



We are in the process of ensuring this document is accessible to all audiences. If you need assistance accessing this document, or any material on the EPA East Palestine, Ohio emergency response webpages, please contact the Region 5 Public Information Officer on-call at:
R5_EastPalestine@epa.gov

February 24, 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. 1661**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting these data validation reports for thirteen air samples (including a field duplicate sample) collected at the E Palestine site. The samples were collected on February 4-6 & 8-13, 2023, and were analyzed for VOCs by ALS Environmental. The final laboratory data package was received on February 17, 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 these data packages. The results may be used as qualified based on the findings of this validation effort.

If you have any questions regarding this data validation report, please call me at (770) 598-1808.

Sincerely,

A handwritten signature in black ink that reads 'Shanna Vasser'.

Shanna Vasser, PE

Civil Engineer

Enclosure

cc: Chris Burns, 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. P2300508, P2300510,
P2300526, P2300605, AND P2300646**

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1661a	Technical Reviewer (signature and date)	<i>Shanna Vasser</i> 2/23/2023
Data Reviewer (signature and date)	<i>L. Wright</i> 02/19/2023 <i>Denise McGuire</i> February 20, 2023	Laboratory	ALS Environmental, Simi Valley, CA
Laboratory Report No.	P2300508	Analyses	
		Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes	
Samples and Matrix	Two air samples		
Collection Date(s)	02/06/2023		
Field Duplicate Pairs	NA		
Field QC Blanks	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, 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	<p>The ending field vacuum pressure listed on the chain-of-custody (COC) form for EPD-DW-B01-020623 was -14” Hg. This large vacuum pressure suggests that the canister filled more slowly than intended over the allotted time, therefore the sample volume is lower than planned. The lower volume may have affected analytical sensitivity (possibly leading to elevated MDL and RL values). Also, the sample may not be representative of the full collection period.</p> <p>There were no custody seals on the canisters/shipping containers. No qualifications are required.</p>

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
NA	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
N	TO-15 SIM: Bromofluorobenzene (BFB) was recovered below acceptance criteria in both field samples. All results were qualified as estimated with potential low bias (flagged J-/UJ) in both samples.

MS/MSDs:

Within Criteria	Exceedance/Notes
NA	

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

Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for EPD-DW-B01-020623 was 2.18 and canister dilution factor for EPD-SR01-020623 was 1.31.

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.

**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 both samples and butyl ester-2-propenoic acid in EPD-SR01-020623 were reported as not detected and qualified as manually searched for, but not found in the sample (flagged U, NF).

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. P2300508

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-DW-B01-020623	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	3.2		0.019	0.11	UG/M3	3.2	J-
EPD-DW-B01-020623	TO-15 SIM	Chloromethane	0.26		0.057	0.11	UG/M3	0.26	J-
EPD-DW-B01-020623	TO-15 SIM	Vinyl Chloride	0.055	U	0.026	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,3-Butadiene	0.11	U	0.017	0.11	UG/M3	0.11	UJ
EPD-DW-B01-020623	TO-15 SIM	Bromomethane	0.029	J	0.015	0.055	UG/M3	0.029	J-
EPD-DW-B01-020623	TO-15 SIM	Chloroethane	0.055	U	0.017	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Acrolein	0.14	J	0.076	0.44	UG/M3	0.14	J-
EPD-DW-B01-020623	TO-15 SIM	Acetone	6.8		0.5	5.5	UG/M3	6.8	J-
EPD-DW-B01-020623	TO-15 SIM	Trichlorofluoromethane	10		0.018	0.11	UG/M3	10	J-
EPD-DW-B01-020623	TO-15 SIM	1,1-Dichloroethene	0.055	U	0.019	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.26		0.017	0.22	UG/M3	0.26	J-
EPD-DW-B01-020623	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.43		0.018	0.055	UG/M3	0.43	J-
EPD-DW-B01-020623	TO-15 SIM	trans-1,2-Dichloroethene	0.055	U	0.024	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,1-Dichloroethane	0.055	U	0.018	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Methyl tert-Butyl Ether	0.055	U	0.026	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	cis-1,2-Dichloroethene	0.055	U	0.016	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Chloroform	0.060	J	0.017	0.22	UG/M3	0.06	J-
EPD-DW-B01-020623	TO-15 SIM	1,2-Dichloroethane	0.058		0.018	0.055	UG/M3	0.058	J-
EPD-DW-B01-020623	TO-15 SIM	1,1,1-Trichloroethane	0.055	U	0.02	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Benzene	0.46		0.033	0.16	UG/M3	0.46	J-
EPD-DW-B01-020623	TO-15 SIM	Carbon Tetrachloride	0.41		0.015	0.055	UG/M3	0.41	J-
EPD-DW-B01-020623	TO-15 SIM	1,2-Dichloropropane	0.014	J	0.013	0.055	UG/M3	0.014	J-
EPD-DW-B01-020623	TO-15 SIM	Bromodichloromethane	0.055	U	0.013	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Trichloroethene	0.055	U	0.017	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,4-Dioxane	0.22	U	0.019	0.22	UG/M3	0.22	UJ
EPD-DW-B01-020623	TO-15 SIM	cis-1,3-Dichloropropene	0.11	U	0.015	0.11	UG/M3	0.11	UJ
EPD-DW-B01-020623	TO-15 SIM	trans-1,3-Dichloropropene	0.11	U	0.01	0.11	UG/M3	0.11	UJ
EPD-DW-B01-020623	TO-15 SIM	1,1,2-Trichloroethane	0.22	U	0.013	0.22	UG/M3	0.22	UJ
EPD-DW-B01-020623	TO-15 SIM	Toluene	0.94		0.026	0.22	UG/M3	0.94	J-
EPD-DW-B01-020623	TO-15 SIM	Dibromochloromethane	0.055	U	0.014	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,2-Dibromoethane	0.055	U	0.015	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	Tetrachloroethene	0.048	J	0.019	0.055	UG/M3	0.048	J-
EPD-DW-B01-020623	TO-15 SIM	Chlorobenzene	0.22	U	0.021	0.22	UG/M3	0.22	UJ

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300508

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-DW-B01-020623	TO-15 SIM	Ethylbenzene	0.084	J	0.026	0.22	UG/M3	0.084	J-
EPD-DW-B01-020623	TO-15 SIM	m,p-Xylenes	0.35		0.052	0.22	UG/M3	0.35	UJ
EPD-DW-B01-020623	TO-15 SIM	Styrene	0.046	J	0.026	0.22	UG/M3	0.046	J-
EPD-DW-B01-020623	TO-15 SIM	o-Xylene	0.087	J	0.028	0.22	UG/M3	0.087	J-
EPD-DW-B01-020623	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.055	U	0.019	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,3,5-Trimethylbenzene	0.22	U	0.031	0.22	UG/M3	0.22	UJ
EPD-DW-B01-020623	TO-15 SIM	1,2,4-Trimethylbenzene	0.074	J	0.035	0.22	UG/M3	0.074	J-
EPD-DW-B01-020623	TO-15 SIM	1,3-Dichlorobenzene	0.055	U	0.037	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,4-Dichlorobenzene	0.055	U	0.044	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,2-Dichlorobenzene	0.055	U	0.039	0.055	UG/M3	0.055	UJ
EPD-DW-B01-020623	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.22	U	0.031	0.22	UG/M3	0.22	UJ
EPD-DW-B01-020623	TO-15 SIM	1,2,4-Trichlorobenzene	0.11	U	0.044	0.11	UG/M3	0.11	UJ
EPD-DW-B01-020623	TO-15 SIM	Naphthalene	0.068	J	0.048	0.22	UG/M3	0.068	J-
EPD-DW-B01-020623	TO-15 SIM	Hexachlorobutadiene	0.22	U	0.028	0.22	UG/M3	0.22	UJ
EPD-DW-B01-020623	TO-15	Ethanol	49	T			UG/M3	49	NJ
EPD-DW-B01-020623	TO-15	Acetone	8.1	T			UG/M3	8.1	NJ
EPD-DW-B01-020623	TO-15	Trichlorofluoromethane	10	T			UG/M3	10	NJ
EPD-DW-B01-020623	TO-15	BUTYL ESTER-2-PROPENOIC ACID	3.7	T			UG/M3	3.7	NJ
EPD-DW-B01-020623	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-DW-B01-020623	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-SR01-020623	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.9		0.011	0.066	UG/M3	2.9	J-
EPD-SR01-020623	TO-15 SIM	Chloromethane	0.26		0.034	0.066	UG/M3	0.26	J-
EPD-SR01-020623	TO-15 SIM	Vinyl Chloride	0.033	U	0.016	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	1,3-Butadiene	0.066	U	0.01	0.066	UG/M3	0.066	UJ
EPD-SR01-020623	TO-15 SIM	Bromomethane	0.028	J	0.0088	0.033	UG/M3	0.028	J-
EPD-SR01-020623	TO-15 SIM	Chloroethane	0.033	U	0.01	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Acrolein	0.12	J	0.046	0.26	UG/M3	0.12	J-
EPD-SR01-020623	TO-15 SIM	Acetone	3.2	J	0.3	3.3	UG/M3	3.2	J-
EPD-SR01-020623	TO-15 SIM	Trichlorofluoromethane	4.7		0.011	0.066	UG/M3	4.7	J-
EPD-SR01-020623	TO-15 SIM	1,1-Dichloroethene	0.033	U	0.012	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.27		0.01	0.13	UG/M3	0.27	J-
EPD-SR01-020623	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.46		0.011	0.033	UG/M3	0.46	J-
EPD-SR01-020623	TO-15 SIM	trans-1,2-Dichloroethene	0.033	U	0.014	0.033	UG/M3	0.033	UJ

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300508

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-SR01-020623	TO-15 SIM	1,1-Dichloroethane	0.033	U	0.011	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Methyl tert-Butyl Ether	0.033	U	0.016	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	cis-1,2-Dichloroethene	0.033	U	0.0094	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Chloroform	0.064	J	0.01	0.13	UG/M3	0.064	J-
EPD-SR01-020623	TO-15 SIM	1,2-Dichloroethane	0.063		0.011	0.033	UG/M3	0.063	J-
EPD-SR01-020623	TO-15 SIM	1,1,1-Trichloroethane	0.033	U	0.012	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Benzene	0.54		0.02	0.098	UG/M3	0.54	J-
EPD-SR01-020623	TO-15 SIM	Carbon Tetrachloride	0.46		0.0093	0.033	UG/M3	0.46	J-
EPD-SR01-020623	TO-15 SIM	1,2-Dichloropropane	0.015	J	0.008	0.033	UG/M3	0.015	J-
EPD-SR01-020623	TO-15 SIM	Bromodichloromethane	0.033	U	0.0076	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Trichloroethene	0.033	U	0.01	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	1,4-Dioxane	0.025	J	0.011	0.13	UG/M3	0.025	J-
EPD-SR01-020623	TO-15 SIM	cis-1,3-Dichloropropene	0.066	U	0.0093	0.066	UG/M3	0.066	UJ
EPD-SR01-020623	TO-15 SIM	trans-1,3-Dichloropropene	0.066	U	0.0063	0.066	UG/M3	0.066	UJ
EPD-SR01-020623	TO-15 SIM	1,1,2-Trichloroethane	0.13	U	0.0077	0.13	UG/M3	0.13	UJ
EPD-SR01-020623	TO-15 SIM	Toluene	0.78		0.016	0.13	UG/M3	0.78	J-
EPD-SR01-020623	TO-15 SIM	Dibromochloromethane	0.033	U	0.0084	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	1,2-Dibromoethane	0.033	U	0.0088	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	Tetrachloroethene	0.048		0.011	0.033	UG/M3	0.048	J-
EPD-SR01-020623	TO-15 SIM	Chlorobenzene	0.13	U	0.013	0.13	UG/M3	0.13	UJ
EPD-SR01-020623	TO-15 SIM	Ethylbenzene	0.080	J	0.016	0.13	UG/M3	0.08	J-
EPD-SR01-020623	TO-15 SIM	m,p-Xylenes	0.27		0.031	0.13	UG/M3	0.27	J-
EPD-SR01-020623	TO-15 SIM	Styrene	0.026	J	0.016	0.13	UG/M3	0.026	J-
EPD-SR01-020623	TO-15 SIM	o-Xylene	0.085	J	0.017	0.13	UG/M3	0.085	J-
EPD-SR01-020623	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.033	U	0.011	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	1,3,5-Trimethylbenzene	0.020	J	0.018	0.13	UG/M3	0.02	J-
EPD-SR01-020623	TO-15 SIM	1,2,4-Trimethylbenzene	0.082	J	0.021	0.13	UG/M3	0.082	J-
EPD-SR01-020623	TO-15 SIM	1,3-Dichlorobenzene	0.033	U	0.022	0.033	UG/M3	0.033	UJ

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300508

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-SR01-020623	TO-15 SIM	1,4-Dichlorobenzene	0.033	U	0.026	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	1,2-Dichlorobenzene	0.033	U	0.024	0.033	UG/M3	0.033	UJ
EPD-SR01-020623	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.13	U	0.018	0.13	UG/M3	0.13	UJ
EPD-SR01-020623	TO-15 SIM	1,2,4-Trichlorobenzene	0.066	U	0.026	0.066	UG/M3	0.066	UJ
EPD-SR01-020623	TO-15 SIM	Naphthalene	0.033	J	0.029	0.13	UG/M3	0.033	J-
EPD-SR01-020623	TO-15 SIM	Hexachlorobutadiene	0.13	U	0.017	0.13	UG/M3	0.13	UJ
EPD-SR01-020623	TO-15	Acetone	4.4	T			UG/M3	4.4	NJ
EPD-SR01-020623	TO-15	Trichlorofluoromethane	4.5	T			UG/M3	4.5	NJ
EPD-SR01-020623	TO-15	Ethyl Acetate	2.6	T			UG/M3	2.6	NJ
EPD-SR01-020623	TO-15	1-Butanol	3.0	T			UG/M3	3	NJ
EPD-SR01-020623	TO-15	Unknown	2.7	T			UG/M3	2.7	NJ
EPD-SR01-020623	TO-15	n-Nonaldehyde	2.7	T			UG/M3	2.7	NJ
EPD-SR01-020623	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-SR01-020623	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-SR01-020623	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF			UG/M3	0	U,NF

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1661b	Technical Reviewer (signature and date)	<i>Shanna Vasser</i> 2/23/2023
Data Reviewer (signature and date)	<i>L. Wright</i> 02/19/2023 <i>Denise McGuire</i> February 20, 2023	Laboratory	ALS Environmental, Simi Valley, CA
Laboratory Report No.	P2300510	Analyses	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes
Samples and Matrix	Two air samples	Collection Date(s)	02/04/2023 and 02/05/2023
Field Duplicate Pairs	NA	Field QC Blanks	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, 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	<p>The ending field-measured canister pressures listed on the chain-of-custody (COC) form were (-3.5” Hg) for EPD-MUNICIPALOFFICE-02042023 and (-2” Hg) for EPD-SR01-230204 (slight vacuum pressures), while canister pressures measured by the laboratory upon receipt were 0.27 psig (0.55” Hg) for EPD-SR01-230204 and 0.29 psig (0.59” Hg) for EPD-MUNICIPALOFFICE-02042023 (slight positive pressures). These pressure discrepancies suggest that either one or more of the pressure gauges used were inaccurate or there is the possibility of canister leaks. Typically, the field gauges tend to be less accurate than lab gauges. If it is assumed that the field gauges were less accurate than the laboratory gauges, then the pressure data collected by the laboratory upon canister receipt suggest that the canisters 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 canisters filled completely, the samples may not be representative of the matrix conditions over the entire sampling period, and the analytical results for the samples should be used with this in mind. If all gauges were measuring pressure accurately, the data suggests the possibility that the canisters had leaks that allowed them to fill up to atmospheric pressure between the end of the sampling event and the time the canisters arrived at the lab. Such leaks could have contaminated, or in the least, diluted the samples with air unintended for sampling. Under either of these circumstances, these sample results should be used with caution because the results may not be representative of sampling conditions over the intended sampling period.</p> <p>There was no custody seal on the sampling/shipping container(s). No qualifications were required.</p>

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
NA	

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

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
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for both samples was 1.23. In EPD-SR01-230204, m+p-xylene was reported from a ten times dilution. All other analytes were reported undiluted.

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

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 both samples. The known TICs were qualified as tentatively identified (flagged NJ). The unknown TIC detected in EPD-SR01-230204 was qualified as estimated (flagged J). In both samples, 2-butoxyethanol and 2-ethylhexyl 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
ALS ENVIRONMENTAL REPORT NO. P2300510

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.5		0.01	0.062	UG/M3	2.5	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Chloromethane	0.23		0.032	0.062	UG/M3	0.23	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Vinyl Chloride	0.031	U	0.015	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,3-Butadiene	0.084		0.0097	0.062	UG/M3	0.084	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Bromomethane	0.026	J	0.0082	0.031	UG/M3	0.026	J
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Chloroethane	0.031	U	0.0096	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Acrolein	0.13	J	0.043	0.25	UG/M3	0.13	J
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Acetone	2	J	0.28	3.1	UG/M3	2	J
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Trichlorofluoromethane	1.2		0.01	0.062	UG/M3	1.2	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,1-Dichloroethene	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.0096	0.12	UG/M3	0.29	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.44		0.01	0.031	UG/M3	0.44	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	trans-1,2-Dichloroethene	0.031	U	0.014	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,1-Dichloroethane	0.031	U	0.01	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Methyl tert-Butyl Ether	0.031	U	0.015	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	cis-1,2-Dichloroethene	0.031	U	0.0089	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Chloroform	0.064	J	0.0098	0.12	UG/M3	0.064	J
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2-Dichloroethane	0.087		0.01	0.031	UG/M3	0.087	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,1,1-Trichloroethane	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Benzene	0.98		0.018	0.092	UG/M3	0.98	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Carbon Tetrachloride	0.43		0.0087	0.031	UG/M3	0.43	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2-Dichloropropane	0.016	J	0.0075	0.031	UG/M3	0.016	J
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Bromodichloromethane	0.031	U	0.0071	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Trichloroethene	0.01	J	0.0095	0.031	UG/M3	0.01	J
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,4-Dioxane	0.12	U	0.011	0.12	UG/M3	0.12	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	cis-1,3-Dichloropropene	0.062	U	0.0087	0.062	UG/M3	0.062	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	trans-1,3-Dichloropropene	0.062	U	0.0059	0.062	UG/M3	0.062	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,1,2-Trichloroethane	0.12	U	0.0073	0.12	UG/M3	0.12	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Toluene	1.4		0.015	0.12	UG/M3	1.4	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Dibromochloromethane	0.031	U	0.0079	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2-Dibromoethane	0.031	U	0.0082	0.031	UG/M3	0.031	U
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Tetrachloroethene	0.047		0.011	0.031	UG/M3	0.047	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Chlorobenzene	0.12	U	0.012	0.12	UG/M3	0.12	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300510

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Ethylbenzene	2.3		0.015	0.12	UG/M3	2.3	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	m,p-Xylenes	9.8		0.03	0.12	UG/M3	9.8	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Styrene	0.064 J		0.015	0.12	UG/M3	0.064 J	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	o-Xylene	2.3		0.016	0.12	UG/M3	2.3	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.031 U		0.011	0.031	UG/M3	0.031 U	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,3,5-Trimethylbenzene	0.071 J		0.017	0.12	UG/M3	0.071 J	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2,4-Trimethylbenzene	0.25		0.02	0.12	UG/M3	0.25	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,3-Dichlorobenzene	0.031 U		0.021	0.031	UG/M3	0.031 U	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,4-Dichlorobenzene	0.031 U		0.025	0.031	UG/M3	0.031 U	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2-Dichlorobenzene	0.031 U		0.022	0.031	UG/M3	0.031 U	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.12 U		0.017	0.12	UG/M3	0.12 U	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	1,2,4-Trichlorobenzene	0.062 U		0.025	0.062	UG/M3	0.062 U	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Naphthalene	0.097 J		0.027	0.12	UG/M3	0.097 J	
EPD-MUNICIPALOFFICE-02042023	TO-15 SIM	Hexachlorobutadiene	0.12 U		0.016	0.12	UG/M3	0.12 U	
EPD-MUNICIPALOFFICE-02042023	TO-15	n-Butane	3.9 T				UG/M3	3.9 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	Ethanol	5.8 T				UG/M3	5.8 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	2-Methylbutane	4.7 T				UG/M3	4.7 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	2-Propanol (Isopropyl Alcohol)	2.8 T				UG/M3	2.8 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	n-Pentane	3 T				UG/M3	3 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	Ethylbenzene	2.5 T				UG/M3	2.5 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	m,p-Xylene	9.1 T				UG/M3	9.1 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	BUTYL ESTER-2-PROPENOIC ACID	42 T				UG/M3	42 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	o-Xylene	2.3 T				UG/M3	2.3 NJ	
EPD-MUNICIPALOFFICE-02042023	TO-15	2-Butoxyethanol	0 U,NF				UG/M3	0 U,NF	
EPD-MUNICIPALOFFICE-02042023	TO-15	2-Ethylhexyl Acrylate	0 U,NF				UG/M3	0 U,NF	
EPD-SR01-230204	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.6		0.01	0.062	UG/M3	2.6	
EPD-SR01-230204	TO-15 SIM	Chloromethane	0.25		0.032	0.062	UG/M3	0.25	
EPD-SR01-230204	TO-15 SIM	Vinyl Chloride	0.031 U		0.015	0.031	UG/M3	0.031 U	
EPD-SR01-230204	TO-15 SIM	1,3-Butadiene	0.051 J		0.0097	0.062	UG/M3	0.051 J	
EPD-SR01-230204	TO-15 SIM	Bromomethane	0.028 J		0.0082	0.031	UG/M3	0.028 J	
EPD-SR01-230204	TO-15 SIM	Chloroethane	0.011 J		0.0096	0.031	UG/M3	0.011 J	
EPD-SR01-230204	TO-15 SIM	Acrolein	0.18 J		0.043	0.25	UG/M3	0.18 J	
EPD-SR01-230204	TO-15 SIM	Acetone	3.4		0.28	3.1	UG/M3	3.4	

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300510

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-SR01-230204	TO-15 SIM	Trichlorofluoromethane	1.3		0.01	0.062	UG/M3	1.3	
EPD-SR01-230204	TO-15 SIM	1,1-Dichloroethene	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.47		0.0096	0.12	UG/M3	0.47	
EPD-SR01-230204	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.47		0.01	0.031	UG/M3	0.47	
EPD-SR01-230204	TO-15 SIM	trans-1,2-Dichloroethene	0.031	U	0.014	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	1,1-Dichloroethane	0.031	U	0.01	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	Methyl tert-Butyl Ether	0.031	U	0.015	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	cis-1,2-Dichloroethene	0.031	U	0.0089	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	Chloroform	0.074	J	0.0098	0.12	UG/M3	0.074	J
EPD-SR01-230204	TO-15 SIM	1,2-Dichloroethane	0.53		0.01	0.031	UG/M3	0.53	
EPD-SR01-230204	TO-15 SIM	1,1,1-Trichloroethane	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	Benzene	0.78		0.018	0.092	UG/M3	0.78	
EPD-SR01-230204	TO-15 SIM	Carbon Tetrachloride	0.45		0.0087	0.031	UG/M3	0.45	
EPD-SR01-230204	TO-15 SIM	1,2-Dichloropropane	0.018	J	0.0075	0.031	UG/M3	0.018	J
EPD-SR01-230204	TO-15 SIM	Bromodichloromethane	0.031	U	0.0071	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	Trichloroethene	0.011	J	0.0095	0.031	UG/M3	0.011	J
EPD-SR01-230204	TO-15 SIM	1,4-Dioxane	0.12	U	0.011	0.12	UG/M3	0.12	U
EPD-SR01-230204	TO-15 SIM	cis-1,3-Dichloropropene	0.062	U	0.0087	0.062	UG/M3	0.062	U
EPD-SR01-230204	TO-15 SIM	trans-1,3-Dichloropropene	0.062	U	0.0059	0.062	UG/M3	0.062	U
EPD-SR01-230204	TO-15 SIM	1,1,2-Trichloroethane	0.12	U	0.0073	0.12	UG/M3	0.12	U
EPD-SR01-230204	TO-15 SIM	Toluene	1.3		0.015	0.12	UG/M3	1.3	
EPD-SR01-230204	TO-15 SIM	Dibromochloromethane	0.031	U	0.0079	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	1,2-Dibromoethane	0.031	U	0.0082	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	Tetrachloroethene	0.087		0.011	0.031	UG/M3	0.087	
EPD-SR01-230204	TO-15 SIM	Chlorobenzene	0.12	U	0.012	0.12	UG/M3	0.12	U
EPD-SR01-230204	TO-15 SIM	Ethylbenzene	26		0.015	0.12	UG/M3	26	
EPD-SR01-230204	TO-15 SIM	m,p-Xylenes	97	D	0.3	1.2	UG/M3	97	
EPD-SR01-230204	TO-15 SIM	Styrene	0.07	J	0.015	0.12	UG/M3	0.07	J
EPD-SR01-230204	TO-15 SIM	o-Xylene	21		0.016	0.12	UG/M3	21	
EPD-SR01-230204	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	1,3,5-Trimethylbenzene	0.045	J	0.017	0.12	UG/M3	0.045	J
EPD-SR01-230204	TO-15 SIM	1,2,4-Trimethylbenzene	0.15		0.02	0.12	UG/M3	0.15	
EPD-SR01-230204	TO-15 SIM	1,3-Dichlorobenzene	0.031	U	0.021	0.031	UG/M3	0.031	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300510

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-SR01-230204	TO-15 SIM	1,4-Dichlorobenzene	0.031	U	0.025	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	1,2-Dichlorobenzene	0.031	U	0.022	0.031	UG/M3	0.031	U
EPD-SR01-230204	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.12	U	0.017	0.12	UG/M3	0.12	U
EPD-SR01-230204	TO-15 SIM	1,2,4-Trichlorobenzene	0.062	U	0.025	0.062	UG/M3	0.062	U
EPD-SR01-230204	TO-15 SIM	Naphthalene	0.049	J	0.027	0.12	UG/M3	0.049	J
EPD-SR01-230204	TO-15 SIM	Hexachlorobutadiene	0.12	U	0.016	0.12	UG/M3	0.12	U
EPD-SR01-230204	TO-15	Unknown	7	T			UG/M3	7	J
EPD-SR01-230204	TO-15	n-Butane	4.1	T			UG/M3	4.1	NJ
EPD-SR01-230204	TO-15	Ethanol	36	T			UG/M3	36	NJ
EPD-SR01-230204	TO-15	2-Methylbutane	5.4	T			UG/M3	5.4	NJ
EPD-SR01-230204	TO-15	2-Propanol (Isopropyl Alcohol)	8.4	T			UG/M3	8.4	NJ
EPD-SR01-230204	TO-15	Ethylbenzene	23	T			UG/M3	23	NJ
EPD-SR01-230204	TO-15	m,p-Xylene	76	T			UG/M3	76	NJ
EPD-SR01-230204	TO-15	BUTYL ESTER-2-PROPENOIC ACID	24	T			UG/M3	24	NJ
EPD-SR01-230204	TO-15	o-Xylene	17	T			UG/M3	17	NJ
EPD-SR01-230204	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-SR01-230204	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1661c	Technical Reviewer (signature and date)	<i>Shanna Vasser</i> 2/23/2023
Data Reviewer (signature and date)	<i>L. Wright</i> <i>Denise McGuire</i> 02/19/2023 February 20, 2023	Laboratory	ALS Environmental, Simi Valley, CA
Laboratory Report No.	P2300526	Analyses	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes
Samples and Matrix	One air sample		
Collection Date(s)	02/06/2023		
Field Duplicate Pairs	NA		
Field QC Blanks	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.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	There was no custody seal on the container. 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
N	TO-15 SIM: Bromofluorobenzene (BFB) was recovered below acceptance criteria in EPD-SA-01-020623. All results were qualified as estimated with potential low bias (flagged J-/UJ).

MS/MSDs:

Within Criteria	Exceedance/Notes
NA	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

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

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for EPD-SA-01-020623 was 1.47.

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 EPD-SA-01-020623. The known TICs were qualified as tentatively identified (flagged NJ). The unknown TIC was qualified as estimated (flagged J). 2-Butoxyethanol and 2-ethylhexyl acrylate were reported as nondetect and qualified as searched for, but not found in the sample (flagged U, NF).

Other [specify]:

Within Criteria	Exceedance/Notes
Y	

**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
ALS ENVIRONMENTAL REPORT NO. P2300526

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-SA-01-020623	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	4.3		0.025	0.15	UG/M3	4.3	J-
EPD-SA-01-020623	TO-15 SIM	Chloromethane	0.69		0.076	0.15	UG/M3	0.69	J-
EPD-SA-01-020623	TO-15 SIM	Vinyl Chloride	16		0.035	0.074	UG/M3	16	J-
EPD-SA-01-020623	TO-15 SIM	1,3-Butadiene	0.18		0.023	0.15	UG/M3	0.18	J-
EPD-SA-01-020623	TO-15 SIM	Bromomethane	0.036	J	0.02	0.074	UG/M3	0.036	J-
EPD-SA-01-020623	TO-15 SIM	Chloroethane	0.17		0.023	0.074	UG/M3	0.17	J-
EPD-SA-01-020623	TO-15 SIM	Acrolein	0.52	J	0.1	0.59	UG/M3	0.52	J-
EPD-SA-01-020623	TO-15 SIM	Acetone	6.1	J	0.68	7.4	UG/M3	6.1	J-
EPD-SA-01-020623	TO-15 SIM	Trichlorofluoromethane	1.3		0.024	0.15	UG/M3	1.3	J-
EPD-SA-01-020623	TO-15 SIM	1,1-Dichloroethene	0.074	U	0.026	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.36		0.023	0.29	UG/M3	0.36	J-
EPD-SA-01-020623	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.48	V	0.024	0.074	UG/M3	0.48	J-
EPD-SA-01-020623	TO-15 SIM	trans-1,2-Dichloroethene	0.074	U	0.032	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	1,1-Dichloroethane	0.074	U	0.024	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	Methyl tert-Butyl Ether	0.074	U	0.035	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	cis-1,2-Dichloroethene	0.074	U	0.021	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	Chloroform	0.19	J	0.024	0.29	UG/M3	0.19	J-
EPD-SA-01-020623	TO-15 SIM	1,2-Dichloroethane	0.077		0.024	0.074	UG/M3	0.077	J-
EPD-SA-01-020623	TO-15 SIM	1,1,1-Trichloroethane	0.074	U	0.026	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	Benzene	4.2		0.044	0.22	UG/M3	4.2	J-
EPD-SA-01-020623	TO-15 SIM	Carbon Tetrachloride	0.57		0.021	0.074	UG/M3	0.57	J-
EPD-SA-01-020623	TO-15 SIM	1,2-Dichloropropane	0.033	J	0.018	0.074	UG/M3	0.033	J-
EPD-SA-01-020623	TO-15 SIM	Bromodichloromethane	0.074	U	0.017	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	Trichloroethene	0.085		0.023	0.074	UG/M3	0.085	J-
EPD-SA-01-020623	TO-15 SIM	1,4-Dioxane	0.026	J	0.026	0.29	UG/M3	0.026	J-
EPD-SA-01-020623	TO-15 SIM	cis-1,3-Dichloropropene	0.15	U	0.021	0.15	UG/M3	0.15	UJ
EPD-SA-01-020623	TO-15 SIM	trans-1,3-Dichloropropene	0.15	U	0.014	0.15	UG/M3	0.15	UJ
EPD-SA-01-020623	TO-15 SIM	1,1,2-Trichloroethane	0.29	U	0.017	0.29	UG/M3	0.29	UJ
EPD-SA-01-020623	TO-15 SIM	Toluene	4.1		0.035	0.29	UG/M3	4.1	J-
EPD-SA-01-020623	TO-15 SIM	Dibromochloromethane	0.074	U	0.019	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	1,2-Dibromoethane	0.074	U	0.02	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	Tetrachloroethene	0.072	J	0.025	0.074	UG/M3	0.072	J-
EPD-SA-01-020623	TO-15 SIM	Chlorobenzene	0.06	J	0.029	0.29	UG/M3	0.060	J-
EPD-SA-01-020623	TO-15 SIM	Ethylbenzene	0.31		0.035	0.29	UG/M3	0.31	J-

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300526

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-SA-01-020623	TO-15 SIM	m,p-Xylenes	0.95		0.071	0.29	UG/M3	0.95	J-
EPD-SA-01-020623	TO-15 SIM	Styrene	0.17	J	0.035	0.29	UG/M3	0.17	J-
EPD-SA-01-020623	TO-15 SIM	o-Xylene	0.52		0.038	0.29	UG/M3	0.52	J-
EPD-SA-01-020623	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.074	U	0.026	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	1,3,5-Trimethylbenzene	0.083	J	0.041	0.29	UG/M3	0.083	J-
EPD-SA-01-020623	TO-15 SIM	1,2,4-Trimethylbenzene	0.36		0.047	0.29	UG/M3	0.36	J-
EPD-SA-01-020623	TO-15 SIM	1,3-Dichlorobenzene	0.074	U	0.05	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	1,4-Dichlorobenzene	0.074	U	0.059	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	1,2-Dichlorobenzene	0.074	U	0.053	0.074	UG/M3	0.074	UJ
EPD-SA-01-020623	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.29	U	0.041	0.29	UG/M3	0.29	UJ
EPD-SA-01-020623	TO-15 SIM	1,2,4-Trichlorobenzene	0.15	U	0.059	0.15	UG/M3	0.15	UJ
EPD-SA-01-020623	TO-15 SIM	Naphthalene	0.42		0.065	0.29	UG/M3	0.42	J-
EPD-SA-01-020623	TO-15 SIM	Hexachlorobutadiene	0.29	U	0.038	0.29	UG/M3	0.29	UJ
EPD-SA-01-020623	TO-15	1,1-Difluoroethane	3.9	T			UG/M3	3.9	NJ
EPD-SA-01-020623	TO-15	Unknown	4.4	B,T			UG/M3	4.4	J
EPD-SA-01-020623	TO-15	Propene	15	T			UG/M3	15	NJ
EPD-SA-01-020623	TO-15	Propane	14	T			UG/M3	14	NJ
EPD-SA-01-020623	TO-15	Dichlorodifluoromethane (CFC 12)	1.9	T			UG/M3	1.9	NJ
EPD-SA-01-020623	TO-15	Chloromethane	0.49	T			UG/M3	0.49	NJ
EPD-SA-01-020623	TO-15	2-Methylpropane	13	T			UG/M3	13	NJ
EPD-SA-01-020623	TO-15	Vinyl Chloride	8.3	T			UG/M3	8.3	NJ
EPD-SA-01-020623	TO-15	2-Methylpropene	2.3	T			UG/M3	2.3	NJ
EPD-SA-01-020623	TO-15	n-Butane	12	T			UG/M3	12	NJ
EPD-SA-01-020623	TO-15	Ethanol	68	T			UG/M3	68	NJ
EPD-SA-01-020623	TO-15	Acetone	12	T			UG/M3	12	NJ
EPD-SA-01-020623	TO-15	2-Propanol (Isopropyl Alcohol)	24	T			UG/M3	24	NJ
EPD-SA-01-020623	TO-15	n-Pentane	4.8	T			UG/M3	4.8	NJ
EPD-SA-01-020623	TO-15	Cyclopentane	5.5	T			UG/M3	5.5	NJ
EPD-SA-01-020623	TO-15	2-Methylpentane	10	T			UG/M3	10	NJ
EPD-SA-01-020623	TO-15	Ethyl Acetate	7.4	T			UG/M3	7.4	NJ
EPD-SA-01-020623	TO-15	Benzene	11	T			UG/M3	11	NJ
EPD-SA-01-020623	TO-15	BUTYL ESTER-2-PROPENOIC ACID	2.7	T			UG/M3	2.7	NJ
EPD-SA-01-020623	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF
EPD-SA-01-020623	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1661d	Technical Reviewer (signature and date)	<i>Shawn Wasser</i> 2/23/2023
Data Reviewer (signature and date)	<i>Denise McGuire L. Wright</i> February 20, 2023 2/20/2023	Laboratory	ALS Environmental, Simi Valley, CA
Laboratory Report No.	P2300605	Analyses	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes
Samples and Matrix	Three air samples	Collection Date(s)	02/08/2023 - 02/10/2023
Field Duplicate Pairs	NA	Field QC Blanks	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.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	There was no custody seal on the container. No qualifications are required.

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

Method blanks:

Within Criteria	Exceedance/Notes
N	TO-15 SIM: Method blank P230213-MB contained 1,2,4-Trichlorobenzene at 0.026 µg/m ³ . 1,2,4-Trichlorobenzene result in EPD-WA-01-020723 was qualified as nondetect (flagged U) at the reporting limit.

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
Y	

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

**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 acrolein, 1,2-dichloroethane, carbon tetrachloride, and cis-1,3-dichloropropene. Acrolein, 1,2-dichloroethane, and carbon tetrachloride results in all three samples were qualified as estimated with possible high bias (flagged J+). Associated cis-1,3-dichloropropene results were nondetect; therefore, no qualification required.

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for EPD-WA-01-020723 was 1.32. Canister dilution factor for EPD-WA-01-020823 was 1.63. Canister dilution factor for EPD-WA-01-020923 was 1.29.

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
Y	

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.

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

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
Y	<p>Several tentatively identified compounds (TICs) were detected in all three 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-WA-01-020823 and EPD-WA-01-020923 were reported as nondetect and qualified as searched for, but not found in the sample (flagged U, NF).</p> <p>Sulfur dioxide was tentatively identified in EPD-WA-01-020823. 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-WA-01-020823 was qualified as tentatively identified and possibly biased low (flagged NJ-).</p>

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.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300605

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-020723	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.4		0.011	0.066	UG/M3	2.4	
EPD-WA-01-020723	TO-15 SIM	Chloromethane	0.37		0.034	0.066	UG/M3	0.37	
EPD-WA-01-020723	TO-15 SIM	Vinyl Chloride	10		0.016	0.033	UG/M3	10	
EPD-WA-01-020723	TO-15 SIM	1,3-Butadiene	0.53		0.01	0.066	UG/M3	0.53	
EPD-WA-01-020723	TO-15 SIM	Bromomethane	0.04		0.0088	0.033	UG/M3	0.040	
EPD-WA-01-020723	TO-15 SIM	Chloroethane	0.066		0.01	0.033	UG/M3	0.066	
EPD-WA-01-020723	TO-15 SIM	Acrolein	0.76		0.046	0.26	UG/M3	0.76 J+	
EPD-WA-01-020723	TO-15 SIM	Acetone	7.2		0.3	3.3	UG/M3	7.2	
EPD-WA-01-020723	TO-15 SIM	Trichlorofluoromethane	1.2		0.011	0.066	UG/M3	1.2	
EPD-WA-01-020723	TO-15 SIM	1,1-Dichloroethene	0.012 J		0.012	0.033	UG/M3	0.012 J	
EPD-WA-01-020723	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.31		0.01	0.13	UG/M3	0.31	
EPD-WA-01-020723	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.46		0.011	0.033	UG/M3	0.46	
EPD-WA-01-020723	TO-15 SIM	trans-1,2-Dichloroethene	0.015 J		0.015	0.033	UG/M3	0.015 J	
EPD-WA-01-020723	TO-15 SIM	1,1-Dichloroethane	0.015 J		0.011	0.033	UG/M3	0.015 J	
EPD-WA-01-020723	TO-15 SIM	Methyl tert-Butyl Ether	0.033 U		0.016	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	cis-1,2-Dichloroethene	0.012 J		0.0095	0.033	UG/M3	0.012 J	
EPD-WA-01-020723	TO-15 SIM	Chloroform	0.088 J		0.011	0.13	UG/M3	0.088 J	
EPD-WA-01-020723	TO-15 SIM	1,2-Dichloroethane	0.081		0.011	0.033	UG/M3	0.081 J+	
EPD-WA-01-020723	TO-15 SIM	1,1,1-Trichloroethane	0.033 U		0.012	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	Benzene	12		0.02	0.099	UG/M3	12	
EPD-WA-01-020723	TO-15 SIM	Carbon Tetrachloride	0.46		0.0094	0.033	UG/M3	0.46 J+	
EPD-WA-01-020723	TO-15 SIM	1,2-Dichloropropane	0.071		0.0081	0.033	UG/M3	0.071	
EPD-WA-01-020723	TO-15 SIM	Bromodichloromethane	0.033 U		0.0077	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	Trichloroethene	0.066		0.01	0.033	UG/M3	0.066	
EPD-WA-01-020723	TO-15 SIM	1,4-Dioxane	0.084 J		0.011	0.13	UG/M3	0.084 J	
EPD-WA-01-020723	TO-15 SIM	cis-1,3-Dichloropropene	0.066 U		0.0094	0.066	UG/M3	0.066 U	
EPD-WA-01-020723	TO-15 SIM	trans-1,3-Dichloropropene	0.066 U		0.0063	0.066	UG/M3	0.066 U	
EPD-WA-01-020723	TO-15 SIM	1,1,2-Trichloroethane	0.017 J		0.0078	0.13	UG/M3	0.017 J	
EPD-WA-01-020723	TO-15 SIM	Toluene	3.9		0.016	0.13	UG/M3	3.9	
EPD-WA-01-020723	TO-15 SIM	Dibromochloromethane	0.01 J		0.0084	0.033	UG/M3	0.010 J	
EPD-WA-01-020723	TO-15 SIM	1,2-Dibromoethane	0.033 U		0.0088	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	Tetrachloroethene	0.064		0.011	0.033	UG/M3	0.064	
EPD-WA-01-020723	TO-15 SIM	Chlorobenzene	0.088 J		0.013	0.13	UG/M3	0.088 J	

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300605

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-020723	TO-15 SIM	Ethylbenzene	0.65		0.016	0.13	UG/M3	0.65	
EPD-WA-01-020723	TO-15 SIM	m,p-Xylenes	1.6		0.032	0.13	UG/M3	1.6	
EPD-WA-01-020723	TO-15 SIM	Styrene	0.43		0.016	0.13	UG/M3	0.43	
EPD-WA-01-020723	TO-15 SIM	o-Xylene	0.94		0.017	0.13	UG/M3	0.94	
EPD-WA-01-020723	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.033 U		0.011	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	1,3,5-Trimethylbenzene	0.16		0.018	0.13	UG/M3	0.16	
EPD-WA-01-020723	TO-15 SIM	1,2,4-Trimethylbenzene	0.76		0.021	0.13	UG/M3	0.76	
EPD-WA-01-020723	TO-15 SIM	1,3-Dichlorobenzene	0.033 U		0.022	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	1,4-Dichlorobenzene	0.033 U		0.026	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	1,2-Dichlorobenzene	0.033 U		0.024	0.033	UG/M3	0.033 U	
EPD-WA-01-020723	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.13 U		0.018	0.13	UG/M3	0.13 U	
EPD-WA-01-020723	TO-15 SIM	1,2,4-Trichlorobenzene	0.039 J, B		0.026	0.066	UG/M3	0.066 U	
EPD-WA-01-020723	TO-15 SIM	Naphthalene	1.4		0.029	0.13	UG/M3	1.4	
EPD-WA-01-020723	TO-15 SIM	Hexachlorobutadiene	0.13 U		0.017	0.13	UG/M3	0.13 U	
EPD-WA-01-020723	TO-15	2-Methylpropane	5.4 T				UG/M3	5.4 NJ	
EPD-WA-01-020723	TO-15	n-Butane	15 T				UG/M3	15 NJ	
EPD-WA-01-020723	TO-15	Ethanol	8 T				UG/M3	8.0 NJ	
EPD-WA-01-020723	TO-15	2-Methylbutane	14 T				UG/M3	14 NJ	
EPD-WA-01-020723	TO-15	2-Propanol (Isopropyl Alcohol)	4 T				UG/M3	4.0 NJ	
EPD-WA-01-020723	TO-15	n-Pentane	5.1 T				UG/M3	5.1 NJ	
EPD-WA-01-020723	TO-15	2-Methylpentane	2.8 T				UG/M3	2.8 NJ	
EPD-WA-01-020723	TO-15	1-Butanol	6 T				UG/M3	6.0 NJ	
EPD-WA-01-020723	TO-15	Benzene	9.4 T				UG/M3	9.4 NJ	
EPD-WA-01-020723	TO-15	Toluene	3.2 T				UG/M3	3.2 NJ	
EPD-WA-01-020723	TO-15	Hexamethylcyclotrisiloxane	2.5 T				UG/M3	2.5 NJ	
EPD-WA-01-020723	TO-15	BUTYL ESTER-2-PROPENOIC ACID	18 T				UG/M3	18 NJ	
EPD-WA-01-020723	TO-15	2-Ethylhexyl Acrylate	0 U,NF				UG/M3	0 U, NF	
EPD-WA-01-020723	TO-15	2-Butoxyethanol	0 U,NF				UG/M3	0 U, NF	
EPD-WA-01-020823	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.3		0.014	0.082	UG/M3	2.3	
EPD-WA-01-020823	TO-15 SIM	Chloromethane	0.27		0.042	0.082	UG/M3	0.27	
EPD-WA-01-020823	TO-15 SIM	Vinyl Chloride	0.44		0.02	0.041	UG/M3	0.44	
EPD-WA-01-020823	TO-15 SIM	1,3-Butadiene	0.15		0.013	0.082	UG/M3	0.15	
EPD-WA-01-020823	TO-15 SIM	Bromomethane	0.03 J		0.011	0.041	UG/M3	0.030 J	

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300605

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-020823	TO-15 SIM	Chloroethane	0.086		0.013	0.041	UG/M3	0.086	
EPD-WA-01-020823	TO-15 SIM	Acrolein	0.8		0.057	0.33	UG/M3	0.80	J+
EPD-WA-01-020823	TO-15 SIM	Acetone	9.9		0.37	4.1	UG/M3	9.9	
EPD-WA-01-020823	TO-15 SIM	Trichlorofluoromethane	1.2		0.013	0.082	UG/M3	1.2	
EPD-WA-01-020823	TO-15 SIM	1,1-Dichloroethene	0.041	U	0.014	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.013	0.16	UG/M3	0.29	
EPD-WA-01-020823	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.45		0.013	0.041	UG/M3	0.45	
EPD-WA-01-020823	TO-15 SIM	trans-1,2-Dichloroethene	0.041	U	0.018	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	1,1-Dichloroethane	0.041	U	0.013	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	Methyl tert-Butyl Ether	0.041	U	0.02	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	cis-1,2-Dichloroethene	0.041	U	0.012	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	Chloroform	0.071	J	0.013	0.16	UG/M3	0.071	J
EPD-WA-01-020823	TO-15 SIM	1,2-Dichloroethane	0.061		0.014	0.041	UG/M3	0.061	J+
EPD-WA-01-020823	TO-15 SIM	1,1,1-Trichloroethane	0.041	U	0.015	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	Benzene	0.87		0.024	0.12	UG/M3	0.87	
EPD-WA-01-020823	TO-15 SIM	Carbon Tetrachloride	0.42		0.012	0.041	UG/M3	0.42	J+
EPD-WA-01-020823	TO-15 SIM	1,2-Dichloropropane	0.015	J	0.0099	0.041	UG/M3	0.015	J
EPD-WA-01-020823	TO-15 SIM	Bromodichloromethane	0.041	U	0.0095	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	Trichloroethene	0.024	J	0.013	0.041	UG/M3	0.024	J
EPD-WA-01-020823	TO-15 SIM	1,4-Dioxane	0.062	J	0.014	0.16	UG/M3	0.062	J
EPD-WA-01-020823	TO-15 SIM	cis-1,3-Dichloropropene	0.082	U	0.012	0.082	UG/M3	0.082	U
EPD-WA-01-020823	TO-15 SIM	trans-1,3-Dichloropropene	0.082	U	0.0078	0.082	UG/M3	0.082	U
EPD-WA-01-020823	TO-15 SIM	1,1,2-Trichloroethane	0.16	U	0.0096	0.16	UG/M3	0.16	U
EPD-WA-01-020823	TO-15 SIM	Toluene	1.2		0.02	0.16	UG/M3	1.2	
EPD-WA-01-020823	TO-15 SIM	Dibromochloromethane	0.041	U	0.01	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	1,2-Dibromoethane	0.041	U	0.011	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	Tetrachloroethene	0.073		0.014	0.041	UG/M3	0.073	
EPD-WA-01-020823	TO-15 SIM	Chlorobenzene	0.16	U	0.016	0.16	UG/M3	0.16	U
EPD-WA-01-020823	TO-15 SIM	Ethylbenzene	0.25		0.02	0.16	UG/M3	0.25	
EPD-WA-01-020823	TO-15 SIM	m,p-Xylenes	0.96		0.039	0.16	UG/M3	0.96	
EPD-WA-01-020823	TO-15 SIM	Styrene	0.099	J	0.02	0.16	UG/M3	0.099	J
EPD-WA-01-020823	TO-15 SIM	o-Xylene	0.29		0.021	0.16	UG/M3	0.29	
EPD-WA-01-020823	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.033	J	0.014	0.041	UG/M3	0.033	J

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300605

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-020823	TO-15 SIM	1,3,5-Trimethylbenzene	0.063	J	0.023	0.16	UG/M3	0.063	J
EPD-WA-01-020823	TO-15 SIM	1,2,4-Trimethylbenzene	0.23		0.026	0.16	UG/M3	0.23	
EPD-WA-01-020823	TO-15 SIM	1,3-Dichlorobenzene	0.041	U	0.028	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	1,4-Dichlorobenzene	0.041	U	0.033	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	1,2-Dichlorobenzene	0.041	U	0.029	0.041	UG/M3	0.041	U
EPD-WA-01-020823	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.16	U	0.023	0.16	UG/M3	0.16	U
EPD-WA-01-020823	TO-15 SIM	1,2,4-Trichlorobenzene	0.082	U	0.033	0.082	UG/M3	0.082	U
EPD-WA-01-020823	TO-15 SIM	Naphthalene	0.14	J	0.036	0.16	UG/M3	0.14	J
EPD-WA-01-020823	TO-15 SIM	Hexachlorobutadiene	0.16	U	0.021	0.16	UG/M3	0.16	U
EPD-WA-01-020823	TO-15	Sulfur Dioxide	14	!,T			UG/M3	14	NJ-
EPD-WA-01-020823	TO-15	n-Butane	3.9	T			UG/M3	3.9	NJ
EPD-WA-01-020823	TO-15	Acetone	12	T			UG/M3	12	NJ
EPD-WA-01-020823	TO-15	2-Ethoxyethanol	4.6	T			UG/M3	4.6	NJ
EPD-WA-01-020823	TO-15	Hexamethylcyclotrisiloxane	7.2	T			UG/M3	7.2	NJ
EPD-WA-01-020823	TO-15	Unknown Siloxane	4.9	T			UG/M3	4.9	NJ
EPD-WA-01-020823	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-020823	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-020823	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-020923	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.3		0.011	0.065	UG/M3	2.3	
EPD-WA-01-020923	TO-15 SIM	Chloromethane	0.25		0.034	0.065	UG/M3	0.25	
EPD-WA-01-020923	TO-15 SIM	Vinyl Chloride	0.016	J	0.015	0.032	UG/M3	0.016	J
EPD-WA-01-020923	TO-15 SIM	1,3-Butadiene	0.038	J	0.01	0.065	UG/M3	0.038	J
EPD-WA-01-020923	TO-15 SIM	Bromomethane	0.03	J	0.0086	0.032	UG/M3	0.030	J
EPD-WA-01-020923	TO-15 SIM	Chloroethane	0.022	J	0.01	0.032	UG/M3	0.022	J
EPD-WA-01-020923	TO-15 SIM	Acrolein	0.23	J	0.045	0.26	UG/M3	0.23	J+
EPD-WA-01-020923	TO-15 SIM	Acetone	6		0.3	3.2	UG/M3	6.0	
EPD-WA-01-020923	TO-15 SIM	Trichlorofluoromethane	1.1		0.01	0.065	UG/M3	1.1	
EPD-WA-01-020923	TO-15 SIM	1,1-Dichloroethene	0.032	U	0.011	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.01	0.13	UG/M3	0.29	
EPD-WA-01-020923	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.45		0.01	0.032	UG/M3	0.45	
EPD-WA-01-020923	TO-15 SIM	trans-1,2-Dichloroethene	0.032	U	0.014	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	1,1-Dichloroethane	0.032	U	0.011	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	Methyl tert-Butyl Ether	0.032	U	0.015	0.032	UG/M3	0.032	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300605

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-020923	TO-15 SIM	cis-1,2-Dichloroethene	0.032	U	0.0093	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	Chloroform	0.064	J	0.01	0.13	UG/M3	0.064	J
EPD-WA-01-020923	TO-15 SIM	1,2-Dichloroethane	0.12		0.011	0.032	UG/M3	0.12	J+
EPD-WA-01-020923	TO-15 SIM	1,1,1-Trichloroethane	0.032	U	0.012	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	Benzene	0.53		0.019	0.097	UG/M3	0.53	
EPD-WA-01-020923	TO-15 SIM	Carbon Tetrachloride	0.29		0.0092	0.032	UG/M3	0.29	J+
EPD-WA-01-020923	TO-15 SIM	1,2-Dichloropropane	0.068		0.0079	0.032	UG/M3	0.068	
EPD-WA-01-020923	TO-15 SIM	Bromodichloromethane	0.032	U	0.0075	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	Trichloroethene	0.027	J	0.0099	0.032	UG/M3	0.027	J
EPD-WA-01-020923	TO-15 SIM	1,4-Dioxane	0.019	J	0.011	0.13	UG/M3	0.019	J
EPD-WA-01-020923	TO-15 SIM	cis-1,3-Dichloropropene	0.065	U	0.0092	0.065	UG/M3	0.065	U
EPD-WA-01-020923	TO-15 SIM	trans-1,3-Dichloropropene	0.065	U	0.0062	0.065	UG/M3	0.065	U
EPD-WA-01-020923	TO-15 SIM	1,1,2-Trichloroethane	0.012	J	0.0076	0.13	UG/M3	0.012	J
EPD-WA-01-020923	TO-15 SIM	Toluene	1.3		0.015	0.13	UG/M3	1.3	
EPD-WA-01-020923	TO-15 SIM	Dibromochloromethane	0.032	U	0.0083	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	1,2-Dibromoethane	0.032	U	0.0086	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	Tetrachloroethene	0.066		0.011	0.032	UG/M3	0.066	
EPD-WA-01-020923	TO-15 SIM	Chlorobenzene	0.13	U	0.013	0.13	UG/M3	0.13	U
EPD-WA-01-020923	TO-15 SIM	Ethylbenzene	0.52		0.015	0.13	UG/M3	0.52	
EPD-WA-01-020923	TO-15 SIM	m,p-Xylenes	0.77		0.031	0.13	UG/M3	0.77	
EPD-WA-01-020923	TO-15 SIM	Styrene	0.059	J	0.015	0.13	UG/M3	0.059	J
EPD-WA-01-020923	TO-15 SIM	o-Xylene	0.3		0.017	0.13	UG/M3	0.30	
EPD-WA-01-020923	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.032	U	0.011	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	1,3,5-Trimethylbenzene	0.071	J	0.018	0.13	UG/M3	0.071	J
EPD-WA-01-020923	TO-15 SIM	1,2,4-Trimethylbenzene	0.22		0.021	0.13	UG/M3	0.22	
EPD-WA-01-020923	TO-15 SIM	1,3-Dichlorobenzene	0.032	U	0.022	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	1,4-Dichlorobenzene	0.032	U	0.026	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	1,2-Dichlorobenzene	0.032	U	0.023	0.032	UG/M3	0.032	U
EPD-WA-01-020923	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.13	U	0.018	0.13	UG/M3	0.13	U
EPD-WA-01-020923	TO-15 SIM	1,2,4-Trichlorobenzene	0.065	U	0.026	0.065	UG/M3	0.065	U
EPD-WA-01-020923	TO-15 SIM	Naphthalene	0.13	U	0.028	0.13	UG/M3	0.13	U
EPD-WA-01-020923	TO-15 SIM	Hexachlorobutadiene	0.13	U	0.017	0.13	UG/M3	0.13	U
EPD-WA-01-020923	TO-15	Acetone	8.3	T			UG/M3	8.3	NJ

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300605

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-020923	TO-15	n-Pentane	20	T			UG/M3	20	NJ
EPD-WA-01-020923	TO-15	Ethyl Acetate	8.2	T			UG/M3	8.2	NJ
EPD-WA-01-020923	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-020923	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U,NF
EPD-WA-01-020923	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U,NF

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1661e	Technical Reviewer (signature and date)	<i>J. Ramon Vasser</i> 2/23/2023
Data Reviewer (signature and date)	<i>L. Wright</i> 02/19/2023 <i>Denise McGuire</i> February 20, 2023	Laboratory	ALS Environmental, Simi Valley, CA
Laboratory Report No.	P2300646	Analyses	Volatile organic compounds (VOCs) by EPA Method TO-15 in scan and selected ion monitoring (SIM) modes
Samples and Matrix	Five air samples	Collection Date(s)	02/11/2023-02/13/2023
Field Duplicate Pairs	EPD-WA-01-021123 and EPD-WA-02-021123	Field QC Blanks	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, these results were only reported in units $\mu\text{g}/\text{m}^3$ in the EDD. No qualifications are required. The laboratory noted that EPD-WA-02-021123 and EPD-WA-01-021123 were collected using canisters that were batch-certified for method TO-15 scan and not TO-15 SIM. The results should be utilized accordingly.

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	<p>The ending field-measured canister pressure listed on the chain-of-custody (COC) form for EPD-WA-01-021023 is (-2” Hg) (slight vacuum pressure), while the canister pressure measured by the laboratory upon receipt is 0.31 psig (0.63” Hg) for EPD-WA-01-021023 (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 canister leaks. Typically, the field gauges tend to be less accurate than lab gauges. 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 both 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, this sample results should be used with caution because the results may not be representative of sampling conditions over the intended sampling period.</p> <p>There were no custody seals on the sample/shipping containers. No qualifications were required.</p>

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
N	The relative percent difference for the toluene and tetrachloroethene results in field duplicate pair EPD-WA-01-021123 and EPD-WA-02-021123 exceeded 50% acceptance criterion. Toluene and tetrachloroethene results in EPD-WA-01-021123 and EPD-WA-02-021123 were qualified as estimated (flagged J).

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
N	TO-15 SIM: High LCS and/or LCSD percent recoveries of acrolein, carbon tetrachloride, and cis-1,3-dichloropropene. Acrolein and carbon tetrachloride results were qualified as estimated with possible high bias (flagged J+) in all five samples. No qualification is required for cis-1,3-dichloropropene because the average percent recovery was within acceptance criteria and all associated sample results are nondetect.

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for EPD-MG-01-021223 is 1.35. Canister dilution factor for EPD-WA-01-021023 is 1.23. Canister dilution factor for EPD-WA-01-021123 is 1.39. Canister dilution factor for EPD-WA-01-021223 is 1.41. Canister dilution factor for EPD-WA-02-021123 is 1.33.

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

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 five samples. The known TICs were qualified as tentatively identified (flagged NJ). Unknown TICs were qualified as estimated (flagged J). 2-butoxyethanol and 2-ethylhexyl acrylate in all five samples and butyl ester-2-propenoic acid in EPD-MG-01-021223 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
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-MG-01-021223	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.2		0.011	0.068	UG/M3	2.2	
EPD-MG-01-021223	TO-15 SIM	Chloromethane	0.26		0.035	0.068	UG/M3	0.26	
EPD-MG-01-021223	TO-15 SIM	Vinyl Chloride	0.034	U	0.016	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	1,3-Butadiene	0.14		0.011	0.068	UG/M3	0.14	
EPD-MG-01-021223	TO-15 SIM	Bromomethane	0.024	J	0.009	0.034	UG/M3	0.024	J
EPD-MG-01-021223	TO-15 SIM	Chloroethane	0.014	J	0.011	0.034	UG/M3	0.014	J
EPD-MG-01-021223	TO-15 SIM	Acrolein	0.31		0.047	0.27	UG/M3	0.31	J+
EPD-MG-01-021223	TO-15 SIM	Acetone	4.7		0.31	3.4	UG/M3	4.7	
EPD-MG-01-021223	TO-15 SIM	Trichlorofluoromethane	1.2		0.011	0.068	UG/M3	1.2	
EPD-MG-01-021223	TO-15 SIM	1,1-Dichloroethene	0.034	U	0.012	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.3		0.011	0.14	UG/M3	0.30	
EPD-MG-01-021223	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.43		0.011	0.034	UG/M3	0.43	
EPD-MG-01-021223	TO-15 SIM	trans-1,2-Dichloroethene	0.034	U	0.015	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	1,1-Dichloroethane	0.034	U	0.011	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	Methyl tert-Butyl Ether	0.034	U	0.016	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	cis-1,2-Dichloroethene	0.034	U	0.0097	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	Chloroform	0.094	J	0.011	0.14	UG/M3	0.094	J
EPD-MG-01-021223	TO-15 SIM	1,2-Dichloroethane	0.063		0.011	0.034	UG/M3	0.063	
EPD-MG-01-021223	TO-15 SIM	1,1,1-Trichloroethane	0.034	U	0.012	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	Benzene	1.4		0.02	0.1	UG/M3	1.4	
EPD-MG-01-021223	TO-15 SIM	Carbon Tetrachloride	0.39		0.0096	0.034	UG/M3	0.39	J+
EPD-MG-01-021223	TO-15 SIM	1,2-Dichloropropane	0.015	J	0.0082	0.034	UG/M3	0.015	J
EPD-MG-01-021223	TO-15 SIM	Bromodichloromethane	0.034	U	0.0078	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	Trichloroethene	0.012	J	0.01	0.034	UG/M3	0.012	J
EPD-MG-01-021223	TO-15 SIM	1,4-Dioxane	0.14	U	0.012	0.14	UG/M3	0.14	U
EPD-MG-01-021223	TO-15 SIM	cis-1,3-Dichloropropene	0.068	U	0.0096	0.068	UG/M3	0.068	U
EPD-MG-01-021223	TO-15 SIM	trans-1,3-Dichloropropene	0.068	U	0.0065	0.068	UG/M3	0.068	U
EPD-MG-01-021223	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.008	0.14	UG/M3	0.14	U
EPD-MG-01-021223	TO-15 SIM	Toluene	2.6		0.016	0.14	UG/M3	2.6	
EPD-MG-01-021223	TO-15 SIM	Dibromochloromethane	0.034	U	0.0086	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	1,2-Dibromoethane	0.034	U	0.009	0.034	UG/M3	0.034	U
EPD-MG-01-021223	TO-15 SIM	Tetrachloroethene	0.3		0.012	0.034	UG/M3	0.30	
EPD-MG-01-021223	TO-15 SIM	Chlorobenzene	0.14	U	0.013	0.14	UG/M3	0.14	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-MG-01-021223	TO-15 SIM	Ethylbenzene	0.39		0.016	0.14	UG/M3	0.39	
EPD-MG-01-021223	TO-15 SIM	m,p-Xylenes	1.7		0.032	0.14	UG/M3	1.7	
EPD-MG-01-021223	TO-15 SIM	Styrene	0.11 J		0.016	0.14	UG/M3	0.11 J	
EPD-MG-01-021223	TO-15 SIM	o-Xylene	0.57		0.018	0.14	UG/M3	0.57	
EPD-MG-01-021223	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.034 U		0.012	0.034	UG/M3	0.034 U	
EPD-MG-01-021223	TO-15 SIM	1,3,5-Trimethylbenzene	0.12 J		0.019	0.14	UG/M3	0.12 J	
EPD-MG-01-021223	TO-15 SIM	1,2,4-Trimethylbenzene	0.44		0.022	0.14	UG/M3	0.44	
EPD-MG-01-021223	TO-15 SIM	1,3-Dichlorobenzene	0.034 U		0.023	0.034	UG/M3	0.034 U	
EPD-MG-01-021223	TO-15 SIM	1,4-Dichlorobenzene	0.41		0.027	0.034	UG/M3	0.41	
EPD-MG-01-021223	TO-15 SIM	1,2-Dichlorobenzene	0.034 U		0.024	0.034	UG/M3	0.034 U	
EPD-MG-01-021223	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14 U		0.019	0.14	UG/M3	0.14 U	
EPD-MG-01-021223	TO-15 SIM	1,2,4-Trichlorobenzene	0.068 U		0.027	0.068	UG/M3	0.068 U	
EPD-MG-01-021223	TO-15 SIM	Naphthalene	0.15		0.03	0.14	UG/M3	0.15	
EPD-MG-01-021223	TO-15 SIM	Hexachlorobutadiene	0.14 U		0.018	0.14	UG/M3	0.14 U	
EPD-MG-01-021223	TO-15	Propane	15 T				UG/M3	15 NJ	
EPD-MG-01-021223	TO-15	2-Methylpropane	7.4 T				UG/M3	7.4 NJ	
EPD-MG-01-021223	TO-15	n-Butane	7.6 T				UG/M3	7.6 NJ	
EPD-MG-01-021223	TO-15	Ethanol	3.7 T				UG/M3	3.7 NJ	
EPD-MG-01-021223	TO-15	2-Methylbutane	12 T				UG/M3	12 NJ	
EPD-MG-01-021223	TO-15	n-Pentane	8.8 T				UG/M3	8.8 NJ	
EPD-MG-01-021223	TO-15	2-Methylpentane	2.5 T				UG/M3	2.5 NJ	
EPD-MG-01-021223	TO-15	Ethyl Acetate	10 T				UG/M3	10 NJ	
EPD-MG-01-021223	TO-15	BUTYL ESTER-2-PROPENOIC ACID	0 U,NF				UG/M3	0 U, NF	
EPD-MG-01-021223	TO-15	2-Ethylhexyl Acrylate	0 U,NF				UG/M3	0 U, NF	
EPD-MG-01-021223	TO-15	2-Butoxyethanol	0 U,NF				UG/M3	0 U, NF	
EPD-WA-01-021023	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.2		0.01	0.062	UG/M3	2.2	
EPD-WA-01-021023	TO-15 SIM	Chloromethane	0.33		0.032	0.062	UG/M3	0.33	
EPD-WA-01-021023	TO-15 SIM	Vinyl Chloride	1.7		0.015	0.031	UG/M3	1.7	
EPD-WA-01-021023	TO-15 SIM	1,3-Butadiene	0.063		0.0097	0.062	UG/M3	0.063	
EPD-WA-01-021023	TO-15 SIM	Bromomethane	0.029 J		0.0082	0.031	UG/M3	0.029 J	
EPD-WA-01-021023	TO-15 SIM	Chloroethane	0.017 J		0.0096	0.031	UG/M3	0.017 J	
EPD-WA-01-021023	TO-15 SIM	Acrolein	0.18 J		0.043	0.25	UG/M3	0.18 J+	
EPD-WA-01-021023	TO-15 SIM	Acetone	5.5		0.28	3.1	UG/M3	5.5	

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-021023	TO-15 SIM	Trichlorofluoromethane	1.1		0.01	0.062	UG/M3	1.1	
EPD-WA-01-021023	TO-15 SIM	1,1-Dichloroethene	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.32		0.0096	0.12	UG/M3	0.32	
EPD-WA-01-021023	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.46		0.01	0.031	UG/M3	0.46	
EPD-WA-01-021023	TO-15 SIM	trans-1,2-Dichloroethene	0.015	J	0.014	0.031	UG/M3	0.015	J
EPD-WA-01-021023	TO-15 SIM	1,1-Dichloroethane	0.031	U	0.01	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	Methyl tert-Butyl Ether	0.031	U	0.015	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	cis-1,2-Dichloroethene	0.031	U	0.0089	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	Chloroform	0.094	J	0.0098	0.12	UG/M3	0.094	J
EPD-WA-01-021023	TO-15 SIM	1,2-Dichloroethane	0.07		0.01	0.031	UG/M3	0.070	
EPD-WA-01-021023	TO-15 SIM	1,1,1-Trichloroethane	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	Benzene	1.2		0.018	0.092	UG/M3	1.2	
EPD-WA-01-021023	TO-15 SIM	Carbon Tetrachloride	0.42		0.0087	0.031	UG/M3	0.42	J+
EPD-WA-01-021023	TO-15 SIM	1,2-Dichloropropane	0.016	J	0.0075	0.031	UG/M3	0.016	J
EPD-WA-01-021023	TO-15 SIM	Bromodichloromethane	0.031	U	0.0071	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	Trichloroethene	0.53		0.0095	0.031	UG/M3	0.53	
EPD-WA-01-021023	TO-15 SIM	1,4-Dioxane	0.12	U	0.011	0.12	UG/M3	0.12	U
EPD-WA-01-021023	TO-15 SIM	cis-1,3-Dichloropropene	0.062	U	0.0087	0.062	UG/M3	0.062	U
EPD-WA-01-021023	TO-15 SIM	trans-1,3-Dichloropropene	0.062	U	0.0059	0.062	UG/M3	0.062	U
EPD-WA-01-021023	TO-15 SIM	1,1,2-Trichloroethane	0.12	U	0.0073	0.12	UG/M3	0.12	U
EPD-WA-01-021023	TO-15 SIM	Toluene	8.7		0.015	0.12	UG/M3	8.7	
EPD-WA-01-021023	TO-15 SIM	Dibromochloromethane	0.031	U	0.0079	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	1,2-Dibromoethane	0.031	U	0.0082	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	Tetrachloroethene	0.065		0.011	0.031	UG/M3	0.065	
EPD-WA-01-021023	TO-15 SIM	Chlorobenzene	0.12	U	0.012	0.12	UG/M3	0.12	U
EPD-WA-01-021023	TO-15 SIM	Ethylbenzene	0.29		0.015	0.12	UG/M3	0.29	
EPD-WA-01-021023	TO-15 SIM	m,p-Xylenes	0.9		0.03	0.12	UG/M3	0.90	
EPD-WA-01-021023	TO-15 SIM	Styrene	0.25		0.015	0.12	UG/M3	0.25	
EPD-WA-01-021023	TO-15 SIM	o-Xylene	0.32		0.016	0.12	UG/M3	0.32	
EPD-WA-01-021023	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.031	U	0.011	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	1,3,5-Trimethylbenzene	0.15		0.017	0.12	UG/M3	0.15	
EPD-WA-01-021023	TO-15 SIM	1,2,4-Trimethylbenzene	0.58		0.02	0.12	UG/M3	0.58	
EPD-WA-01-021023	TO-15 SIM	1,3-Dichlorobenzene	0.031	U	0.021	0.031	UG/M3	0.031	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-021023	TO-15 SIM	1,4-Dichlorobenzene	0.07		0.025	0.031	UG/M3	0.070	
EPD-WA-01-021023	TO-15 SIM	1,2-Dichlorobenzene	0.031	U	0.022	0.031	UG/M3	0.031	U
EPD-WA-01-021023	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.12	U	0.017	0.12	UG/M3	0.12	U
EPD-WA-01-021023	TO-15 SIM	1,2,4-Trichlorobenzene	0.062	U	0.025	0.062	UG/M3	0.062	U
EPD-WA-01-021023	TO-15 SIM	Naphthalene	0.059	J	0.027	0.12	UG/M3	0.059	J
EPD-WA-01-021023	TO-15 SIM	Hexachlorobutadiene	0.12	U	0.016	0.12	UG/M3	0.12	U
EPD-WA-01-021023	TO-15	Propane	2.5	T			UG/M3	2.5	NJ
EPD-WA-01-021023	TO-15	2-Methylpropane	73	T			UG/M3	73	NJ
EPD-WA-01-021023	TO-15	n-Butane	5.2	T			UG/M3	5.2	NJ
EPD-WA-01-021023	TO-15	Ethanol	8.9	T			UG/M3	8.9	NJ
EPD-WA-01-021023	TO-15	2-Methylbutane	16	T			UG/M3	16	NJ
EPD-WA-01-021023	TO-15	2-Propanol (Isopropyl Alcohol)	2.4	T			UG/M3	2.4	NJ
EPD-WA-01-021023	TO-15	n-Pentane	48	T			UG/M3	48	NJ
EPD-WA-01-021023	TO-15	Carbon Disulfide	7	T			UG/M3	7.0	NJ
EPD-WA-01-021023	TO-15	2-Methylpentane	2.6	T			UG/M3	2.6	NJ
EPD-WA-01-021023	TO-15	Ethyl Acetate	170	T			UG/M3	170	NJ
EPD-WA-01-021023	TO-15	Toluene	7.5	T			UG/M3	7.5	NJ
EPD-WA-01-021023	TO-15	BUTYL ESTER-2-PROPENOIC ACID	4.5	T			UG/M3	4.5	NJ
EPD-WA-01-021023	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-021023	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-021123	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.3		0.012	0.07	UG/M3	2.3	
EPD-WA-01-021123	TO-15 SIM	Chloromethane	0.33		0.036	0.07	UG/M3	0.33	
EPD-WA-01-021123	TO-15 SIM	Vinyl Chloride	1.7		0.017	0.035	UG/M3	1.7	
EPD-WA-01-021123	TO-15 SIM	1,3-Butadiene	0.34		0.011	0.07	UG/M3	0.34	
EPD-WA-01-021123	TO-15 SIM	Bromomethane	0.028	J	0.0093	0.035	UG/M3	0.028	J
EPD-WA-01-021123	TO-15 SIM	Chloroethane	0.028	J	0.011	0.035	UG/M3	0.028	J
EPD-WA-01-021123	TO-15 SIM	Acrolein	0.3		0.049	0.28	UG/M3	0.30	J+
EPD-WA-01-021123	TO-15 SIM	Acetone	4.1		0.32	3.5	UG/M3	4.1	
EPD-WA-01-021123	TO-15 SIM	Trichlorofluoromethane	1.1		0.011	0.07	UG/M3	1.1	
EPD-WA-01-021123	TO-15 SIM	1,1-Dichloroethene	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.3		0.011	0.14	UG/M3	0.30	
EPD-WA-01-021123	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.43		0.011	0.035	UG/M3	0.43	
EPD-WA-01-021123	TO-15 SIM	trans-1,2-Dichloroethene	0.035	U	0.015	0.035	UG/M3	0.035	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-021123	TO-15 SIM	1,1-Dichloroethane	0.035	U	0.011	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	Methyl tert-Butyl Ether	0.035	U	0.017	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	cis-1,2-Dichloroethene	0.013	J	0.01	0.035	UG/M3	0.013	J
EPD-WA-01-021123	TO-15 SIM	Chloroform	0.066	J	0.011	0.14	UG/M3	0.066	J
EPD-WA-01-021123	TO-15 SIM	1,2-Dichloroethane	0.065		0.012	0.035	UG/M3	0.065	
EPD-WA-01-021123	TO-15 SIM	1,1,1-Trichloroethane	0.035	U	0.013	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	Benzene	1.1		0.021	0.1	UG/M3	1.1	
EPD-WA-01-021123	TO-15 SIM	Carbon Tetrachloride	0.33		0.0099	0.035	UG/M3	0.33	J+
EPD-WA-01-021123	TO-15 SIM	1,2-Dichloropropane	0.014	J	0.0085	0.035	UG/M3	0.014	J
EPD-WA-01-021123	TO-15 SIM	Bromodichloromethane	0.035	U	0.0081	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	Trichloroethene	0.019	J	0.011	0.035	UG/M3	0.019	J
EPD-WA-01-021123	TO-15 SIM	1,4-Dioxane	0.029	J	0.012	0.14	UG/M3	0.029	J
EPD-WA-01-021123	TO-15 SIM	cis-1,3-Dichloropropene	0.07	U	0.0099	0.07	UG/M3	0.070	U
EPD-WA-01-021123	TO-15 SIM	trans-1,3-Dichloropropene	0.017	J	0.0067	0.07	UG/M3	0.017	J
EPD-WA-01-021123	TO-15 SIM	1,1,2-Trichloroethane	0.14	U	0.0082	0.14	UG/M3	0.14	U
EPD-WA-01-021123	TO-15 SIM	Toluene	1.2		0.017	0.14	UG/M3	1.2	J
EPD-WA-01-021123	TO-15 SIM	Dibromochloromethane	0.035	U	0.0089	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	1,2-Dibromoethane	0.013	J	0.0093	0.035	UG/M3	0.013	J
EPD-WA-01-021123	TO-15 SIM	Tetrachloroethene	0.41		0.012	0.035	UG/M3	0.41	J
EPD-WA-01-021123	TO-15 SIM	Chlorobenzene	0.14	U	0.013	0.14	UG/M3	0.14	U
EPD-WA-01-021123	TO-15 SIM	Ethylbenzene	0.19		0.017	0.14	UG/M3	0.19	
EPD-WA-01-021123	TO-15 SIM	m,p-Xylenes	0.78		0.033	0.14	UG/M3	0.78	
EPD-WA-01-021123	TO-15 SIM	Styrene	0.07	J	0.017	0.14	UG/M3	0.070	J
EPD-WA-01-021123	TO-15 SIM	o-Xylene	0.27		0.018	0.14	UG/M3	0.27	
EPD-WA-01-021123	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.035	U	0.012	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	1,3,5-Trimethylbenzene	0.068	J	0.019	0.14	UG/M3	0.068	J
EPD-WA-01-021123	TO-15 SIM	1,2,4-Trimethylbenzene	0.24		0.022	0.14	UG/M3	0.24	J
EPD-WA-01-021123	TO-15 SIM	1,3-Dichlorobenzene	0.035	U	0.024	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	1,4-Dichlorobenzene	0.05		0.028	0.035	UG/M3	0.050	
EPD-WA-01-021123	TO-15 SIM	1,2-Dichlorobenzene	0.035	U	0.025	0.035	UG/M3	0.035	U
EPD-WA-01-021123	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.14	U	0.019	0.14	UG/M3	0.14	U
EPD-WA-01-021123	TO-15 SIM	1,2,4-Trichlorobenzene	0.07	U	0.028	0.07	UG/M3	0.070	U
EPD-WA-01-021123	TO-15 SIM	Naphthalene	0.06	J	0.031	0.14	UG/M3	0.060	J

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-021123	TO-15 SIM	Hexachlorobutadiene	0.14	U	0.018	0.14	UG/M3	0.14	U
EPD-WA-01-021123	TO-15	Propane	4.7	T			UG/M3	4.7	NJ
EPD-WA-01-021123	TO-15	2-Methylpropane	3.4	T			UG/M3	3.4	NJ
EPD-WA-01-021123	TO-15	n-Butane	6.8	T			UG/M3	6.8	NJ
EPD-WA-01-021123	TO-15	2-Methylbutane	7.2	T			UG/M3	7.2	NJ
EPD-WA-01-021123	TO-15	BUTYL ESTER-2-PROPENOIC ACID	3.3	T			UG/M3	3.3	NJ
EPD-WA-01-021123	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-021123	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-021223	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.4		0.024	0.14	UG/M3	2.4	
EPD-WA-01-021223	TO-15 SIM	Chloromethane	0.58		0.073	0.14	UG/M3	0.58	
EPD-WA-01-021223	TO-15 SIM	Vinyl Chloride	4.2		0.034	0.071	UG/M3	4.2	
EPD-WA-01-021223	TO-15 SIM	1,3-Butadiene	0.34		0.022	0.14	UG/M3	0.34	
EPD-WA-01-021223	TO-15 SIM	Bromomethane	0.026	J	0.019	0.071	UG/M3	0.026	J
EPD-WA-01-021223	TO-15 SIM	Chloroethane	0.051	J	0.022	0.071	UG/M3	0.051	J
EPD-WA-01-021223	TO-15 SIM	Acrolein	0.54	J	0.099	0.56	UG/M3	0.54	J+
EPD-WA-01-021223	TO-15 SIM	Acetone	4.6	J	0.65	7.1	UG/M3	4.6	J
EPD-WA-01-021223	TO-15 SIM	Trichlorofluoromethane	1.2		0.023	0.14	UG/M3	1.2	
EPD-WA-01-021223	TO-15 SIM	1,1-Dichloroethene	0.071	U	0.025	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.29		0.022	0.28	UG/M3	0.29	
EPD-WA-01-021223	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.46		0.023	0.071	UG/M3	0.46	
EPD-WA-01-021223	TO-15 SIM	trans-1,2-Dichloroethene	0.071	U	0.031	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	1,1-Dichloroethane	0.035	J	0.023	0.071	UG/M3	0.035	J
EPD-WA-01-021223	TO-15 SIM	Methyl tert-Butyl Ether	0.071	U	0.034	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	cis-1,2-Dichloroethene	0.071	U	0.02	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	Chloroform	0.074	J	0.023	0.28	UG/M3	0.074	J
EPD-WA-01-021223	TO-15 SIM	1,2-Dichloroethane	0.11		0.023	0.071	UG/M3	0.11	
EPD-WA-01-021223	TO-15 SIM	1,1,1-Trichloroethane	0.071	U	0.025	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	Benzene	3		0.042	0.21	UG/M3	3.0	
EPD-WA-01-021223	TO-15 SIM	Carbon Tetrachloride	0.44		0.02	0.071	UG/M3	0.44	J+
EPD-WA-01-021223	TO-15 SIM	1,2-Dichloropropane	0.071	U	0.017	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	Bromodichloromethane	0.071	U	0.016	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	Trichloroethene	0.071	U	0.022	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	1,4-Dioxane	0.28	U	0.025	0.28	UG/M3	0.28	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-021223	TO-15 SIM	cis-1,3-Dichloropropene	0.14	U	0.02	0.14	UG/M3	0.14	U
EPD-WA-01-021223	TO-15 SIM	trans-1,3-Dichloropropene	0.14	U	0.014	0.14	UG/M3	0.14	U
EPD-WA-01-021223	TO-15 SIM	1,1,2-Trichloroethane	0.28	U	0.017	0.28	UG/M3	0.28	U
EPD-WA-01-021223	TO-15 SIM	Toluene	2.1		0.034	0.28	UG/M3	2.1	
EPD-WA-01-021223	TO-15 SIM	Dibromochloromethane	0.071	U	0.018	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	1,2-Dibromoethane	0.071	U	0.019	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	Tetrachloroethene	0.073		0.024	0.071	UG/M3	0.073	
EPD-WA-01-021223	TO-15 SIM	Chlorobenzene	0.28	U	0.027	0.28	UG/M3	0.28	U
EPD-WA-01-021223	TO-15 SIM	Ethylbenzene	0.39		0.034	0.28	UG/M3	0.39	
EPD-WA-01-021223	TO-15 SIM	m,p-Xylenes	1.4		0.068	0.28	UG/M3	1.4	
EPD-WA-01-021223	TO-15 SIM	Styrene	0.19	J	0.034	0.28	UG/M3	0.19	J
EPD-WA-01-021223	TO-15 SIM	o-Xylene	0.5		0.037	0.28	UG/M3	0.50	
EPD-WA-01-021223	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.071	U	0.025	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	1,3,5-Trimethylbenzene	0.17	J	0.039	0.28	UG/M3	0.17	J
EPD-WA-01-021223	TO-15 SIM	1,2,4-Trimethylbenzene	0.74		0.045	0.28	UG/M3	0.74	
EPD-WA-01-021223	TO-15 SIM	1,3-Dichlorobenzene	0.071	U	0.048	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	1,4-Dichlorobenzene	0.12		0.056	0.071	UG/M3	0.12	
EPD-WA-01-021223	TO-15 SIM	1,2-Dichlorobenzene	0.071	U	0.051	0.071	UG/M3	0.071	U
EPD-WA-01-021223	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.28	U	0.039	0.28	UG/M3	0.28	U
EPD-WA-01-021223	TO-15 SIM	1,2,4-Trichlorobenzene	0.14	U	0.056	0.14	UG/M3	0.14	U
EPD-WA-01-021223	TO-15 SIM	Naphthalene	0.27	J	0.062	0.28	UG/M3	0.27	J
EPD-WA-01-021223	TO-15 SIM	Hexachlorobutadiene	0.28	U	0.037	0.28	UG/M3	0.28	U
EPD-WA-01-021223	TO-15	Propene	2.7	T			UG/M3	2.7	NJ
EPD-WA-01-021223	TO-15	Propane	5.8	T			UG/M3	5.8	NJ
EPD-WA-01-021223	TO-15	2-Methylpropane	11	T			UG/M3	11	NJ
EPD-WA-01-021223	TO-15	n-Butane	27	T			UG/M3	27	NJ
EPD-WA-01-021223	TO-15	Ethanol	2.7	T			UG/M3	2.7	NJ
EPD-WA-01-021223	TO-15	2-Methylbutane	15	T			UG/M3	15	NJ
EPD-WA-01-021223	TO-15	n-Pentane	5.6	T			UG/M3	5.6	NJ
EPD-WA-01-021223	TO-15	Trimethylsilanol	17	T			UG/M3	17	NJ
EPD-WA-01-021223	TO-15	2-Methylpentane	2.9	T			UG/M3	2.9	NJ
EPD-WA-01-021223	TO-15	Benzene	5.6	T			UG/M3	5.6	NJ
EPD-WA-01-021223	TO-15	Hexamethylcyclotrisiloxane	410	T			UG/M3	410	NJ

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-01-021223	TO-15	BUTYL ESTER-2-PROPENOIC ACID	14	T			UG/M3	14	NJ
EPD-WA-01-021223	TO-15	Unknown	140	T			UG/M3	140	J
EPD-WA-01-021223	TO-15	Unknown	94	T			UG/M3	94	J
EPD-WA-01-021223	TO-15	Unknown Siloxane	230	T			UG/M3	230	J
EPD-WA-01-021223	TO-15	Unknown	10	T			UG/M3	10	J
EPD-WA-01-021223	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U, NF
EPD-WA-01-021223	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U, NF
EPD-WA-02-021123	TO-15 SIM	Dichlorodifluoromethane (CFC 12)	2.3		0.011	0.067	UG/M3	2.3	
EPD-WA-02-021123	TO-15 SIM	Chloromethane	0.29		0.035	0.067	UG/M3	0.29	
EPD-WA-02-021123	TO-15 SIM	Vinyl Chloride	1.8		0.016	0.033	UG/M3	1.8	
EPD-WA-02-021123	TO-15 SIM	1,3-Butadiene	0.34		0.011	0.067	UG/M3	0.34	
EPD-WA-02-021123	TO-15 SIM	Bromomethane	0.023	J	0.0089	0.033	UG/M3	0.023	J
EPD-WA-02-021123	TO-15 SIM	Chloroethane	0.016	J	0.01	0.033	UG/M3	0.016	J
EPD-WA-02-021123	TO-15 SIM	Acrolein	0.25	J	0.047	0.27	UG/M3	0.25	J+
EPD-WA-02-021123	TO-15 SIM	Acetone	3.8		0.31	3.3	UG/M3	3.8	
EPD-WA-02-021123	TO-15 SIM	Trichlorofluoromethane	1.1		0.011	0.067	UG/M3	1.1	
EPD-WA-02-021123	TO-15 SIM	1,1-Dichloroethene	0.033	U	0.012	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	Dichloromethane (Methylene Chloride)	0.28		0.01	0.13	UG/M3	0.28	
EPD-WA-02-021123	TO-15 SIM	1,1,2-Trichlorotrifluoroethane	0.45		0.011	0.033	UG/M3	0.45	
EPD-WA-02-021123	TO-15 SIM	trans-1,2-Dichloroethene	0.033	U	0.015	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	1,1-Dichloroethane	0.033	U	0.011	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	Methyl tert-Butyl Ether	0.033	U	0.016	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	cis-1,2-Dichloroethene	0.033	U	0.0096	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	Chloroform	0.074	J	0.011	0.13	UG/M3	0.074	J
EPD-WA-02-021123	TO-15 SIM	1,2-Dichloroethane	0.061		0.011	0.033	UG/M3	0.061	
EPD-WA-02-021123	TO-15 SIM	1,1,1-Trichloroethane	0.033	U	0.012	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	Benzene	1.2		0.02	0.1	UG/M3	1.2	
EPD-WA-02-021123	TO-15 SIM	Carbon Tetrachloride	0.35		0.0094	0.033	UG/M3	0.35	J+
EPD-WA-02-021123	TO-15 SIM	1,2-Dichloropropane	0.014	J	0.0081	0.033	UG/M3	0.014	J
EPD-WA-02-021123	TO-15 SIM	Bromodichloromethane	0.033	U	0.0077	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	Trichloroethene	0.082		0.01	0.033	UG/M3	0.082	
EPD-WA-02-021123	TO-15 SIM	1,4-Dioxane	0.016	J	0.012	0.13	UG/M3	0.016	J
EPD-WA-02-021123	TO-15 SIM	cis-1,3-Dichloropropene	0.067	U	0.0094	0.067	UG/M3	0.067	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. P2300646

Sample ID	Method	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
EPD-WA-02-021123	TO-15 SIM	trans-1,3-Dichloropropene	0.067	U	0.0064	0.067	UG/M3	0.067	U
EPD-WA-02-021123	TO-15 SIM	1,1,2-Trichloroethane	0.13	U	0.0078	0.13	UG/M3	0.13	U
EPD-WA-02-021123	TO-15 SIM	Toluene	2.3		0.016	0.13	UG/M3	2.3	J
EPD-WA-02-021123	TO-15 SIM	Dibromochloromethane	0.033	U	0.0085	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	1,2-Dibromoethane	0.033	U	0.0089	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	Tetrachloroethene	0.2		0.011	0.033	UG/M3	0.20	J
EPD-WA-02-021123	TO-15 SIM	Chlorobenzene	0.13	U	0.013	0.13	UG/M3	0.13	U
EPD-WA-02-021123	TO-15 SIM	Ethylbenzene	0.21		0.016	0.13	UG/M3	0.21	
EPD-WA-02-021123	TO-15 SIM	m,p-Xylenes	0.77		0.032	0.13	UG/M3	0.77	
EPD-WA-02-021123	TO-15 SIM	Styrene	0.085	J	0.016	0.13	UG/M3	0.085	J
EPD-WA-02-021123	TO-15 SIM	o-Xylene	0.25		0.017	0.13	UG/M3	0.25	
EPD-WA-02-021123	TO-15 SIM	1,1,2,2-Tetrachloroethane	0.033	U	0.012	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	1,3,5-Trimethylbenzene	0.045	J	0.019	0.13	UG/M3	0.045	J
EPD-WA-02-021123	TO-15 SIM	1,2,4-Trimethylbenzene	0.13	J	0.021	0.13	UG/M3	0.13	J
EPD-WA-02-021123	TO-15 SIM	1,3-Dichlorobenzene	0.033	U	0.023	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	1,4-Dichlorobenzene	0.054		0.027	0.033	UG/M3	0.054	
EPD-WA-02-021123	TO-15 SIM	1,2-Dichlorobenzene	0.033	U	0.024	0.033	UG/M3	0.033	U
EPD-WA-02-021123	TO-15 SIM	1,2-Dibromo 3-Chloropropane	0.13	U	0.019	0.13	UG/M3	0.13	U
EPD-WA-02-021123	TO-15 SIM	1,2,4-Trichlorobenzene	0.067	U	0.027	0.067	UG/M3	0.067	U
EPD-WA-02-021123	TO-15 SIM	Naphthalene	0.13	U	0.029	0.13	UG/M3	0.13	U
EPD-WA-02-021123	TO-15 SIM	Hexachlorobutadiene	0.13	U	0.017	0.13	UG/M3	0.13	U
EPD-WA-02-021123	TO-15	Propene	2.6	T			UG/M3	2.6	NJ
EPD-WA-02-021123	TO-15	Propane	4.7	T			UG/M3	4.7	NJ
EPD-WA-02-021123	TO-15	2-Methylpropane	16	T			UG/M3	16	NJ
EPD-WA-02-021123	TO-15	n-Butane	6.8	T			UG/M3	6.8	NJ
EPD-WA-02-021123	TO-15	Ethanol	3.2	T			UG/M3	3.2	NJ
EPD-WA-02-021123	TO-15	2-Methylbutane	9.1	T			UG/M3	9.1	NJ
EPD-WA-02-021123	TO-15	n-Pentane	15	T			UG/M3	15	NJ
EPD-WA-02-021123	TO-15	Ethyl Acetate	19	T			UG/M3	19	NJ
EPD-WA-02-021123	TO-15	BUTYL ESTER-2-PROPENOIC ACID	4.8	T			UG/M3	4.8	NJ
EPD-WA-02-021123	TO-15	2-Ethylhexyl Acrylate	0	U,NF			UG/M3	0	U, NF
EPD-WA-02-021123	TO-15	2-Butoxyethanol	0	U,NF			UG/M3	0	U, NF