68HE0520F0032/0001EB201
<b>Document Tracking No.</b>	1680a		<b>Technical Reviewer (signature and date)</b>	 3/3/2023
<b>Data Reviewer (signature and date)</b>	 March 2, 2023	 03/2/2023	<b>Laboratory</b>	ALS Environmental, Simi Valley, CA
<b>Laboratory Report No.</b>	P2300788			
<b>Analyses</b>	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes			
<b>Samples and Matrix</b>	Three air samples, including one field duplicate			
<b>Collection Date(s)</b>	02/22/2023			
<b>Field Duplicate Pairs</b>	EPD-WA-01-022223 and EPD-WA-02-022223			
<b>Field QC Blanks</b>	NA			

**INTRODUCTION**

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

**OVERALL EVALUATION**

No rejection of data was required for this data package. The data can be used with the qualifications indicated in this checklist.

**Data completeness:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	TO-15 SIM results are reported in units of $\mu\text{g}/\text{m}^3$ and ppbV in the analytical data package, however, these results are only reported in units of $\mu\text{g}/\text{m}^3$ in the EDD. No qualifications are required.

**Sample preservation, receipt, and holding times:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	There were no custody seals on the canisters/shipping containers. No qualifications are required.

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
Y	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
N	The relative percent difference for the chloromethane results in field duplicate pair EPD-WA-01-022223 and EPD-WA-02-022223 exceeded the 50% acceptance criteria. The chloromethane result for EPD-WA-01-022223 and EPD-WA-02-022223 was qualified as estimated (flagged J).

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
N	TO-15 SIM: High LCS and LCSD percent recoveries of vinyl chloride. Vinyl chloride result was qualified as estimated with possible high bias (flagged J+) in all three samples.

**Sample dilutions:**

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for EPD-A-01-022223 was 1.42, canister dilution factor for EPD-WA-01-022223 was 1.46, and canister dilution factor for EPD-WA-02-022223 was 1.41.

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Detections between the method detection limit (MDL) and reporting limit (RL) were reported and qualified as estimated (flagged J) by the laboratory.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
Y	Several tentatively identified compounds (TICs) were detected in all three samples. The known TICs were qualified as tentatively identified and estimated (flagged NJ). Unknown TICs were qualified as estimated (flagged J). 2-Butoxyethanol and 2-ethylhexyl acrylate in all three samples and butyl ester-2-propenoic acid in EPD-A-01-022223 were reported as not detected and qualified as manually searched for, but not found in the sample (flagged U, NF).

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Other [None]:**

Within Criteria	Exceedance/Notes
NA	

**Overall Qualifications:**

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NF	The tentatively identified compound was manually searched for but was not found in the sample.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300788

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-A-01-022223	TO-15	2,2,4,6,6-PENTAMETHYLHEPTANE	3.2	T			UG/M3	3.2	NJ
EPD-A-01-022223	TO-15	2,2,6-TRIMETHYLOCTANE	26	T			UG/M3	26	NJ
EPD-A-01-022223	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022223	TO-15	2-Ethyl-1-hexanol	4.9	T			UG/M3	4.9	U,NF
EPD-A-01-022223	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022223	TO-15	2-ETHYLHEXYLACETATE	8.2	T			UG/M3	8.2	U,NF
EPD-A-01-022223	TO-15	2-Methylbutane	17	T			UG/M3	17	U,NF
EPD-A-01-022223	TO-15	2-Methylpropane	340	T			UG/M3	340	U,NF
EPD-A-01-022223	TO-15	3-ETHYL-2,2-DIMETHYLPENTANE	5.7	T			UG/M3	5.7	U,NF
EPD-A-01-022223	TO-15	Benzene	3.3	T			UG/M3	3.3	NJ
EPD-A-01-022223	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022223	TO-15	C12H26 Branched Alkane	12	T			UG/M3	12	NJ
EPD-A-01-022223	TO-15	C12H26 Branched Alkane	10	T			UG/M3	10	NJ
EPD-A-01-022223	TO-15	C12H26 Branched Alkane	4.0	T			UG/M3	4.0	NJ
EPD-A-01-022223	TO-15	Ethanol	6.5	T			UG/M3	6.5	NJ
EPD-A-01-022223	TO-15	Ethyl Acetate	810	T			UG/M3	810	NJ
EPD-A-01-022223	TO-15	n-Butane	4.2	T			UG/M3	4.2	NJ
EPD-A-01-022223	TO-15	n-Pentane	25	T			UG/M3	25	NJ
EPD-A-01-022223	TO-15	Propane	6.6	T			UG/M3	6.6	NJ
EPD-A-01-022223	TO-15	Toluene	34	T			UG/M3	34	NJ
EPD-A-01-022223	TO-15	Unknown Hydrocarbon	5.7	T			UG/M3	5.7	J
EPD-A-01-022223	TO-15	Unknown Hydrocarbon	2.9	T			UG/M3	2.9	J
EPD-A-01-022223	TO-15	Vinyl Acetate	5.8	T			UG/M3	5.8	NJ
EPD-A-01-022223	TO-15 SIM	1,1,1-Trichloroethane	0.036	U	0.013	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.036	U	0.012	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.0084	0.14	UG/M3	0.14	U
EPD-A-01-022223	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.40		0.012	0.036	UG/M3	0.40	
EPD-A-01-022223	TO-15 SIM	1,1-Dichloroethane	0.036	U	0.012	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	1,1-Dichloroethene	0.036	U	0.012	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	1,2,4-Trichlorobenzene	0.071	U	0.028	0.071	UG/M3	0.071	U
EPD-A-01-022223	TO-15 SIM	1,2,4-Trimethylbenzene	0.20		0.023	0.14	UG/M3	0.20	
EPD-A-01-022223	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-A-01-022223	TO-15 SIM	1,2-Dibromoethane	0.036	U	0.0095	0.036	UG/M3	0.036	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-A-01-022223	TO-15 SIM	1,2-Dichlorobenzene	0.036	U	0.026	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	1,2-Dichloroethane	0.097		0.012	0.036	UG/M3	0.097	
EPD-A-01-022223	TO-15 SIM	1,2-Dichloropropane	0.64		0.0087	0.036	UG/M3	0.64	
EPD-A-01-022223	TO-15 SIM	1,3,5-Trimethylbenzene	0.062	J	0.02	0.14	UG/M3	0.062	J
EPD-A-01-022223	TO-15 SIM	1,3-Butadiene	0.051	J	0.011	0.071	UG/M3	0.051	J
EPD-A-01-022223	TO-15 SIM	1,3-Dichlorobenzene	0.036	U	0.024	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	1,4-Dichlorobenzene	0.59		0.028	0.036	UG/M3	0.59	
EPD-A-01-022223	TO-15 SIM	1,4-Dioxane	0.14	U	0.012	0.14	UG/M3	0.14	U
EPD-A-01-022223	TO-15 SIM	Acetone	5.7		0.33	3.6	UG/M3	5.7	
EPD-A-01-022223	TO-15 SIM	Acrolein	0.19	J	0.05	0.28	UG/M3	0.19	J
EPD-A-01-022223	TO-15 SIM	Benzene	3.0		0.021	0.11	UG/M3	3.0	
EPD-A-01-022223	TO-15 SIM	Bromodichloromethane	0.036	U	0.0082	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	Bromomethane	0.027	J	0.0095	0.036	UG/M3	0.027	J
EPD-A-01-022223	TO-15 SIM	Carbon Tetrachloride	0.39		0.01	0.036	UG/M3	0.39	
EPD-A-01-022223	TO-15 SIM	Chlorobenzene	0.016	J	0.014	0.14	UG/M3	0.016	J
EPD-A-01-022223	TO-15 SIM	Chloroethane	0.015	J	0.011	0.036	UG/M3	0.015	J
EPD-A-01-022223	TO-15 SIM	Chloroform	0.20		0.011	0.14	UG/M3	0.20	
EPD-A-01-022223	TO-15 SIM	Chloromethane	0.33		0.037	0.071	UG/M3	0.33	
EPD-A-01-022223	TO-15 SIM	cis-1,2-Dichloroethene	0.036	U	0.01	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	cis-1,3-Dichloropropene	0.071	U	0.01	0.071	UG/M3	0.071	U
EPD-A-01-022223	TO-15 SIM	Dibromochloromethane	0.036	U	0.0091	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.1		0.012	0.071	UG/M3	2.1	
EPD-A-01-022223	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.94		0.011	0.14	UG/M3	0.94	
EPD-A-01-022223	TO-15 SIM	Ethylbenzene	0.50		0.017	0.14	UG/M3	0.50	
EPD-A-01-022223	TO-15 SIM	Hexachlorobutadiene	0.14	U	0.018	0.14	UG/M3	0.14	U
EPD-A-01-022223	TO-15 SIM	m,p-Xylenes	1.6		0.034	0.14	UG/M3	1.6	
EPD-A-01-022223	TO-15 SIM	Methyl tert-Butyl Ether	0.036	U	0.017	0.036	UG/M3	0.036	U
EPD-A-01-022223	TO-15 SIM	Naphthalene	0.14	U	0.031	0.14	UG/M3	0.14	U
EPD-A-01-022223	TO-15 SIM	o-Xylene	0.70		0.018	0.14	UG/M3	0.70	
EPD-A-01-022223	TO-15 SIM	Styrene	0.45		0.017	0.14	UG/M3	0.45	
EPD-A-01-022223	TO-15 SIM	Tetrachloroethene	0.57		0.012	0.036	UG/M3	0.57	
EPD-A-01-022223	TO-15 SIM	Toluene	37		0.017	0.14	UG/M3	37	
EPD-A-01-022223	TO-15 SIM	trans-1,2-Dichloroethene	0.029	J	0.016	0.036	UG/M3	0.029	J



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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-A-01-022223	TO-15 SIM	trans-1,3-Dichloropropene	0.071	U	0.0068	0.071	UG/M3	0.071	U
EPD-A-01-022223	TO-15 SIM	Trichloroethene	0.17		0.011	0.036	UG/M3	0.17	
EPD-A-01-022223	TO-15 SIM	Trichlorofluoromethane	1.0		0.012	0.071	UG/M3	1.0	
EPD-A-01-022223	TO-15 SIM	Vinyl Chloride	0.061		0.017	0.036	UG/M3	0.061	J+
EPD-WA-01-022223	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-022223	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-022223	TO-15	2-Methylbutane	7.9	T			UG/M3	7.9	NJ
EPD-WA-01-022223	TO-15	2-Methylpropane	5.6	T			UG/M3	5.6	NJ
EPD-WA-01-022223	TO-15	2-Methylpropene	3.1	T			UG/M3	3.1	NJ
EPD-WA-01-022223	TO-15	BUTYL ESTER-2-PROPENOIC ACID	4.3	T			UG/M3	4.3	NJ
EPD-WA-01-022223	TO-15	Ethyl Acetate	4.2	T			UG/M3	4.2	NJ
EPD-WA-01-022223	TO-15	n-Butane	9.5	T			UG/M3	9.5	NJ
EPD-WA-01-022223	TO-15	Propane	4.8	T			UG/M3	4.8	NJ
EPD-WA-01-022223	TO-15 SIM	1,1,1-Trichloroethane	0.037	U	0.013	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.037	U	0.013	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,1,2-Trichloroethane	0.15	U	0.0086	0.15	UG/M3	0.15	U
EPD-WA-01-022223	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.53		0.012	0.037	UG/M3	0.53	
EPD-WA-01-022223	TO-15 SIM	1,1-Dichloroethane	0.037	U	0.012	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,1-Dichloroethene	0.037	U	0.013	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,2,4-Trichlorobenzene	0.073	U	0.029	0.073	UG/M3	0.073	U
EPD-WA-01-022223	TO-15 SIM	1,2,4-Trimethylbenzene	0.20		0.023	0.15	UG/M3	0.20	
EPD-WA-01-022223	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.15	U	0.02	0.15	UG/M3	0.15	U
EPD-WA-01-022223	TO-15 SIM	1,2-Dibromoethane	0.037	U	0.0098	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,2-Dichlorobenzene	0.037	U	0.026	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,2-Dichloroethane	0.073		0.012	0.037	UG/M3	0.073	
EPD-WA-01-022223	TO-15 SIM	1,2-Dichloropropane	0.025	J	0.0089	0.037	UG/M3	0.025	J
EPD-WA-01-022223	TO-15 SIM	1,3,5-Trimethylbenzene	0.057	J	0.020	0.15	UG/M3	0.057	J
EPD-WA-01-022223	TO-15 SIM	1,3-Butadiene	0.085		0.012	0.073	UG/M3	0.085	
EPD-WA-01-022223	TO-15 SIM	1,3-Dichlorobenzene	0.037	U	0.025	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	1,4-Dichlorobenzene	0.23		0.029	0.037	UG/M3	0.23	
EPD-WA-01-022223	TO-15 SIM	1,4-Dioxane	0.15	U	0.013	0.15	UG/M3	0.15	U
EPD-WA-01-022223	TO-15 SIM	Acetone	4.3		0.34	3.7	UG/M3	4.3	
EPD-WA-01-022223	TO-15 SIM	Acrolein	0.2	J	0.051	0.29	UG/M3	0.20	J

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300788

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-01-022223	TO-15 SIM	Benzene	0.90		0.022	0.11	UG/M3	0.90	
EPD-WA-01-022223	TO-15 SIM	Bromodichloromethane	0.037	U	0.0085	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	Bromomethane	0.027	J	0.0098	0.037	UG/M3	0.027	J
EPD-WA-01-022223	TO-15 SIM	Carbon Tetrachloride	0.50		0.010	0.037	UG/M3	0.50	
EPD-WA-01-022223	TO-15 SIM	Chlorobenzene	0.15	U	0.014	0.15	UG/M3	0.15	U
EPD-WA-01-022223	TO-15 SIM	Chloroethane	0.015	J	0.011	0.037	UG/M3	0.015	J
EPD-WA-01-022223	TO-15 SIM	Chloroform	0.075	J	0.012	0.15	UG/M3	0.075	J
EPD-WA-01-022223	TO-15 SIM	Chloromethane	0.58		0.038	0.073	UG/M3	0.58	J
EPD-WA-01-022223	TO-15 SIM	cis-1,2-Dichloroethene	0.037	U	0.011	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	cis-1,3-Dichloropropene	0.073	U	0.010	0.073	UG/M3	0.073	U
EPD-WA-01-022223	TO-15 SIM	Dibromochloromethane	0.037	U	0.0093	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.7		0.012	0.073	UG/M3	2.7	
EPD-WA-01-022223	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.34		0.011	0.15	UG/M3	0.34	
EPD-WA-01-022223	TO-15 SIM	Ethylbenzene	0.17		0.018	0.15	UG/M3	0.17	
EPD-WA-01-022223	TO-15 SIM	Hexachlorobutadiene	0.15	U	0.019	0.15	UG/M3	0.15	U
EPD-WA-01-022223	TO-15 SIM	m,p-Xylenes	0.67		0.035	0.15	UG/M3	0.67	
EPD-WA-01-022223	TO-15 SIM	Methyl tert-Butyl Ether	0.037	U	0.018	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	Naphthalene	0.039	J	0.032	0.15	UG/M3	0.039	J
EPD-WA-01-022223	TO-15 SIM	o-Xylene	0.24		0.019	0.15	UG/M3	0.24	
EPD-WA-01-022223	TO-15 SIM	Styrene	0.049	J	0.018	0.15	UG/M3	0.049	J
EPD-WA-01-022223	TO-15 SIM	Tetrachloroethene	0.11		0.013	0.037	UG/M3	0.11	
EPD-WA-01-022223	TO-15 SIM	Toluene	2.2		0.018	0.15	UG/M3	2.2	
EPD-WA-01-022223	TO-15 SIM	trans-1,2-Dichloroethene	0.037	U	0.016	0.037	UG/M3	0.037	U
EPD-WA-01-022223	TO-15 SIM	trans-1,3-Dichloropropene	0.073	U	0.007	0.073	UG/M3	0.073	U
EPD-WA-01-022223	TO-15 SIM	Trichloroethene	0.018	J	0.011	0.037	UG/M3	0.018	J
EPD-WA-01-022223	TO-15 SIM	Trichlorofluoromethane	1.3		0.012	0.073	UG/M3	1.3	
EPD-WA-01-022223	TO-15 SIM	Vinyl Chloride	1.3		0.018	0.037	UG/M3	1.3	J+
EPD-WA-02-022223	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-WA-02-022223	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-WA-02-022223	TO-15	2-Methylbutane	8.5	T			UG/M3	8.5	NJ
EPD-WA-02-022223	TO-15	2-Methylpropane	7.7	T			UG/M3	7.7	NJ
EPD-WA-02-022223	TO-15	2-Methylpropene	3.0	T			UG/M3	3.0	NJ
EPD-WA-02-022223	TO-15	BUTYL ESTER-2-PROPENOIC ACID	4.3	T			UG/M3	4.3	NJ


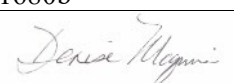
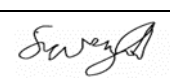
E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300788

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-02-022223	TO-15	Ethyl Acetate	3.6	T			UG/M3	3.6	NJ
EPD-WA-02-022223	TO-15	n-Butane	9.7	T			UG/M3	9.7	NJ
EPD-WA-02-022223	TO-15	n-Pentane	3.2	T			UG/M3	3.2	NJ
EPD-WA-02-022223	TO-15	Propane	7.2	T			UG/M3	7.2	NJ
EPD-WA-02-022223	TO-15 SIM	1,1,1-Trichloroethane	0.035	U	0.013	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.0083	0.14	UG/M3	0.14	U
EPD-WA-02-022223	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.47		0.011	0.035	UG/M3	0.47	
EPD-WA-02-022223	TO-15 SIM	1,1-Dichloroethane	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,1-Dichloroethene	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,2,4-Trichlorobenzene	0.071	U	0.028	0.071	UG/M3	0.071	U
EPD-WA-02-022223	TO-15 SIM	1,2,4-Trimethylbenzene	0.19		0.023	0.14	UG/M3	0.19	
EPD-WA-02-022223	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-WA-02-022223	TO-15 SIM	1,2-Dibromoethane	0.035	U	0.0094	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,2-Dichlorobenzene	0.035	U	0.025	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,2-Dichloroethane	0.067		0.012	0.035	UG/M3	0.067	
EPD-WA-02-022223	TO-15 SIM	1,2-Dichloropropane	0.026	J	0.0086	0.035	UG/M3	0.026	J
EPD-WA-02-022223	TO-15 SIM	1,3,5-Trimethylbenzene	0.050	J	0.02	0.14	UG/M3	0.050	J
EPD-WA-02-022223	TO-15 SIM	1,3-Butadiene	0.071		0.011	0.071	UG/M3	0.071	
EPD-WA-02-022223	TO-15 SIM	1,3-Dichlorobenzene	0.035	U	0.024	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	1,4-Dichlorobenzene	0.29		0.028	0.035	UG/M3	0.29	
EPD-WA-02-022223	TO-15 SIM	1,4-Dioxane	0.14	U	0.012	0.14	UG/M3	0.14	U
EPD-WA-02-022223	TO-15 SIM	Acetone	3.8		0.32	3.5	UG/M3	3.8	
EPD-WA-02-022223	TO-15 SIM	Acrolein	0.14	J	0.049	0.28	UG/M3	0.14	J
EPD-WA-02-022223	TO-15 SIM	Benzene	0.82		0.021	0.11	UG/M3	0.82	
EPD-WA-02-022223	TO-15 SIM	Bromodichloromethane	0.035	U	0.0082	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	Bromomethane	0.026	J	0.0094	0.035	UG/M3	0.026	J
EPD-WA-02-022223	TO-15 SIM	Carbon Tetrachloride	0.45		0.01	0.035	UG/M3	0.45	
EPD-WA-02-022223	TO-15 SIM	Chlorobenzene	0.14	U	0.014	0.14	UG/M3	0.14	U
EPD-WA-02-022223	TO-15 SIM	Chloroethane	0.013	J	0.011	0.035	UG/M3	0.013	J
EPD-WA-02-022223	TO-15 SIM	Chloroform	0.068	J	0.011	0.14	UG/M3	0.068	J
EPD-WA-02-022223	TO-15 SIM	Chloromethane	0.33		0.037	0.071	UG/M3	0.33	J
EPD-WA-02-022223	TO-15 SIM	cis-1,2-Dichloroethene	0.035	U	0.01	0.035	UG/M3	0.035	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300788

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-02-022223	TO-15 SIM	cis-1,3-Dichloropropene	0.071	U	0.01	0.071	UG/M3	0.071	U
EPD-WA-02-022223	TO-15 SIM	Dibromochloromethane	0.035	U	0.009	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.4		0.012	0.071	UG/M3	2.4	
EPD-WA-02-022223	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.31		0.011	0.14	UG/M3	0.31	
EPD-WA-02-022223	TO-15 SIM	Ethylbenzene	0.16		0.017	0.14	UG/M3	0.16	
EPD-WA-02-022223	TO-15 SIM	Hexachlorobutadiene	0.14	U	0.018	0.14	UG/M3	0.14	U
EPD-WA-02-022223	TO-15 SIM	m,p-Xylenes	0.61		0.034	0.14	UG/M3	0.61	
EPD-WA-02-022223	TO-15 SIM	Methyl tert-Butyl Ether	0.035	U	0.017	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	Naphthalene	0.089	J	0.031	0.14	UG/M3	0.089	J
EPD-WA-02-022223	TO-15 SIM	o-Xylene	0.22		0.018	0.14	UG/M3	0.22	
EPD-WA-02-022223	TO-15 SIM	Styrene	0.055	J	0.017	0.14	UG/M3	0.055	J
EPD-WA-02-022223	TO-15 SIM	Tetrachloroethene	0.11		0.012	0.035	UG/M3	0.11	
EPD-WA-02-022223	TO-15 SIM	Toluene	2.3		0.017	0.14	UG/M3	2.3	
EPD-WA-02-022223	TO-15 SIM	trans-1,2-Dichloroethene	0.035	U	0.016	0.035	UG/M3	0.035	U
EPD-WA-02-022223	TO-15 SIM	trans-1,3-Dichloropropene	0.071	U	0.0068	0.071	UG/M3	0.071	U
EPD-WA-02-022223	TO-15 SIM	Trichloroethene	0.040		0.011	0.035	UG/M3	0.040	
EPD-WA-02-022223	TO-15 SIM	Trichlorofluoromethane	1.2		0.011	0.071	UG/M3	1.2	
EPD-WA-02-022223	TO-15 SIM	Vinyl Chloride	1.2		0.017	0.035	UG/M3	1.2	J+

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

<b>Site Name</b>	E Palestine Site - ER		<b>TO/TOLIN No.</b>	68HE0520F0032/0001EB201
<b>Document Tracking No.</b>	1680b		<b>Technical Reviewer (signature and date)</b>	 3/3/2023
<b>Data Reviewer (signature and date)</b>	 March 1, 2023	 03/2/2023	<b>Laboratory</b>	ALS Environmental, Simi Valley, CA
<b>Laboratory Report No.</b>	P2300826			
<b>Analyses</b>	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes			
<b>Samples and Matrix</b>	Two air samples			
<b>Collection Date(s)</b>	02/23/2023			
<b>Field Duplicate Pairs</b>	NA			
<b>Field QC Blanks</b>	NA			

**INTRODUCTION**

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

**OVERALL EVALUATION**

No rejection of data was required for this data package. The data can be used with the qualifications indicated in this checklist.

**Data completeness:**

Within Criteria	Exceedance/Notes
N	TO-15 SIM results are reported in units of $\mu\text{g}/\text{m}^3$ and ppbV in the analytical data package; however, the results are only reported in units of $\mu\text{g}/\text{m}^3$ in the EDD. No qualifications are required. The container labels for sample EPD-A-01-022323 had an incorrect sample ID of EPD-A-01-022223 and an incorrect sample date of 2/22/2023. Tetra Tech notified the lab of the errors, and the sample was logged in with the correct ID and sample date (EPD-A-01-022323 with a collection date of 2/23/2023). Additionally, sample EPD-WA-03-022323, also collected on 2/23/2023, had an error on the chain-of-custody (COC) form such that it was originally logged as EPD-WA-03-022223. These errors were corrected in the lab report. No qualifications are required.

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Sample preservation, receipt, and holding times:**

Within Criteria	Exceedance/Notes
Y	

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
Y	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Field duplicates:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
NA	

**LCSs/LCSDs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	

**Sample dilutions:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Canister dilution factor for EPD-WA-03-022323 was 1.52 and canister dilution factor for EPD-A-01-022323 was 1.40.

**Re-extraction and reanalysis:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
NA	

**MDLs/RLs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Detections between the method detection limit (MDL) and reporting limit (RL) were reported and qualified as estimated (flagged J) by the laboratory.

**Tentatively identified compounds:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Several tentatively identified compounds (TICs) were detected in both samples. The known TICs were qualified as tentatively identified (flagged NJ). 2-Butoxyethanol, 2-ethylhexyl acrylate, and butyl ester-2-propenoic acid in EPD-A-01-022323 and EPD-WA-03-022323 were reported as nondetect and qualified as searched for, but not found in the sample (flagged U, NF).

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Tentatively identified compounds (continued):**

Within Criteria	Exceedance/Notes
Y	Sulfur dioxide was tentatively identified in both samples. Since EPA Method TO-15 is not an appropriate method for quantifying sulfur dioxide, the laboratory qualified the result with a “>” sign because the numerical value is probably biased low. The sulfur dioxide result in EPD-A-01-022323 and EPD-WA-03-022323 were qualified as tentatively identified and possibly biased low (flagged NJ-).

**Other [None]:**

Within Criteria	Exceedance/Notes
NA	

**Overall Qualifications:**

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NF	The tentatively identified compound was manually searched for but was not found in the sample.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
NJ-	The tentatively identified compound result is probably biased low because TO-15 is not an appropriate method for quantifying it.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.



**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

E PALESTINE SITE - ER ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300826

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-A-01-022323	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022323	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022323	TO-15	2-Methylbutane	5.4	T			UG/M3	5.4	NJ
EPD-A-01-022323	TO-15	2-Methylpropane	5.0	T			UG/M3	5.0	NJ
EPD-A-01-022323	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022323	TO-15	Ethyl Acetate	3.7	T			UG/M3	3.7	NJ
EPD-A-01-022323	TO-15	n-Butane	4.2	T			UG/M3	4.2	NJ
EPD-A-01-022323	TO-15	Propane	4.0	T			UG/M3	4.0	NJ
EPD-A-01-022323	TO-15	Sulfur Dioxide	21	!,T			UG/M3	21	NJ-
EPD-A-01-022323	TO-15 SIM	1,1,1-Trichloroethane	0.035	U	0.013	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.0083	0.14	UG/M3	0.14	U
EPD-A-01-022323	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.46		0.011	0.035	UG/M3	0.46	
EPD-A-01-022323	TO-15 SIM	1,1-Dichloroethane	0.035	U	0.011	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,1-Dichloroethene	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,2,4-Trichlorobenzene	0.070	U	0.028	0.07	UG/M3	0.070	U
EPD-A-01-022323	TO-15 SIM	1,2,4-Trimethylbenzene	0.16		0.022	0.14	UG/M3	0.16	
EPD-A-01-022323	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-A-01-022323	TO-15 SIM	1,2-Dibromoethane	0.035	U	0.0094	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,2-Dichlorobenzene	0.035	U	0.025	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,2-Dichloroethane	0.061		0.012	0.035	UG/M3	0.061	
EPD-A-01-022323	TO-15 SIM	1,2-Dichloropropane	0.023	J	0.0085	0.035	UG/M3	0.023	J
EPD-A-01-022323	TO-15 SIM	1,3,5-Trimethylbenzene	0.045	J	0.02	0.14	UG/M3	0.045	J
EPD-A-01-022323	TO-15 SIM	1,3-Butadiene	0.11		0.011	0.07	UG/M3	0.11	
EPD-A-01-022323	TO-15 SIM	1,3-Dichlorobenzene	0.035	U	0.024	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	1,4-Dichlorobenzene	0.30		0.028	0.035	UG/M3	0.30	
EPD-A-01-022323	TO-15 SIM	1,4-Dioxane	0.14	U	0.012	0.14	UG/M3	0.14	U
EPD-A-01-022323	TO-15 SIM	Acetone	3.0	J	0.32	3.5	UG/M3	3.0	J
EPD-A-01-022323	TO-15 SIM	Acrolein	0.16	J	0.049	0.28	UG/M3	0.16	J
EPD-A-01-022323	TO-15 SIM	Benzene	1.0		0.021	0.11	UG/M3	1.0	
EPD-A-01-022323	TO-15 SIM	Bromodichloromethane	0.035	U	0.0081	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	Bromomethane	0.028	J	0.0094	0.035	UG/M3	0.028	J
EPD-A-01-022323	TO-15 SIM	Carbon Tetrachloride	0.45		0.0099	0.035	UG/M3	0.45	

E PALESTINE SITE - ER ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300826

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-A-01-022323	TO-15 SIM	Chlorobenzene	0.14	U	0.014	0.14	UG/M3	0.14	U
EPD-A-01-022323	TO-15 SIM	Chloroethane	0.013	J	0.011	0.035	UG/M3	0.013	J
EPD-A-01-022323	TO-15 SIM	Chloroform	0.068	J	0.011	0.14	UG/M3	0.068	J
EPD-A-01-022323	TO-15 SIM	Chloromethane	0.29		0.036	0.07	UG/M3	0.29	
EPD-A-01-022323	TO-15 SIM	cis-1,2-Dichloroethene	0.035	U	0.01	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	cis-1,3-Dichloropropene	0.070	U	0.0099	0.07	UG/M3	0.070	U
EPD-A-01-022323	TO-15 SIM	Dibromochloromethane	0.035	U	0.009	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.5		0.012	0.07	UG/M3	2.5	
EPD-A-01-022323	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.31		0.011	0.14	UG/M3	0.31	
EPD-A-01-022323	TO-15 SIM	Ethylbenzene	0.20		0.017	0.14	UG/M3	0.20	
EPD-A-01-022323	TO-15 SIM	Hexachlorobutadiene	0.14	U	0.018	0.14	UG/M3	0.14	U
EPD-A-01-022323	TO-15 SIM	m,p-Xylenes	0.79		0.034	0.14	UG/M3	0.79	
EPD-A-01-022323	TO-15 SIM	Methyl tert-Butyl Ether	0.035	U	0.017	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	Naphthalene	0.15		0.031	0.14	UG/M3	0.15	
EPD-A-01-022323	TO-15 SIM	o-Xylene	0.23		0.018	0.14	UG/M3	0.23	
EPD-A-01-022323	TO-15 SIM	Styrene	0.077	J	0.017	0.14	UG/M3	0.077	J
EPD-A-01-022323	TO-15 SIM	Tetrachloroethene	0.13		0.012	0.035	UG/M3	0.13	
EPD-A-01-022323	TO-15 SIM	Toluene	1.7		0.017	0.14	UG/M3	1.7	
EPD-A-01-022323	TO-15 SIM	trans-1,2-Dichloroethene	0.035	U	0.015	0.035	UG/M3	0.035	U
EPD-A-01-022323	TO-15 SIM	trans-1,3-Dichloropropene	0.07	U	0.0067	0.07	UG/M3	0.07	U
EPD-A-01-022323	TO-15 SIM	Trichloroethene	0.050		0.011	0.035	UG/M3	0.050	
EPD-A-01-022323	TO-15 SIM	Trichlorofluoromethane	1.2		0.011	0.07	UG/M3	1.2	
EPD-A-01-022323	TO-15 SIM	Vinyl Chloride	0.043		0.017	0.035	UG/M3	0.043	
EPD-WA-03-022323	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-WA-03-022323	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-WA-03-022323	TO-15	2-Methylbutane	19	T			UG/M3	19	NJ
EPD-WA-03-022323	TO-15	2-Methylpentane	3.2	T			UG/M3	3.2	NJ
EPD-WA-03-022323	TO-15	2-Methylpropane	16	T			UG/M3	16	NJ
EPD-WA-03-022323	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF			UG/M3	0	U,NF
EPD-WA-03-022323	TO-15	Dichlorodifluoromethane (CFC 12)	3.0	T			UG/M3	3.0	NJ
EPD-WA-03-022323	TO-15	Ethyl Acetate	5.9	T			UG/M3	5.9	NJ
EPD-WA-03-022323	TO-15	n-Butane	30	T			UG/M3	30	NJ
EPD-WA-03-022323	TO-15	n-Pentane	6.3	T			UG/M3	6.3	NJ


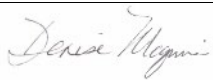
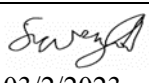
E PALESTINE SITE - ER ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300826

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-03-022323	TO-15	Propane	5.3	T			UG/M3	5.3	NJ
EPD-WA-03-022323	TO-15	Sulfur Dioxide	23	!,T			UG/M3	23	NJ-
EPD-WA-03-022323	TO-15	Toluene	4.1	T			UG/M3	4.1	NJ
EPD-WA-03-022323	TO-15 SIM	1,1,1-Trichloroethane	0.038	U	0.014	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.038	U	0.013	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,1,2-Trichloroethane	0.15	U	0.009	0.15	UG/M3	0.15	U
EPD-WA-03-022323	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.45		0.012	0.038	UG/M3	0.45	
EPD-WA-03-022323	TO-15 SIM	1,1-Dichloroethane	0.038	U	0.012	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,1-Dichloroethene	0.038	U	0.013	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,2,4-Trichlorobenzene	0.076	U	0.03	0.076	UG/M3	0.076	U
EPD-WA-03-022323	TO-15 SIM	1,2,4-Trimethylbenzene	0.42		0.024	0.15	UG/M3	0.42	
EPD-WA-03-022323	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.15	U	0.021	0.15	UG/M3	0.15	U
EPD-WA-03-022323	TO-15 SIM	1,2-Dibromoethane	0.038	U	0.01	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,2-Dichlorobenzene	0.038	U	0.027	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,2-Dichloroethane	0.065		0.013	0.038	UG/M3	0.065	
EPD-WA-03-022323	TO-15 SIM	1,2-Dichloropropane	0.020	J	0.0093	0.038	UG/M3	0.020	J
EPD-WA-03-022323	TO-15 SIM	1,3,5-Trimethylbenzene	0.12	J	0.021	0.15	UG/M3	0.12	J
EPD-WA-03-022323	TO-15 SIM	1,3-Butadiene	0.13		0.012	0.076	UG/M3	0.13	
EPD-WA-03-022323	TO-15 SIM	1,3-Dichlorobenzene	0.038	U	0.026	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	1,4-Dichlorobenzene	0.28		0.03	0.038	UG/M3	0.28	
EPD-WA-03-022323	TO-15 SIM	1,4-Dioxane	0.15	U	0.013	0.15	UG/M3	0.15	U
EPD-WA-03-022323	TO-15 SIM	Acetone	4.8		0.35	3.8	UG/M3	4.8	
EPD-WA-03-022323	TO-15 SIM	Acrolein	0.22	J	0.053	0.3	UG/M3	0.22	J
EPD-WA-03-022323	TO-15 SIM	Benzene	1.2		0.023	0.11	UG/M3	1.2	
EPD-WA-03-022323	TO-15 SIM	Bromodichloromethane	0.038	U	0.0088	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	Bromomethane	0.038	J	0.01	0.038	UG/M3	0.038	J
EPD-WA-03-022323	TO-15 SIM	Carbon Tetrachloride	0.42		0.011	0.038	UG/M3	0.42	
EPD-WA-03-022323	TO-15 SIM	Chlorobenzene	0.15	U	0.015	0.15	UG/M3	0.15	U
EPD-WA-03-022323	TO-15 SIM	Chloroethane	0.015	J	0.012	0.038	UG/M3	0.015	J
EPD-WA-03-022323	TO-15 SIM	Chloroform	0.067	J	0.012	0.15	UG/M3	0.067	J
EPD-WA-03-022323	TO-15 SIM	Chloromethane	0.34		0.04	0.076	UG/M3	0.34	
EPD-WA-03-022323	TO-15 SIM	cis-1,2-Dichloroethene	0.038	U	0.011	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	cis-1,3-Dichloropropene	0.076	U	0.011	0.076	UG/M3	0.076	U

E PALESTINE SITE - ER ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300826

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-03-022323	TO-15 SIM	Dibromochloromethane	0.038	U	0.0097	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.4		0.013	0.076	UG/M3	2.4	
EPD-WA-03-022323	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.32		0.012	0.15	UG/M3	0.32	
EPD-WA-03-022323	TO-15 SIM	Ethylbenzene	0.39		0.018	0.15	UG/M3	0.39	
EPD-WA-03-022323	TO-15 SIM	Hexachlorobutadiene	0.15	U	0.02	0.15	UG/M3	0.15	U
EPD-WA-03-022323	TO-15 SIM	m,p-Xylenes	1.7		0.036	0.15	UG/M3	1.7	
EPD-WA-03-022323	TO-15 SIM	Methyl tert-Butyl Ether	0.038	U	0.018	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	Naphthalene	0.12	J	0.033	0.15	UG/M3	0.12	J
EPD-WA-03-022323	TO-15 SIM	o-Xylene	0.51		0.02	0.15	UG/M3	0.51	
EPD-WA-03-022323	TO-15 SIM	Styrene	0.09	J	0.018	0.15	UG/M3	0.09	J
EPD-WA-03-022323	TO-15 SIM	Tetrachloroethene	0.087		0.013	0.038	UG/M3	0.087	
EPD-WA-03-022323	TO-15 SIM	Toluene	4.7		0.018	0.15	UG/M3	4.7	
EPD-WA-03-022323	TO-15 SIM	trans-1,2-Dichloroethene	0.038	U	0.017	0.038	UG/M3	0.038	U
EPD-WA-03-022323	TO-15 SIM	trans-1,3-Dichloropropene	0.076	U	0.0073	0.076	UG/M3	0.076	U
EPD-WA-03-022323	TO-15 SIM	Trichloroethene	0.017	J	0.012	0.038	UG/M3	0.017	J
EPD-WA-03-022323	TO-15 SIM	Trichlorofluoromethane	1.2		0.012	0.076	UG/M3	1.2	
EPD-WA-03-022323	TO-15 SIM	Vinyl Chloride	0.99		0.018	0.038	UG/M3	0.99	

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

<b>Site Name</b>	E Palestine Site – ER		<b>TO/TOLIN No.</b>	68HE0520F0032/0001EB201
<b>Document Tracking No.</b>	1680c		<b>Technical Reviewer (signature and date)</b>	 3/6/2023
<b>Data Reviewer (signature and date)</b>	 March 1, 2023	 03/2/2023	<b>Laboratory</b>	ALS Environmental, Simi Valley, CA
<b>Laboratory Report No.</b>	P2300840			
<b>Analyses</b>	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes			
<b>Samples and Matrix</b>	Three air samples, including one field duplicate			
<b>Collection Date(s)</b>	02/24/2023			
<b>Field Duplicate Pairs</b>	EPD-A-01-02423 and EPD-A-02-022423			
<b>Field QC Blanks</b>	NA			

**INTRODUCTION**

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

**OVERALL EVALUATION**

No rejection of data was required for this data package. The data can be used with the qualifications indicated in this checklist.

**Data completeness:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	TO-15 SIM results are reported in units of $\mu\text{g}/\text{m}^3$ and ppbV in the analytical data package, however, these results are only reported in units of $\mu\text{g}/\text{m}^3$ in the EDD. No qualifications are required.

**Sample preservation, receipt, and holding times:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	There were no custody seals on the canisters/shipping containers. No qualifications are required.

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Method blanks:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	

**Field blanks:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
NA	

**Surrogates and labeled compounds:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	

**MS/MSDs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
NA	

**Laboratory duplicates:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
NA	

**Field duplicates:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	The relative percent difference for toluene results in field duplicate pair EPD-A-01-02423 and EPD-A-02-022423 exceeded 50% acceptance criteria. Toluene result for EPD-A-01-02423 and EPD-A-02-022423 were qualified as estimated (flagged J).

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**LCSs/LCSDs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	TO-15 SIM: High LCS and LCSD percent recoveries of vinyl chloride. Vinyl chloride result in EPD-WA-01-022423 is qualified as estimated with possible high bias (flagged J+). The vinyl chloride result for samples EPD-A-01-022423 and EPD-A-02-022423 are nondetect; therefore, no qualifications are required.

**Sample dilutions:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Canister dilution factor for EPD-A-01-022423 was 1.51. Canister dilution factor for EPD-A-02-022423 was 1.41. Canister dilution factor for EPD-WA-01-022323 was 1.44.

**Re-extraction and reanalysis:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
NA	

**MDLs/RLs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Detections between the method detection limit (MDL) and reporting limit (RL) were reported and qualified as estimated (flagged J) by the laboratory.



**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
Y	Several tentatively identified compounds (TICs) were detected in both samples. The known TICs were qualified as tentatively identified (flagged NJ). 2-Butoxyethanol and 2-ethylhexyl acrylate in all three samples and butyl ester-2-propenoic acid in EPD-A-01-022423 and EPD-A-02-022423 were reported as nondetect and qualified as searched for, but not found in the sample (flagged U, NF). Sulfur dioxide was tentatively identified in all three samples. Since EPA Method TO-15 is not an appropriate method for quantifying sulfur dioxide, the laboratory qualified the result as probably biased low. The sulfur dioxide result in EPD-A-01-022423, EPD-A-02-022423, and EPD-WA-01-022423 were qualified as tentatively identified and possibly biased low (flagged NJ-).

**Other [None]:**

Within Criteria	Exceedance/Notes
NA	

**Overall Qualifications:**

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NF	The tentatively identified compound was manually searched for but was not found in the sample.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
NJ-	The tentatively identified compound result is probably biased low because TO-15 is not an appropriate method for quantifying it.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300840

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-A-01-022423	TO-15	2-Butoxyethanol	0	U,NF,T			UG/M3	0	U, NF
EPD-A-01-022423	TO-15	2-Ethylhexyl Acrylate	0	U,NF,T			UG/M3	0	U, NF
EPD-A-01-022423	TO-15	2-Methylpropane	3.6	T			UG/M3	3.6	NJ
EPD-A-01-022423	TO-15	Acetone	4.1	T			UG/M3	4.1	NJ
EPD-A-01-022423	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF,T			UG/M3	0	U, NF
EPD-A-01-022423	TO-15	Ethyl Acetate	3.0	T			UG/M3	3.0	NJ
EPD-A-01-022423	TO-15	Sulfur Dioxide	7.7	!, B,T			UG/M3	7.7	NJ-
EPD-A-01-022423	TO-15 SIM	1,1,1-Trichloroethane	0.038	U	0.014	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.038	U	0.013	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,1,2-Trichloroethane	0.15	U	0.0089	0.15	UG/M3	0.15	U
EPD-A-01-022423	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.45		0.012	0.038	UG/M3	0.45	
EPD-A-01-022423	TO-15 SIM	1,1-Dichloroethane	0.038	U	0.012	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,1-Dichloroethene	0.038	U	0.013	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,2,4-Trichlorobenzene	0.076	U	0.03	0.076	UG/M3	0.076	U
EPD-A-01-022423	TO-15 SIM	1,2,4-Trimethylbenzene	0.051	J	0.024	0.15	UG/M3	0.051	J
EPD-A-01-022423	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.15	U	0.021	0.15	UG/M3	0.15	U
EPD-A-01-022423	TO-15 SIM	1,2-Dibromoethane	0.038	U	0.01	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,2-Dichlorobenzene	0.038	U	0.027	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,2-Dichloroethane	0.056		0.013	0.038	UG/M3	0.056	
EPD-A-01-022423	TO-15 SIM	1,2-Dichloropropane	0.028	J	0.0092	0.038	UG/M3	0.028	J
EPD-A-01-022423	TO-15 SIM	1,3,5-Trimethylbenzene	0.15	U	0.021	0.15	UG/M3	0.15	U
EPD-A-01-022423	TO-15 SIM	1,3-Butadiene	0.015	J	0.012	0.076	UG/M3	0.015	J
EPD-A-01-022423	TO-15 SIM	1,3-Dichlorobenzene	0.038	U	0.026	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	1,4-Dichlorobenzene	0.16		0.03	0.038	UG/M3	0.16	
EPD-A-01-022423	TO-15 SIM	1,4-Dioxane	0.013	J	0.013	0.15	UG/M3	0.013	J
EPD-A-01-022423	TO-15 SIM	Acetone	3.2	J	0.35	3.8	UG/M3	3.2	J
EPD-A-01-022423	TO-15 SIM	Acrolein	0.11	J	0.053	0.3	UG/M3	0.11	J
EPD-A-01-022423	TO-15 SIM	Benzene	0.35		0.023	0.11	UG/M3	0.35	
EPD-A-01-022423	TO-15 SIM	Bromodichloromethane	0.038	U	0.0088	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	Bromomethane	0.028	J	0.01	0.038	UG/M3	0.028	J
EPD-A-01-022423	TO-15 SIM	Carbon Tetrachloride	0.41		0.011	0.038	UG/M3	0.41	
EPD-A-01-022423	TO-15 SIM	Chlorobenzene	0.15	U	0.015	0.15	UG/M3	0.15	U
EPD-A-01-022423	TO-15 SIM	Chloroethane	0.013	J	0.012	0.038	UG/M3	0.013	J

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
ALS ENVIRONMENTAL REPORT NO. P2300840

Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-A-01-022423	TO-15 SIM	Chloroform	0.06	J	0.012	0.15	UG/M3	0.060	J
EPD-A-01-022423	TO-15 SIM	Chloromethane	0.28		0.039	0.076	UG/M3	0.28	
EPD-A-01-022423	TO-15 SIM	cis-1,2-Dichloroethene	0.038	U	0.011	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	cis-1,3-Dichloropropene	0.076	U	0.011	0.076	UG/M3	0.076	U
EPD-A-01-022423	TO-15 SIM	Dibromochloromethane	0.038	U	0.0097	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.4		0.013	0.076	UG/M3	2.4	
EPD-A-01-022423	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.28		0.012	0.15	UG/M3	0.28	
EPD-A-01-022423	TO-15 SIM	Ethylbenzene	0.063	J	0.018	0.15	UG/M3	0.063	J
EPD-A-01-022423	TO-15 SIM	Hexachlorobutadiene	0.15	U	0.02	0.15	UG/M3	0.15	U
EPD-A-01-022423	TO-15 SIM	m,p-Xylenes	0.2		0.036	0.15	UG/M3	0.20	
EPD-A-01-022423	TO-15 SIM	Methyl tert-Butyl Ether	0.038	U	0.018	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	Naphthalene	0.15	U	0.033	0.15	UG/M3	0.15	U
EPD-A-01-022423	TO-15 SIM	o-Xylene	0.088	J	0.02	0.15	UG/M3	0.088	J
EPD-A-01-022423	TO-15 SIM	Styrene	0.031	J	0.018	0.15	UG/M3	0.031	J
EPD-A-01-022423	TO-15 SIM	Tetrachloroethene	0.057		0.013	0.038	UG/M3	0.057	
EPD-A-01-022423	TO-15 SIM	Toluene	1.1		0.018	0.15	UG/M3	1.1	J
EPD-A-01-022423	TO-15 SIM	trans-1,2-Dichloroethene	0.038	U	0.017	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	trans-1,3-Dichloropropene	0.076	U	0.0072	0.076	UG/M3	0.076	U
EPD-A-01-022423	TO-15 SIM	Trichloroethene	0.038	U	0.012	0.038	UG/M3	0.038	U
EPD-A-01-022423	TO-15 SIM	Trichlorofluoromethane	1.1		0.012	0.076	UG/M3	1.1	
EPD-A-01-022423	TO-15 SIM	Vinyl Chloride	0.038	U	0.018	0.038	UG/M3	0.038	U
EPD-A-02-022423	TO-15	2-Butoxyethanol	0	U,NF,T			UG/M3	0	U,NF
EPD-A-02-022423	TO-15	2-Ethylhexyl Acrylate	0	U,NF,T			UG/M3	0	U,NF
EPD-A-02-022423	TO-15	2-Methylpropane	2.8	T			UG/M3	2.8	NJ
EPD-A-02-022423	TO-15	Acetone	3.6	T			UG/M3	3.6	NJ
EPD-A-02-022423	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF,T			UG/M3	0	U, NF
EPD-A-02-022423	TO-15	n-Nonaldehyde	3.1	T			UG/M3	3.1	NJ
EPD-A-02-022423	TO-15	Sulfur Dioxide	7.1	!, B,T			UG/M3	7.1	NJ-
EPD-A-02-022423	TO-15	Trimethylsilanol	6.4	T			UG/M3	6.4	NJ
EPD-A-02-022423	TO-15 SIM	1,1,1-Trichloroethane	0.035	U	0.013	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.0083	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.47		0.011	0.035	UG/M3	0.47	

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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-A-02-022423	TO-15 SIM	1,1-Dichloroethane	0.015	J	0.012	0.035	UG/M3	0.015	J
EPD-A-02-022423	TO-15 SIM	1,1-Dichloroethene	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	1,2,4-Trichlorobenzene	0.071	U	0.028	0.071	UG/M3	0.071	U
EPD-A-02-022423	TO-15 SIM	1,2,4-Trimethylbenzene	0.056	J	0.023	0.14	UG/M3	0.056	J
EPD-A-02-022423	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	1,2-Dibromoethane	0.035	U	0.0094	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	1,2-Dichlorobenzene	0.035	U	0.025	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	1,2-Dichloroethane	0.06		0.012	0.035	UG/M3	0.06	
EPD-A-02-022423	TO-15 SIM	1,2-Dichloropropane	0.019	J	0.0086	0.035	UG/M3	0.019	J
EPD-A-02-022423	TO-15 SIM	1,3,5-Trimethylbenzene	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	1,3-Butadiene	0.013	J	0.011	0.071	UG/M3	0.013	J
EPD-A-02-022423	TO-15 SIM	1,3-Dichlorobenzene	0.035	U	0.024	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	1,4-Dichlorobenzene	0.19		0.028	0.035	UG/M3	0.19	
EPD-A-02-022423	TO-15 SIM	1,4-Dioxane	0.14	U	0.012	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	Acetone	2.6	J	0.32	3.5	UG/M3	2.6	J
EPD-A-02-022423	TO-15 SIM	Acrolein	0.083	J	0.049	0.28	UG/M3	0.083	J
EPD-A-02-022423	TO-15 SIM	Benzene	0.36		0.021	0.11	UG/M3	0.36	
EPD-A-02-022423	TO-15 SIM	Bromodichloromethane	0.035	U	0.0082	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	Bromomethane	0.028	J	0.0094	0.035	UG/M3	0.028	J
EPD-A-02-022423	TO-15 SIM	Carbon Tetrachloride	0.44		0.01	0.035	UG/M3	0.44	
EPD-A-02-022423	TO-15 SIM	Chlorobenzene	0.14	U	0.014	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	Chloroethane	0.011	J	0.011	0.035	UG/M3	0.011	J
EPD-A-02-022423	TO-15 SIM	Chloroform	0.063	J	0.011	0.14	UG/M3	0.063	J
EPD-A-02-022423	TO-15 SIM	Chloromethane	0.28		0.037	0.071	UG/M3	0.28	
EPD-A-02-022423	TO-15 SIM	cis-1,2-Dichloroethene	0.035	U	0.01	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	cis-1,3-Dichloropropene	0.071	U	0.01	0.071	UG/M3	0.071	U
EPD-A-02-022423	TO-15 SIM	Dibromochloromethane	0.035	U	0.009	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.5		0.012	0.071	UG/M3	2.5	
EPD-A-02-022423	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.011	0.14	UG/M3	0.29	
EPD-A-02-022423	TO-15 SIM	Ethylbenzene	0.050	J	0.017	0.14	UG/M3	0.050	J
EPD-A-02-022423	TO-15 SIM	Hexachlorobutadiene	0.14	U	0.018	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	m,p-Xylenes	0.16		0.034	0.14	UG/M3	0.16	
EPD-A-02-022423	TO-15 SIM	Methyl tert-Butyl Ether	0.035	U	0.017	0.035	UG/M3	0.035	U

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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-A-02-022423	TO-15 SIM	Naphthalene	0.14	U	0.031	0.14	UG/M3	0.14	U
EPD-A-02-022423	TO-15 SIM	o-Xylene	0.064	J	0.018	0.14	UG/M3	0.064	J
EPD-A-02-022423	TO-15 SIM	Styrene	0.028	J	0.017	0.14	UG/M3	0.028	J
EPD-A-02-022423	TO-15 SIM	Tetrachloroethene	0.037		0.012	0.035	UG/M3	0.037	
EPD-A-02-022423	TO-15 SIM	Toluene	0.61		0.017	0.14	UG/M3	0.61	J
EPD-A-02-022423	TO-15 SIM	trans-1,2-Dichloroethene	0.035	U	0.016	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	trans-1,3-Dichloropropene	0.071	U	0.0068	0.071	UG/M3	0.071	U
EPD-A-02-022423	TO-15 SIM	Trichloroethene	0.035	U	0.011	0.035	UG/M3	0.035	U
EPD-A-02-022423	TO-15 SIM	Trichlorofluoromethane	1.2		0.011	0.071	UG/M3	1.2	
EPD-A-02-022423	TO-15 SIM	Vinyl Chloride	0.035	U	0.017	0.035	UG/M3	0.035	U
EPD-WA-01-022423	TO-15	2-Butoxyethanol	0	U,NF,T			UG/M3	0	U, NF
EPD-WA-01-022423	TO-15	2-Ethylhexyl Acrylate	0	U,NF,T			UG/M3	0	U, NF
EPD-WA-01-022423	TO-15	2-Methylbutane	9.0	T			UG/M3	9.0	NJ
EPD-WA-01-022423	TO-15	2-Methylpropane	3.8	T			UG/M3	3.8	NJ
EPD-WA-01-022423	TO-15	BUTYL ESTER-2-PROPENOIC ACID	2.9	T			UG/M3	2.9	NJ
EPD-WA-01-022423	TO-15	Ethyl Acetate	3.1	T			UG/M3	3.1	NJ
EPD-WA-01-022423	TO-15	n-Butane	10	T			UG/M3	10	NJ
EPD-WA-01-022423	TO-15	n-Pentane	2.8	T			UG/M3	2.8	NJ
EPD-WA-01-022423	TO-15	Sulfur Dioxide	5.6	T			UG/M3	5.6	NJ-
EPD-WA-01-022423	TO-15 SIM	1,1,1-Trichloroethane	0.036	U	0.013	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.036	U	0.013	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.0085	0.14	UG/M3	0.14	U
EPD-WA-01-022423	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.47		0.012	0.036	UG/M3	0.47	
EPD-WA-01-022423	TO-15 SIM	1,1-Dichloroethane	0.036	U	0.012	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,1-Dichloroethene	0.036	U	0.013	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,2,4-Trichlorobenzene	0.072	U	0.029	0.072	UG/M3	0.072	U
EPD-WA-01-022423	TO-15 SIM	1,2,4-Trimethylbenzene	0.25		0.023	0.14	UG/M3	0.25	
EPD-WA-01-022423	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-WA-01-022423	TO-15 SIM	1,2-Dibromoethane	0.036	U	0.0096	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,2-Dichlorobenzene	0.036	U	0.026	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,2-Dichloroethane	0.060		0.012	0.036	UG/M3	0.060	
EPD-WA-01-022423	TO-15 SIM	1,2-Dichloropropane	0.017	J	0.0088	0.036	UG/M3	0.017	J
EPD-WA-01-022423	TO-15 SIM	1,3,5-Trimethylbenzene	0.067	J	0.02	0.14	UG/M3	0.067	J

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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-WA-01-022423	TO-15 SIM	1,3-Butadiene	0.072	U	0.011	0.072	UG/M3	0.072	U
EPD-WA-01-022423	TO-15 SIM	1,3-Dichlorobenzene	0.036	U	0.024	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	1,4-Dichlorobenzene	0.54		0.029	0.036	UG/M3	0.54	
EPD-WA-01-022423	TO-15 SIM	1,4-Dioxane	0.14	U	0.013	0.14	UG/M3	0.14	U
EPD-WA-01-022423	TO-15 SIM	Acetone	3.7		0.33	3.6	UG/M3	3.7	
EPD-WA-01-022423	TO-15 SIM	Acrolein	0.17	J	0.05	0.29	UG/M3	0.17	J
EPD-WA-01-022423	TO-15 SIM	Benzene	0.63		0.022	0.11	UG/M3	0.63	
EPD-WA-01-022423	TO-15 SIM	Bromodichloromethane	0.036	U	0.0084	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	Bromomethane	0.027	J	0.0096	0.036	UG/M3	0.027	J
EPD-WA-01-022423	TO-15 SIM	Carbon Tetrachloride	0.44		0.01	0.036	UG/M3	0.44	
EPD-WA-01-022423	TO-15 SIM	Chlorobenzene	0.14	U	0.014	0.14	UG/M3	0.14	U
EPD-WA-01-022423	TO-15 SIM	Chloroethane	0.036	U	0.011	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	Chloroform	0.063	J	0.012	0.14	UG/M3	0.063	J
EPD-WA-01-022423	TO-15 SIM	Chloromethane	0.30		0.037	0.072	UG/M3	0.30	
EPD-WA-01-022423	TO-15 SIM	cis-1,2-Dichloroethene	0.036	U	0.01	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	cis-1,3-Dichloropropene	0.072	U	0.01	0.072	UG/M3	0.072	U
EPD-WA-01-022423	TO-15 SIM	Dibromochloromethane	0.036	U	0.0092	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.5		0.012	0.072	UG/M3	2.5	
EPD-WA-01-022423	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.011	0.14	UG/M3	0.29	
EPD-WA-01-022423	TO-15 SIM	Ethylbenzene	0.16		0.017	0.14	UG/M3	0.16	
EPD-WA-01-022423	TO-15 SIM	Hexachlorobutadiene	0.14	U	0.019	0.14	UG/M3	0.14	U
EPD-WA-01-022423	TO-15 SIM	m,p-Xylenes	0.70		0.035	0.14	UG/M3	0.70	
EPD-WA-01-022423	TO-15 SIM	Methyl tert-Butyl Ether	0.036	U	0.017	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	Naphthalene	0.15		0.032	0.14	UG/M3	0.15	
EPD-WA-01-022423	TO-15 SIM	o-Xylene	0.24		0.019	0.14	UG/M3	0.24	
EPD-WA-01-022423	TO-15 SIM	Styrene	0.052	J	0.017	0.14	UG/M3	0.052	J
EPD-WA-01-022423	TO-15 SIM	Tetrachloroethene	0.042		0.012	0.036	UG/M3	0.042	
EPD-WA-01-022423	TO-15 SIM	Toluene	1.2		0.017	0.14	UG/M3	1.2	
EPD-WA-01-022423	TO-15 SIM	trans-1,2-Dichloroethene	0.036	U	0.016	0.036	UG/M3	0.036	U
EPD-WA-01-022423	TO-15 SIM	trans-1,3-Dichloropropene	0.072	U	0.0069	0.072	UG/M3	0.072	U
EPD-WA-01-022423	TO-15 SIM	Trichloroethene	0.013	J	0.011	0.036	UG/M3	0.013	J
EPD-WA-01-022423	TO-15 SIM	Trichlorofluoromethane	1.2		0.012	0.072	UG/M3	1.2	
EPD-WA-01-022423	TO-15 SIM	Vinyl Chloride	0.84		0.017	0.036	UG/M3	0.84	J+

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

<b>Site Name</b>	E Palestine Site - ER		<b>TO/TOLIN No.</b>	68HE0520F0032/0001EB201
<b>Document Tracking No.</b>	1680d		<b>Technical Reviewer (signature and date)</b>	<i>Shannon Vasser</i> 3/7/2023
<b>Data Reviewer (signature and date)</b>	<i>Dennis Magini</i> March 1, 2023	<i>Sweng</i> 03/2/2023	<b>Laboratory</b>	ALS Environmental, Simi Valley, CA
<b>Laboratory Report No.</b>	P2300842			
<b>Analyses</b>	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes			
<b>Samples and Matrix</b>	Two air samples			
<b>Collection Date(s)</b>	02/25/2023			
<b>Field Duplicate Pairs</b>	NA			
<b>Field QC Blanks</b>	NA			

**INTRODUCTION**

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

**OVERALL EVALUATION**

No rejection of data was required for this data package. The data can be used with the qualifications indicated in this checklist.

**Data completeness:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	TO-15 SIM results are reported in units of $\mu\text{g}/\text{m}^3$ and ppbV in the analytical data package, however, these results are only reported in units of $\mu\text{g}/\text{m}^3$ in the EDD. No qualifications are required.



**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Sample preservation, receipt, and holding times:**

Within Criteria	Exceedance/Notes
N	The ending field-measured canister pressure listed on the chain-of-custody (COC) form was -4.5” Hg for EPD-WA-01-022523 (slight vacuum pressure), while canister pressure measured by the laboratory upon receipt was 0.16 psig (0.33” Hg) for EPD-WA-01-022523 (slight positive pressure). This pressure discrepancy suggests that either one or more of the pressure gauges used were inaccurate or there is the possibility of a canister leak. Typically, the field gauge tends to be less accurate than lab gauge. If it is assumed that the field gauge was less accurate than the laboratory gauge, then the pressure data collected by the laboratory upon canister receipt suggests that the canister may have filled more quickly than intended and may have filled up before the end of the intended sampling period. Because it cannot be known when during the sampling period the canister filled completely, the sample may not be representative of the matrix conditions over the entire sampling period, and the analytical results for the sample should be used with this in mind. If all gauges were measuring pressure accurately, the data suggests the possibility that the canister had a leak that allowed it to fill up to atmospheric pressure between the end of the sampling event and the time the canister arrived at the lab. Such a leak could have contaminated, or in the least, diluted the sample with air unintended for sampling. Under either of these circumstances, the sample results should be used with caution because the results may not be representative of sampling conditions over the intended sampling period.

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
Y	

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
NA	

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
N	TO-15 SIM: High LCSD percent recovery of vinyl chloride. Average between the LCS and LCSD percent recovery is within acceptance criteria, therefore no qualifications are required.

**Sample dilutions:**

Within Criteria	Exceedance/Notes
Y	Canister dilution factor was 1.33 for EPD-A-01-022523 and canister dilution factor was 1.23 for EPD-WA-01-022523.

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

**DATA VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Detections between the method detection limit (MDL) and reporting limit (RL) were reported and qualified as estimated (flagged J) by the laboratory.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
Y	Several tentatively identified compounds (TICs) were detected in both samples. The known TICs were qualified as tentatively identified (flagged NJ). In both samples, 2-butoxyethanol, 2-ethylhexyl acrylate, and n-butyl acrylate were reported as nondetect and qualified as searched for, but not found in the sample (flagged U, NF).

**Other [None]:**

Within Criteria	Exceedance/Notes
NA	

## DATA VALIDATION CHECKLIST – STAGE 2A EPA REGION 5 START CONTRACT

### Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NF	The tentatively identified compound was manually searched for but was not found in the sample.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-A-01-022523	TO-15	Acetone	3.4	T			UG/M3	3.4	NJ
EPD-A-01-022523	TO-15	n-Pentane	3.5	T			UG/M3	3.5	NJ
EPD-A-01-022523	TO-15	Ethyl Acetate	4.1	T			UG/M3	4.1	NJ
EPD-A-01-022523	TO-15	n-Butyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022523	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022523	TO-15	2-BUTOXY ETHANOL	0	U,NF			UG/M3	0	U,NF
EPD-A-01-022523	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.5		0.011	0.067	UG/M3	2.5	
EPD-A-01-022523	TO-15 SIM	Chloromethane	0.41		0.035	0.067	UG/M3	0.41	
EPD-A-01-022523	TO-15 SIM	Trichlorofluoromethane	1.2		0.011	0.067	UG/M3	1.2	
EPD-A-01-022523	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.01	0.13	UG/M3	0.29	
EPD-A-01-022523	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.45		0.011	0.033	UG/M3	0.45	
EPD-A-01-022523	TO-15 SIM	1,2-Dichloroethane	0.063		0.011	0.033	UG/M3	0.063	
EPD-A-01-022523	TO-15 SIM	Benzene	0.45		0.02	0.1	UG/M3	0.45	
EPD-A-01-022523	TO-15 SIM	Carbon Tetrachloride	0.43		0.0094	0.033	UG/M3	0.43	
EPD-A-01-022523	TO-15 SIM	Toluene	0.47		0.016	0.13	UG/M3	0.47	
EPD-A-01-022523	TO-15 SIM	Tetrachloroethene	0.041		0.011	0.033	UG/M3	0.041	
EPD-A-01-022523	TO-15 SIM	m,p-Xylenes	0.39		0.032	0.13	UG/M3	0.39	
EPD-A-01-022523	TO-15 SIM	1,4-Dichlorobenzene	0.061		0.027	0.033	UG/M3	0.061	
EPD-A-01-022523	TO-15 SIM	Vinyl Chloride	0.025	J	0.016	0.033	UG/M3	0.025	J
EPD-A-01-022523	TO-15 SIM	1,3-Butadiene	0.017	J	0.011	0.067	UG/M3	0.017	J
EPD-A-01-022523	TO-15 SIM	Bromomethane	0.026	J	0.0089	0.033	UG/M3	0.026	J
EPD-A-01-022523	TO-15 SIM	Chloroethane	0.012	J	0.01	0.033	UG/M3	0.012	J
EPD-A-01-022523	TO-15 SIM	Acrolein	0.098	J	0.047	0.27	UG/M3	0.098	J
EPD-A-01-022523	TO-15 SIM	Acetone	2.2	J	0.31	3.3	UG/M3	2.2	J
EPD-A-01-022523	TO-15 SIM	Chloroform	0.066	J	0.011	0.13	UG/M3	0.066	J
EPD-A-01-022523	TO-15 SIM	1,2-Dichloropropane	0.017	J	0.0081	0.033	UG/M3	0.017	J
EPD-A-01-022523	TO-15 SIM	Ethylbenzene	0.093	J	0.016	0.13	UG/M3	0.093	J
EPD-A-01-022523	TO-15 SIM	o-Xylene	0.13	J	0.017	0.13	UG/M3	0.13	J
EPD-A-01-022523	TO-15 SIM	1,2,4-Trimethylbenzene	0.039	J	0.021	0.13	UG/M3	0.039	J
EPD-A-01-022523	TO-15 SIM	1,1-Dichloroethene	0.033	U	0.012	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	trans-1,2-Dichloroethene	0.033	U	0.015	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,1-Dichloroethane	0.033	U	0.011	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	Methyl tert-Butyl Ether	0.033	U	0.016	0.033	UG/M3	0.033	U

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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-A-01-022523	TO-15 SIM	cis-1,2-Dichloroethene	0.033	U	0.0096	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,1,1-Trichloroethane	0.033	U	0.012	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	Bromodichloromethane	0.033	U	0.0077	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	Trichloroethene	0.033	U	0.01	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,4-Dioxane	0.13	U	0.012	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	cis-1,3-Dichloropropene	0.067	U	0.0094	0.067	UG/M3	0.067	U
EPD-A-01-022523	TO-15 SIM	trans-1,3-Dichloropropene	0.067	U	0.0064	0.067	UG/M3	0.067	U
EPD-A-01-022523	TO-15 SIM	1,1,2-Trichloroethane	0.13	U	0.0078	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	Dibromochloromethane	0.033	U	0.0085	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,2-Dibromoethane	0.033	U	0.0089	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	Chlorobenzene	0.13	U	0.013	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	Styrene	0.13	U	0.016	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.033	U	0.012	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,3,5-Trimethylbenzene	0.13	U	0.019	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	1,3-Dichlorobenzene	0.033	U	0.023	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,2-Dichlorobenzene	0.033	U	0.024	0.033	UG/M3	0.033	U
EPD-A-01-022523	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.13	U	0.019	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	1,2,4-Trichlorobenzene	0.067	U	0.027	0.067	UG/M3	0.067	U
EPD-A-01-022523	TO-15 SIM	Naphthalene	0.13	U	0.029	0.13	UG/M3	0.13	U
EPD-A-01-022523	TO-15 SIM	Hexachlorobutadiene	0.13	U	0.017	0.13	UG/M3	0.13	U
EPD-WA-01-022523	TO-15	Propane	3.0	T			UG/M3	3.0	NJ
EPD-WA-01-022523	TO-15	2-Methylpropane	3.1	T			UG/M3	3.1	NJ
EPD-WA-01-022523	TO-15	n-Butane	4.0	T			UG/M3	4.0	NJ
EPD-WA-01-022523	TO-15	2-Methylbutane	6.0	T			UG/M3	6.0	NJ
EPD-WA-01-022523	TO-15	n-Pentane	11	T			UG/M3	11	NJ
EPD-WA-01-022523	TO-15	Ethyl Acetate	12	T			UG/M3	12	NJ
EPD-WA-01-022523	TO-15	n-Butyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-022523	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-022523	TO-15	2-BUTOXY ETHANOL	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-022523	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.6		0.01	0.062	UG/M3	2.6	
EPD-WA-01-022523	TO-15 SIM	Chloromethane	0.40		0.032	0.062	UG/M3	0.40	
EPD-WA-01-022523	TO-15 SIM	Vinyl Chloride	0.60		0.015	0.031	UG/M3	0.60	
EPD-WA-01-022523	TO-15 SIM	Trichlorofluoromethane	1.2		0.01	0.062	UG/M3	1.2	

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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-WA-01-022523	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.33		0.0096	0.12	UG/M3	0.33	
EPD-WA-01-022523	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.46		0.01	0.031	UG/M3	0.46	
EPD-WA-01-022523	TO-15 SIM	1,2-Dichloroethane	0.067		0.01	0.031	UG/M3	0.067	
EPD-WA-01-022523	TO-15 SIM	Benzene	0.68		0.018	0.092	UG/M3	0.68	
EPD-WA-01-022523	TO-15 SIM	Carbon Tetrachloride	0.46		0.0087	0.031	UG/M3	0.46	
EPD-WA-01-022523	TO-15 SIM	Toluene	1.4		0.015	0.12	UG/M3	1.4	
EPD-WA-01-022523	TO-15 SIM	Ethylbenzene	0.15		0.015	0.12	UG/M3	0.15	
EPD-WA-01-022523	TO-15 SIM	m,p-Xylenes	0.64		0.03	0.12	UG/M3	0.64	
EPD-WA-01-022523	TO-15 SIM	o-Xylene	0.22		0.016	0.12	UG/M3	0.22	
EPD-WA-01-022523	TO-15 SIM	1,4-Dichlorobenzene	0.053		0.025	0.031	UG/M3	0.053	
EPD-WA-01-022523	TO-15 SIM	1,3-Butadiene	0.038 J		0.0097	0.062	UG/M3	0.038 J	
EPD-WA-01-022523	TO-15 SIM	Bromomethane	0.027 J		0.0082	0.031	UG/M3	0.027 J	
EPD-WA-01-022523	TO-15 SIM	Chloroethane	0.014 J		0.0096	0.031	UG/M3	0.014 J	
EPD-WA-01-022523	TO-15 SIM	Acrolein	0.15 J		0.043	0.25	UG/M3	0.15 J	
EPD-WA-01-022523	TO-15 SIM	Acetone	2.3 J		0.28	3.1	UG/M3	2.3 J	
EPD-WA-01-022523	TO-15 SIM	Chloroform	0.075 J		0.0098	0.12	UG/M3	0.075 J	
EPD-WA-01-022523	TO-15 SIM	1,2-Dichloropropane	0.022 J		0.0075	0.031	UG/M3	0.022 J	
EPD-WA-01-022523	TO-15 SIM	Tetrachloroethene	0.028 J		0.011	0.031	UG/M3	0.028 J	
EPD-WA-01-022523	TO-15 SIM	Styrene	0.052 J		0.015	0.12	UG/M3	0.052 J	
EPD-WA-01-022523	TO-15 SIM	1,3,5-Trimethylbenzene	0.021 J		0.017	0.12	UG/M3	0.021 J	
EPD-WA-01-022523	TO-15 SIM	1,2,4-Trimethylbenzene	0.072 J		0.02	0.12	UG/M3	0.072 J	
EPD-WA-01-022523	TO-15 SIM	1,1-Dichloroethene	0.031 U		0.011	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	trans-1,2-Dichloroethene	0.031 U		0.014	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	1,1-Dichloroethane	0.031 U		0.01	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	Methyl tert-Butyl Ether	0.031 U		0.015	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	cis-1,2-Dichloroethene	0.031 U		0.0089	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	1,1,1-Trichloroethane	0.031 U		0.011	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	Bromodichloromethane	0.031 U		0.0071	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	Trichloroethene	0.031 U		0.0095	0.031	UG/M3	0.031 U	
EPD-WA-01-022523	TO-15 SIM	1,4-Dioxane	0.12 U		0.011	0.12	UG/M3	0.12 U	
EPD-WA-01-022523	TO-15 SIM	cis-1,3-Dichloropropene	0.062 U		0.0087	0.062	UG/M3	0.062 U	
EPD-WA-01-022523	TO-15 SIM	trans-1,3-Dichloropropene	0.062 U		0.0059	0.062	UG/M3	0.062 U	
EPD-WA-01-022523	TO-15 SIM	1,1,2-Trichloroethane	0.12 U		0.0073	0.12	UG/M3	0.12 U	

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Sample_ID	Method	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	Val_Result	Val_Qual
EPD-WA-01-022523	TO-15 SIM	Dibromochloromethane	0.031	U	0.0079	0.031	UG/M3	0.031	U
EPD-WA-01-022523	TO-15 SIM	1,2-Dibromoethane	0.031	U	0.0082	0.031	UG/M3	0.031	U
EPD-WA-01-022523	TO-15 SIM	Chlorobenzene	0.12	U	0.012	0.12	UG/M3	0.12	U
EPD-WA-01-022523	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-WA-01-022523	TO-15 SIM	1,3-Dichlorobenzene	0.031	U	0.021	0.031	UG/M3	0.031	U
EPD-WA-01-022523	TO-15 SIM	1,2-Dichlorobenzene	0.031	U	0.022	0.031	UG/M3	0.031	U
EPD-WA-01-022523	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.12	U	0.017	0.12	UG/M3	0.12	U
EPD-WA-01-022523	TO-15 SIM	1,2,4-Trichlorobenzene	0.062	U	0.025	0.062	UG/M3	0.062	U
EPD-WA-01-022523	TO-15 SIM	Naphthalene	0.12	U	0.027	0.12	UG/M3	0.12	U
EPD-WA-01-022523	TO-15 SIM	Hexachlorobutadiene	0.12	U	0.016	0.12	UG/M3	0.12	U