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December 6, 2023

Mr. 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 Report
E Palestine Site - ER
EPA Contract No.: 68HE0519D0005
Task Order/Task Order Line Item No.: 68HE0520F0032/0001EB201
Document Tracking No. 2131**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for thirty-six air samples (including four field duplicate samples) collected at the E Palestine site. The samples were collected between August 30 – September 2, 2023, and were analyzed for volatile organic compounds by Eurofins Air Toxics, LLC. The final laboratory data package was received on September 7, 2023.

Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan East Palestine Train Derailment Site East Palestine, Columbiana County, Ohio, Revision 3* (April 2023), 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 contact me via the project manager.

Sincerely,

Insert electronic Adobe signature

Casey
Cormier

Digitally signed by Casey
Cormier
Date: 2023.12.06 17:09:40
-05'00'

Environmental Chemist

Enclosure

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

ATTACHMENT

**DATA VALIDATION REPORT
EUROFINS AIR TOXICS, LLC REPORT NOS. 2308686, 2309001,
2309020, AND 2309043**

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	2131a		
Laboratory Report No.	2308686	Laboratory	Eurofins Air Toxics, LLC – Folsom, CA
Analyses	Volatile organic compounds (VOCs) by EPA method TO-15 in scan and selected ion monitoring (SIM) modes		
Samples and Matrix	Nine air samples including one field duplicate pair		
Collection Date(s)	08/30/2023		
Field Duplicate Pairs	EPD-WA-06-083023 / EPD-WA-66-083023		
Field QC Blanks	None		

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 East Palestine Train Derailment Site East Palestine, Columbiana County, Ohio, Revision 3* (April 2023), 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 results was required for this data package. The results may be used as qualified based on this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
N	Laboratory control sample/laboratory control sample duplicate relative percent differences (RPD) were not provided in the Level II laboratory report. The lab provided the RPDs separately. No qualifications were applied.

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	The residual canister receipt vacuum values in the laboratory report were recorded as positive values. The laboratory was contacted and confirmed that all values are negative, even though the minus signs are missing, and that the laboratory uses the following convention for recording Summa canister vacuums and pressures: vacuums are recorded as positive values using the unit of inches of mercury ("Hg), and positive pressures are recorded using the unit pounds per square inch (psi). No qualifications were applied.

Method blanks:

Within Criteria	Exceedance/Notes
N	TO-15 SIM (2308686-10B): 1,2-Dibromoethane, 1,4-dichlorobenzene, m,p-xylene, and toluene were detected in the method blank at levels between the MDLs and RLs. All sample results for the detected analytes were either nondetect or at levels greater than the RLs and greater than ten times the blank levels, therefore no qualifications were applied.

Field blanks:

Within Criteria	Exceedance/Notes
NA	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
Y	

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
Y	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	TO-15 SIM (2308686-12B/12BB): The percent recoveries for 1,4-dichlorobenzene were less than the site-specific QAPP acceptance criteria in the LCS and LCSD. The result for 1,4-dichlorobenzene in all samples were qualified as estimated (flagged UJ).

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	<p>Canister dilution factor for:</p> <ul style="list-style-type: none"> • EPD-DW-D-083023 was 1.49 • EPD-UW-H-083023 was 1.42 • EPD-WA-01-083023 was 1.49 • EPD-WA-02-083023 was 1.47 • EPD-WA-03-083023 was 1.49 • EPD-WA-04-083023 was 1.56 • EPD-WA-05-083023 was 1.52 • EPD-WA-06-083023 was 1.50 • EPD-WA-66-083023 was 1.58

**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 MDL and RL were reported and qualified as estimated (flagged J) by the laboratory.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
Y	Tentatively identified compounds (TICs) were detected in most samples. The known TICs were qualified as tentatively identified (flagged NJ). The unknown TICs were qualified as estimated (flagged J). Butyl acrylate in all samples were reported as not detected and qualified as manually searched for, but not found in the sample (flagged U,NF).

Other [Continuing Calibration]:

Within Criteria	Exceedance/Notes
N	CCV (2308686-11B) had a low percent recovery for 1,4-dichlorobenzene. The 1,4-dichlorobenzene results in all samples were qualified as estimated (flagged UJ).

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
EUROFINS AIR TOXICS, LLC REPORT NO. 2308686

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-66-083023	TO-15	103-65-1	PROPYLBENZENE	0.78	U	0.15	0.78	UG/M3	0.78	U
EPD-WA-66-083023	TO-15	100-42-5	STYRENE	0.67	U	0.14	0.67	UG/M3	0.67	U
EPD-WA-66-083023	TO-15	109-99-9	TETRAHYDROFURAN	2.3	U	0.48	2.3	UG/M3	2.3	U
EPD-WA-66-083023	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	0.72	U	0.18	0.72	UG/M3	0.72	U
EPD-WA-66-083023	TO-15	104-76-7	2-ETHYL-1-HEXANOL	0	U			ppbv	0	U,NF
EPD-WA-66-083023	TO-15	78-78-4	BUTANE, 2-METHYL-	0.8	NJ			ppbv	0.80	NJ
EPD-WA-66-083023	TO-15	141-32-2	BUTYL ACRYLATE (2-PROPENOIC ACID ,BUTYL ESTER)	0	U			ppbv	0	U,NF
EPD-WA-66-083023	TO-15 SIM	71-55-6	1,1,1-TRICHLOROETHANE	0.17	U	0.014	0.17	UG/M3	0.17	U
EPD-WA-66-083023	TO-15 SIM	79-34-5	1,1,2,2-TETRACHLOROETHANE	0.22	U	0.059	0.22	UG/M3	0.22	U
EPD-WA-66-083023	TO-15 SIM	79-00-5	1,1,2-TRICHLOROETHANE	0.17	U	0.0098	0.17	UG/M3	0.17	U
EPD-WA-66-083023	TO-15 SIM	75-34-3	1,1-DICHLOROETHANE	0.13	U	0.014	0.13	UG/M3	0.13	U
EPD-WA-66-083023	TO-15 SIM	75-35-4	1,1-DICHLOROETHENE	0.063	U	0.012	0.063	UG/M3	0.063	U
EPD-WA-66-083023	TO-15 SIM	106-93-4	1,2-DIBROMOETHANE (EDB)	0.24	U	0.015	0.24	UG/M3	0.24	U
EPD-WA-66-083023	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.033	J	0.012	0.13	UG/M3	0.033	J
EPD-WA-66-083023	TO-15 SIM	106-46-7	1,4-DICHLOROBENZENE	0.19	UJ	0.095	0.19	UG/M3	0.19	UJ
EPD-WA-66-083023	TO-15 SIM	71-43-2	BENZENE	0.67		0.02	0.25	UG/M3	0.67	
EPD-WA-66-083023	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.41		0.0086	0.2	UG/M3	0.41	
EPD-WA-66-083023	TO-15 SIM	75-00-3	CHLOROETHANE	0.21	U	0.038	0.21	UG/M3	0.21	U
EPD-WA-66-083023	TO-15 SIM	67-66-3	CHLOROFORM	0.094	J	0.0094	0.15	UG/M3	0.094	J
EPD-WA-66-083023	TO-15 SIM	74-87-3	CHLOROMETHANE	0.67	J	0.23	1.6	UG/M3	0.67	J
EPD-WA-66-083023	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.12	U	0.009	0.12	UG/M3	0.12	U
EPD-WA-66-083023	TO-15 SIM	100-41-4	ETHYL BENZENE	0.16		0.0069	0.14	UG/M3	0.16	
EPD-WA-66-083023	TO-15 SIM	76-14-2	FREON 114	0.1	J	0.013	0.22	UG/M3	0.10	J
EPD-WA-66-083023	TO-15 SIM	75-71-8	FREON 12	2		0.0098	0.39	UG/M3	2.0	
EPD-WA-66-083023	TO-15 SIM	179601-23-1	M,P-XYLENE	0.61		0.014	0.27	UG/M3	0.61	
EPD-WA-66-083023	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.57	U	0.0071	0.57	UG/M3	0.57	U
EPD-WA-66-083023	TO-15 SIM	91-20-3	NAPHTHALENE	0.23	J	0.11	0.41	UG/M3	0.23	J
EPD-WA-66-083023	TO-15 SIM	95-47-6	O-XYLENE	0.22		0.02	0.14	UG/M3	0.22	
EPD-WA-66-083023	TO-15 SIM	127-18-4	TETRACHLOROETHENE	0.062	J	0.014	0.21	UG/M3	0.062	J
EPD-WA-66-083023	TO-15 SIM	108-88-3	TOLUENE	1		0.014	0.3	UG/M3	1.0	
EPD-WA-66-083023	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.63	U	0.01	0.63	UG/M3	0.63	U
EPD-WA-66-083023	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.027	J	0.018	0.17	UG/M3	0.027	J
EPD-WA-66-083023	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.04	U	0.006	0.04	UG/M3	0.040	U

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	2131b		
Laboratory Report No.	2309001	Laboratory	Eurofins Air Toxics, LLC – Folsom, CA
Analyses	Volatile organic compounds (VOCs) by EPA method TO-15 in scan and selected ion monitoring (SIM) modes		
Samples and Matrix	Nine air samples including one field duplicate pair		
Collection Date(s)	08/31/2023		
Field Duplicate Pairs	EPD-WA-02-083123 / EPD-WA-22-083123		
Field QC Blanks	None		

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 East Palestine Train Derailment Site East Palestine, Columbiana County, Ohio, Revision 3* (April 2023), 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 results was required for this data package. The results may be used as qualified based on this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
N	Laboratory control sample/laboratory control sample duplicate relative percent differences (RPD) were not provided in the Level II laboratory report. The lab provided the RPDs separately. No qualifications were applied.

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	The residual canister receipt vacuum values in the laboratory report were recorded as positive values. The laboratory was contacted and confirmed that all values are negative, even though the minus signs are missing, and that the laboratory uses the following convention for recording Summa canister vacuums and pressures: vacuums are recorded as positive values using the unit of inches of mercury ("Hg), and positive pressures are recorded using the unit pounds per square inch (psi). No qualifications were applied.

Method blanks:

Within Criteria	Exceedance/Notes
N	TO-15 SIM (2309001-10B): 1,2-Dibromoethane, 1,4-dichlorobenzene, m,p-xylene, naphthalene, and toluene were detected in the method blank at levels between the MDLs and RLs. The 1,2,-dibromoethane and 1,4-dichlorobenzene results in sample EPD-WA-04-083123, the m,p-xylene results in samples EPD-WA-03-083123 and EPD-WA-04-083123, the naphthalene results in samples EPD-WA-01-083123, EPD-WA-04-083123, EPD-WA-06-083123, and EPD-WA-22-083123 and the toluene result in sample EPD-WA-03-083123 were at levels less than the RLs, therefore the results were raised to the RLs and qualified as nondetect (flagged U). The result for 1,4-dichlorobenzene in sample EPD-WA-04-083123 was further qualified as estimated (flagged UJ) due to LCS and continuing calibration infractions. All other sample results for the detected analytes were either nondetect or at levels greater than the RLs and greater than ten times the blank levels, therefore no qualifications were applied.

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
Y	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	TO-15 SIM (2309001-12B/12BB): The percent recoveries for 1,4-dichlorobenzene were less than the site-specific QAPP acceptance criteria in the LCS and LCSD. The results for 1,4-dichlorobenzene in all samples were qualified as estimated (flagged UJ).

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

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	Canister dilution factor for: <ul style="list-style-type: none"> • EPD-DW-D-083123 was 1.45 • EPD-UW-H-083123 was 1.36 • EPD-WA-01-083123 was 1.42 • EPD-WA-02-083123 was 1.53 • EPD-WA-03-083123 was 1.42 • EPD-WA-04-083123 was 1.45 • EPD-WA-05-083123 was 1.53 • EPD-WA-06-083123 was 1.36 • EPD-WA-22-083123 was 1.49

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

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

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
Y	Tentatively identified compounds (TICs) were detected in most samples. The known TICs were qualified as tentatively identified (flagged NJ). The unknown TICs were qualified as estimated (flagged J). Butyl acrylate in all samples were reported as not detected and qualified as manually searched for, but not found in the sample (flagged U,NF).

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

Other [Continuing Calibration]:

Within Criteria	Exceedance/Notes
N	CCV (2309001-11B) had a low percent recovery for 1,4-dichlorobenzene. The 1,4-dichlorobenzene results in all samples were qualified as estimated (flagged UJ).

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
 EUROFINS AIR TOXICS, LLC REPORT NO. 2309001

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-22-083123	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.032	J	0.012	0.12	UG/M3	0.032	J
EPD-WA-22-083123	TO-15 SIM	106-46-7	1,4-DICHLOROBENZENE	0.18	UJ	0.089	0.18	UG/M3	0.18	UJ
EPD-WA-22-083123	TO-15 SIM	71-43-2	BENZENE	0.34		0.019	0.24	UG/M3	0.34	
EPD-WA-22-083123	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.42		0.0082	0.19	UG/M3	0.42	
EPD-WA-22-083123	TO-15 SIM	75-00-3	CHLOROETHANE	0.2	U	0.036	0.2	UG/M3	0.20	U
EPD-WA-22-083123	TO-15 SIM	67-66-3	CHLOROFORM	0.083	J	0.0089	0.14	UG/M3	0.083	J
EPD-WA-22-083123	TO-15 SIM	74-87-3	CHLOROMETHANE	0.65	J	0.22	1.5	UG/M3	0.65	J
EPD-WA-22-083123	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.12	U	0.0084	0.12	UG/M3	0.12	U
EPD-WA-22-083123	TO-15 SIM	100-41-4	ETHYL BENZENE	0.08	J	0.0065	0.13	UG/M3	0.080	J
EPD-WA-22-083123	TO-15 SIM	76-14-2	FREON 114	0.1	J	0.012	0.21	UG/M3	0.10	J
EPD-WA-22-083123	TO-15 SIM	75-71-8	FREON 12	2		0.0092	0.37	UG/M3	2.0	
EPD-WA-22-083123	TO-15 SIM	179601-23-1	M,P-XYLENE	0.28		0.013	0.26	UG/M3	0.28	
EPD-WA-22-083123	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.54	U	0.0067	0.54	UG/M3	0.54	U
EPD-WA-22-083123	TO-15 SIM	91-20-3	NAPHTHALENE	0.1	J	0.1	0.39	UG/M3	0.39	U
EPD-WA-22-083123	TO-15 SIM	95-47-6	O-XYLENE	0.11	J	0.019	0.13	UG/M3	0.11	J
EPD-WA-22-083123	TO-15 SIM	127-18-4	TETRACHLOROETHENE	0.062	J	0.014	0.2	UG/M3	0.062	J
EPD-WA-22-083123	TO-15 SIM	108-88-3	TOLUENE	0.44		0.013	0.28	UG/M3	0.44	
EPD-WA-22-083123	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.59	U	0.0096	0.59	UG/M3	0.59	U
EPD-WA-22-083123	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.025	J	0.017	0.16	UG/M3	0.025	J
EPD-WA-22-083123	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.038	U	0.0057	0.038	UG/M3	0.038	U

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	2131c		
Laboratory Report No.	2309020	Laboratory	Eurofins Air Toxics, LLC – Folsom, CA
Analyses	Volatile organic compounds (VOCs) by EPA method TO-15 in scan and selected ion monitoring (SIM) modes		
Samples and Matrix	Nine air samples including one field duplicate pair		
Collection Date(s)	09/01/2023		
Field Duplicate Pairs	EPD-WA-03-090123 / EPD-WA-33-090123		
Field QC Blanks	None		

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 East Palestine Train Derailment Site East Palestine, Columbiana County, Ohio, Revision 3* (April 2023), 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 results was required for this data package. The results may be used as qualified based on this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
N	Laboratory control sample/laboratory control sample duplicate relative percent differences (RPD) were not provided in the Level II laboratory report. The lab provided the RPDs separately. No qualifications were applied.

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	The residual canister receipt vacuum values in the laboratory report were recorded as positive values. The laboratory was contacted and confirmed that all values are negative, even though the minus signs are missing, and that the laboratory uses the following convention for recording Summa canister vacuums and pressures: vacuums are recorded as positive values using the unit of inches of mercury ("Hg), and positive pressures are recorded using the unit pounds per square inch (psi). No qualifications were applied.

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

Method blanks:

Within Criteria	Exceedance/Notes
N	<p>TO-15 scan (2309020-10A): 1,3-Dichlorobenzene was detected in the method blank at a level between the method detection limit (MDL) and reporting limit (RL). All associated sample results are nondetect for 1,3-dichlorobenzene, therefore no qualifications were applied.</p> <p>TO-15 SIM (2309020-10B): 1,4-Dichlorobenzene, m,p-xylene, naphthalene, and o-xylene were detected in the method blank at levels between the MDLs and RLs. The naphthalene results in samples EPD-WA-02-090123 and EPD-WA-06-090123 and the o-xylene results in samples EPD-DW-E-090123 and EPD-WA-01-090123 were at levels less than the RLs, therefore the results were raised to the RLs and qualified as nondetect (flagged U). All remaining results for the affected analytes in the associated samples were either nondetect or greater than the RL and greater than ten times the blank levels, therefore no qualifications were applied.</p> <p>TO-15 scan (2309020-10C): 1,2,4-Trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and alpha-chlorotoluene. All associated samples were nondetect for the detected analytes, therefore no qualifications were applied.</p> <p>TO-15 SIM (2309020-10D): 1,1,2-Trichloroethane, 1,4-dichlorobenzene, benzene, ethyl benzene, m,p-xylene, naphthalene, tetrachloroethene, toluene, and trichloroethene were detected in the method blank at levels between the MDLs and RLs. The following sample results were at levels less than the RLs, therefore the results were raised to the RLs and qualified as nondetect (flagged U):</p> <ul style="list-style-type: none"> • 1,4-dichlorobenzene in sample EPD-WA-05-090123 • Ethyl benzene and m,p-xylene in samples EPD-UW-A-090123, EPD-WA-03-090123, and EPD-WA-33-090123 • Naphthalene, tetrachloroethene, and trichloroethene in samples EPD-UW-A-090123, EPD-WA-03-090123, EPD-WA-05-090123, and EPD-WA-33-090123 • Toluene in sample EPD-UW-A-090123 <p>The benzene results in samples EPD-UW-A-090123, EPD-WA-03-090123, and EPD-WA-33-090123 were at levels greater than the RLs and greater than ten times the blank levels, therefore the results were qualified as estimated, possibly high biased (flagged J+).</p>

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
Y	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	<p>TO-15 scan (2309020-12A): The percent recovery for ethanol was greater than the site-specific QAPP acceptance criteria in the LCS. The average LCS/LCSD recovery was within QC limits; therefore, results are not qualified.</p> <p>TO-15 SIM (2309020-12BB): The percent recovery for 1,4-dichlorobenzene was less than the site-specific QAPP acceptance criteria in the LCSD. The average LCS/LCSD recovery was within QC limits; therefore, results are not qualified.</p>

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

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	The residual canister dilution factors for the samples ranges from 1.40 to 1.52.

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

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

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
Y	Tentatively identified compounds (TICs) were detected in most samples. The known TICs were qualified as tentatively identified (flagged NJ). The unknown TICs were qualified as estimated (flagged J). Butyl acrylate in all samples were reported as not detected and qualified as manually searched for, but not found in the sample (flagged U,NF).

Other [Continuing calibration]:

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
EUROFINS AIR TOXICS, LLC REPORT NO. 2309020

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-33-090123	TO-15 SIM	71-55-6	1,1,1-TRICHLOROETHANE	0.16 U		0.013	0.16	UG/M3	0.16 U	
EPD-WA-33-090123	TO-15 SIM	79-34-5	1,1,2,2-TETRACHLOROETHANE	0.2 U		0.051	0.2	UG/M3	0.20 U	
EPD-WA-33-090123	TO-15 SIM	79-00-5	1,1,2-TRICHLOROETHANE	0.16 U		0.008	0.16	UG/M3	0.16 U	
EPD-WA-33-090123	TO-15 SIM	75-34-3	1,1-DICHLOROETHANE	0.12 U		0.0064	0.12	UG/M3	0.12 U	
EPD-WA-33-090123	TO-15 SIM	75-35-4	1,1-DICHLOROETHENE	0.057 U		0.0072	0.057	UG/M3	0.057 U	
EPD-WA-33-090123	TO-15 SIM	106-93-4	1,2-DIBROMOETHANE (EDB)	0.22 U		0.022	0.22	UG/M3	0.22 U	
EPD-WA-33-090123	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.035 J		0.015	0.12	UG/M3	0.035 J	
EPD-WA-33-090123	TO-15 SIM	106-46-7	1,4-DICHLOROBENZENE	0.17 U		0.054	0.17	UG/M3	0.17 U	
EPD-WA-33-090123	TO-15 SIM	71-43-2	BENZENE	0.28		0.02	0.23	UG/M3	0.28 J+	
EPD-WA-33-090123	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.36		0.037	0.18	UG/M3	0.36	
EPD-WA-33-090123	TO-15 SIM	75-00-3	CHLOROETHANE	0.19 U		0.012	0.19	UG/M3	0.19 U	
EPD-WA-33-090123	TO-15 SIM	67-66-3	CHLOROFORM	0.068 J		0.0077	0.14	UG/M3	0.068 J	
EPD-WA-33-090123	TO-15 SIM	74-87-3	CHLOROMETHANE	0.52 J		0.1	1.5	UG/M3	0.52 J	
EPD-WA-33-090123	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.11 U		0.0043	0.11	UG/M3	0.11 U	
EPD-WA-33-090123	TO-15 SIM	100-41-4	ETHYL BENZENE	0.053 J		0.0038	0.12	UG/M3	0.12 U	
EPD-WA-33-090123	TO-15 SIM	76-14-2	FREON 114	0.09 J		0.023	0.2	UG/M3	0.090 J	
EPD-WA-33-090123	TO-15 SIM	75-71-8	FREON 12	1.7		0.022	0.36	UG/M3	1.7	
EPD-WA-33-090123	TO-15 SIM	179601-23-1	M,P-XYLENE	0.15 J		0.0085	0.25	UG/M3	0.25 U	
EPD-WA-33-090123	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.52 U		0.0029	0.52	UG/M3	0.52 U	
EPD-WA-33-090123	TO-15 SIM	91-20-3	NAPHTHALENE	0.088 J		0.053	0.38	UG/M3	0.38 U	
EPD-WA-33-090123	TO-15 SIM	95-47-6	O-XYLENE	0.067 J		0.0022	0.12	UG/M3	0.067 J	
EPD-WA-33-090123	TO-15 SIM	127-18-4	TETRACHLOROETHENE	0.049 J		0.0095	0.2	UG/M3	0.20 U	
EPD-WA-33-090123	TO-15 SIM	108-88-3	TOLUENE	0.34		0.013	0.27	UG/M3	0.34	
EPD-WA-33-090123	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.57 U		0.0058	0.57	UG/M3	0.57 U	
EPD-WA-33-090123	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.028 J		0.01	0.15	UG/M3	0.15 U	
EPD-WA-33-090123	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.037 U		0.0049	0.037	UG/M3	0.037 U	

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	2131d		
Laboratory Report No.	2309043	Laboratory	Eurofins Air Toxics, LLC – Folsom, CA
Analyses	Volatile organic compounds (VOCs) by EPA method TO-15 in scan and selected ion monitoring (SIM) modes		
Samples and Matrix	Nine air samples including one field duplicate pair		
Collection Date(s)	09/02/2023		
Field Duplicate Pairs	EPD-WA-01-090223 / EPD-WA-11-090223		
Field QC Blanks	None		

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 East Palestine Train Derailment Site East Palestine, Columbiana County, Ohio, Revision 3* (April 2023), 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 results was required for this data package. The results may be used as qualified based on this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
N	Laboratory control sample/laboratory control sample duplicate relative percent differences (RPD) were not provided in the Level II laboratory report. The lab provided the RPDs in the Level IV report. No qualifications were applied.

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	The residual canister receipt vacuum values in the laboratory report were recorded as positive values. The laboratory was contacted and confirmed that all values are negative, even though the minus signs are missing, and that the laboratory uses the following convention for recording Summa canister vacuums and pressures: vacuums are recorded as positive values using the unit of inches of mercury ("Hg), and positive pressures are recorded using the unit pounds per square inch (psi). No qualifications were applied.

Method blanks:

Within Criteria	Exceedance/Notes
N	<p>TO-15 SIM (2309043-10B): 1,1,2-Trichloroethane, 1,2-dibromoethane, 1,4-dichlorobenzene, m,p-xylene, naphthalene, o-xylene, and toluene were detected in the method blank at levels between the MDLs and RLs. The naphthalene results in samples EPD-UW-D-090223, EPD-WA-01-090223, EPD-WA-02-090223, EPD-WA-04-090223, and EPD-WA-11-090223 were at levels less than the RLs, therefore the results were raised to the RLs and qualified as nondetect (flagged U). All remaining results for the affected analytes in the associated samples were either nondetect or greater than the RL and greater than ten times the blank levels, therefore no qualifications were applied.</p> <p>TO-15 SIM (2309043-10D): Benzene was detected in the method blank at a level between the MDL and RL. Benzene was detected in all associated samples at levels greater than the RL and greater than ten times the blank levels, therefore no qualifications were applied.</p>

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	EPD-WA-01-090223 / EPD-WA-11-090223: The results for acetone had an absolute difference that was greater than the RL. The results for acetone in both samples were qualified as estimated (flagged J).

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	TO-15 SIM (2309043-12B/12BB): The percent recoveries for 1,4-dichlorobenzene were less than the site-specific QAPP acceptance criteria in the LCS and LCSD. The results for 1,4-dichlorobenzene in associated samples were qualified as estimated (flagged UJ).

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	The residual canister dilution factors for the samples ranges from 1.39 to 1.55.

**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	<p>Detections between the MDL and RL were reported and qualified as estimated (flagged J) by the laboratory.</p> <p>The case narrative contained the following note: “The reporting limit for Acetone was raised from 2.0 ppbv to 5.0 ppbv due to anomalous linearity in the Initial Calibration.” No qualifications were applied.</p>

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
Y	<p>Tentatively identified compounds (TICs) were detected in most samples. The known TICs were qualified as tentatively identified (flagged NJ). The unknown TICs were qualified as estimated (flagged J). Butyl acrylate in all samples were reported as not detected and qualified as manually searched for, but not found in the sample (flagged U,NF).</p>

Other [Continuing Calibration]:

Within Criteria	Exceedance/Notes
N	<p>CCV (2309043-11B) had a low percent recovery for 1,4-dichlorobenzene. 1,4-Dichlorobenzene results in samples EPD-UW-D-090223, EPD-WA-01-090223, EPD-WA-02-090223, EPD-WA-04-090223, and EPD-WA-11-090223 were qualified as estimated (flagged UJ).</p>

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
EUROFINS AIR TOXICS, LLC REPORT NO. 2309043

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-DW-H-090223	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	5.8 U			3.1	5.8 UG/M3	5.8 U	
EPD-DW-H-090223	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	0.76 U			0.2	0.76 UG/M3	0.76 U	
EPD-DW-H-090223	TO-15	95-50-1	1,2-DICHLOROBENZENE	0.93 U			0.18	0.93 UG/M3	0.93 U	
EPD-DW-H-090223	TO-15	78-87-5	1,2-DICHLOROPROPANE	0.72 U			0.23	0.72 UG/M3	0.72 U	
EPD-DW-H-090223	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	0.76 U			0.19	0.76 UG/M3	0.76 U	
EPD-DW-H-090223	TO-15	106-99-0	1,3-BUTADIENE	0.34 U			0.14	0.34 UG/M3	0.34 U	
EPD-DW-H-090223	TO-15	541-73-1	1,3-DICHLOROBENZENE	0.93 U			0.2	0.93 UG/M3	0.93 U	
EPD-DW-H-090223	TO-15	123-91-1	1,4-DIOXANE	0.32 J			0.16	0.56 UG/M3	0.32 J	
EPD-DW-H-090223	TO-15	540-84-1	2,2,4-TRIMETHYLPENTANE	3.6 U			1.1	3.6 UG/M3	3.6 U	
EPD-DW-H-090223	TO-15	78-93-3	2-BUTANONE (METHYL ETHYL KETONE)	1 J			0.23	2.3 UG/M3	1.0 J	
EPD-DW-H-090223	TO-15	591-78-6	2-HEXANONE	3.2 U			0.71	3.2 UG/M3	3.2 U	
EPD-DW-H-090223	TO-15	67-63-0	2-PROPANOL	7.6 U			0.58	7.6 UG/M3	7.6 U	
EPD-DW-H-090223	TO-15	107-05-1	3-CHLOROPROPENE	2.4 U			0.67	2.4 UG/M3	2.4 U	
EPD-DW-H-090223	TO-15	622-96-8	4-ETHYLTOLUENE	0.76 U			0.21	0.76 UG/M3	0.76 U	
EPD-DW-H-090223	TO-15	108-10-1	4-METHYL-2-PENTANONE	0.63 U			0.12	0.63 UG/M3	0.63 U	
EPD-DW-H-090223	TO-15	67-64-1	ACETONE	12 J			1.6	18 UG/M3	12 J	
EPD-DW-H-090223	TO-15	100-44-7	ALPHA-CHLOROTOLUENE	0.8 U			0.18	0.8 UG/M3	0.8 U	
EPD-DW-H-090223	TO-15	75-27-4	BROMODICHLOROMETHANE	1 U			0.22	1 UG/M3	1.0 U	
EPD-DW-H-090223	TO-15	75-25-2	BROMOFORM	1.6 U			0.29	1.6 UG/M3	1.6 U	
EPD-DW-H-090223	TO-15	74-83-9	BROMOMETHANE	30 U			1.7	30 UG/M3	30 U	
EPD-DW-H-090223	TO-15	75-15-0	CARBON DISULFIDE	2.4 U			2.3	2.4 UG/M3	2.4 U	
EPD-DW-H-090223	TO-15	108-90-7	CHLOROBENZENE	0.71 U			0.2	0.71 UG/M3	0.71 U	
EPD-DW-H-090223	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	0.7 U			0.12	0.7 UG/M3	0.70 U	
EPD-DW-H-090223	TO-15	98-82-8	CUMENE	0.76 U			0.28	0.76 UG/M3	0.76 U	
EPD-DW-H-090223	TO-15	110-82-7	CYCLOHEXANE	2.7 U			0.52	2.7 UG/M3	2.7 U	
EPD-DW-H-090223	TO-15	124-48-1	DIBROMOCHLOROMETHANE	1.3 U			0.21	1.3 UG/M3	1.3 U	
EPD-DW-H-090223	TO-15	64-17-5	ETHANOL	1.8 J			0.62	5.8 UG/M3	1.8 J	
EPD-DW-H-090223	TO-15	75-69-4	FREON 11	1			0.14	0.87 UG/M3	1.0	
EPD-DW-H-090223	TO-15	76-13-1	FREON 113	0.47 J			0.23	1.2 UG/M3	0.47 J	
EPD-DW-H-090223	TO-15	142-82-5	HEPTANE	3.2 U			0.49	3.2 UG/M3	3.2 U	
EPD-DW-H-090223	TO-15	87-68-3	HEXACHLOROBUTADIENE	8.3 U			1.9	8.3 UG/M3	8.3 U	
EPD-DW-H-090223	TO-15	110-54-3	HEXANE	2.7 U			0.66	2.7 UG/M3	2.7 U	
EPD-DW-H-090223	TO-15	75-09-2	METHYLENE CHLORIDE	0.39 J			0.24	1.1 UG/M3	0.39 J	
EPD-DW-H-090223	TO-15	103-65-1	PROPYLBENZENE	0.76 U			0.23	0.76 UG/M3	0.76 U	
EPD-DW-H-090223	TO-15	100-42-5	STYRENE	0.66 U			0.18	0.66 UG/M3	0.66 U	
EPD-DW-H-090223	TO-15	109-99-9	TETRAHYDROFURAN	2.3 U			2.2	2.3 UG/M3	2.3 U	
EPD-DW-H-090223	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	0.7 U			0.21	0.7 UG/M3	0.70 U	
EPD-DW-H-090223	TO-15	104-76-7	2-ETHYL-1-HEXANOL	0 U				ppbv	0 U,NF	
EPD-DW-H-090223	TO-15	78-78-4	BUTANE, 2-METHYL-	1.8 NJ				ppbv	1.8 NJ	
EPD-DW-H-090223	TO-15	141-32-2	BUTYL ACRYLATE (2-PROPENOIC ACID ,BUTYL ESTER)	0 U				ppbv	0 U,NF	
EPD-DW-H-090223	TO-15	109-66-0	PENTANE	1.2 NJ				ppbv	1.2 NJ	
EPD-DW-H-090223	TO-15	NA	UNKNOWN TIC	1.3 NJ				ppbv	1.3 J	
EPD-DW-H-090223	TO-15	NA	UNKNOWN TIC	2.2 NJ				ppbv	2.2 J	
EPD-DW-H-090223	TO-15	NA	UNKNOWN TIC	3.4 J				ppbv	3.4 J	
EPD-DW-H-090223	TO-15	NA	UNKNOWN TIC	1.1 J				ppbv	1.1 J	
EPD-DW-H-090223	TO-15 SIM	71-55-6	1,1,1-TRICHLOROETHANE	0.17 U		0.033	0.17	UG/M3	0.17 U	
EPD-DW-H-090223	TO-15 SIM	79-34-5	1,1,2,2-TETRACHLOROETHANE	0.21 U		0.055	0.21	UG/M3	0.21 U	
EPD-DW-H-090223	TO-15 SIM	79-00-5	1,1,2-TRICHLOROETHANE	0.17 U		0.019	0.17	UG/M3	0.17 U	
EPD-DW-H-090223	TO-15 SIM	75-34-3	1,1-DICHLOROETHANE	0.12 U		0.022	0.12	UG/M3	0.12 U	
EPD-DW-H-090223	TO-15 SIM	75-35-4	1,1-DICHLOROETHENE	0.061 U		0.031	0.061	UG/M3	0.061 U	
EPD-DW-H-090223	TO-15 SIM	106-93-4	1,2-DIBROMOETHANE (EDB)	0.24 U		0.039	0.24	UG/M3	0.24 U	
EPD-DW-H-090223	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.041 J		0.0088	0.12	UG/M3	0.041 J	
EPD-DW-H-090223	TO-15 SIM	106-46-7	1,4-DICHLOROBENZENE	0.19 U		0.067	0.19	UG/M3	0.19 U	
EPD-DW-H-090223	TO-15 SIM	71-43-2	BENZENE	0.7		0.02	0.25	UG/M3	0.70	
EPD-DW-H-090223	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.42		0.047	0.25	UG/M3	0.42	
EPD-DW-H-090223	TO-15 SIM	75-00-3	CHLOROETHANE	0.2 U		0.042	0.2	UG/M3	0.20 U	
EPD-DW-H-090223	TO-15 SIM	67-66-3	CHLOROFORM	0.11 J		0.025	0.15	UG/M3	0.11 J	
EPD-DW-H-090223	TO-15 SIM	74-87-3	CHLOROMETHANE	0.74 J		0.28	1.6	UG/M3	0.74 J	
EPD-DW-H-090223	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.12 U		0.029	0.12	UG/M3	0.12 U	
EPD-DW-H-090223	TO-15 SIM	100-41-4	ETHYL BENZENE	0.16		0.029	0.13	UG/M3	0.16	
EPD-DW-H-090223	TO-15 SIM	76-14-2	FREON 114	0.098 J		0.07	0.22	UG/M3	0.098 J	
EPD-DW-H-090223	TO-15 SIM	75-71-8	FREON 12	1.9		0.04	0.38	UG/M3	1.9	
EPD-DW-H-090223	TO-15 SIM	179601-23-1	M,P-XYLENE	0.51		0.038	0.27	UG/M3	0.51	
EPD-DW-H-090223	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.56 U		0.034	0.56	UG/M3	0.56 U	
EPD-DW-H-090223	TO-15 SIM	91-20-3	NAPHTHALENE	0.063 J		0.043	0.41	UG/M3	0.063 J	
EPD-DW-H-090223	TO-15 SIM	95-47-6	O-XYLENE	0.2		0.039	0.13	UG/M3	0.20	
EPD-DW-H-090223	TO-15 SIM	127-18-4	TETRACHLOROETHENE	0.15 J		0.028	0.21	UG/M3	0.15 J	
EPD-DW-H-090223	TO-15 SIM	108-88-3	TOLUENE	1.1		0.042	0.29	UG/M3	1.1	
EPD-DW-H-090223	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.61 U		0.03	0.61	UG/M3	0.61 U	
EPD-DW-H-090223	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.17 U		0.014	0.17	UG/M3	0.17 U	
EPD-DW-H-090223	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.04 U		0.016	0.04	UG/M3	0.040 U	
EPD-UW-D-090223	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	5.2 U			1.1	5.2 UG/M3	5.2 U	
EPD-UW-D-090223	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	0.32 J			0.14	0.68 UG/M3	0.32 J	
EPD-UW-D-090223	TO-15	95-50-1	1,2-DICHLOROBENZENE	0.84 U			0.18	0.84 UG/M3	0.84 U	
EPD-UW-D-090223	TO-15	78-87-5	1,2-DICHLOROPROPANE	0.64 U			0.18	0.64 UG/M3	0.64 U	
EPD-UW-D-090223	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	0.68 U			0.12	0.68 UG/M3	0.68 U	
EPD-UW-D-090223	TO-15	106-99-0	1,3-BUTADIENE	0.31 U			0.054	0.31 UG/M3	0.31 U	
EPD-UW-D-090223	TO-15	541-73-1	1,3-DICHLOROBENZENE	0.84 U			0.13	0.84 UG/M3	0.84 U	
EPD-UW-D-090223	TO-15	123-91-1	1,4-DIOXANE	0.5 U			0.14	0.5 UG/M3	0.50 U	
EPD-UW-D-090223	TO-15	540-84-1	2,2,4-TRIMETHYLPENTANE	0.36 J			0.26	3.2 UG/M3	0.36 J	
EPD-UW-D-090223	TO-15	78-93-3	2-BUTANONE (METHYL ETHYL KETONE)	1.3 J			0.19	2 UG/M3	1.3 J	

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
 EUROFINS AIR TOXICS, LLC REPORT NO. 2309043

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-UW-D-090223	TO-15	591-78-6	2-HEXANONE	2.8 U		0.44	2.8	UG/M3	2.8	U
EPD-UW-D-090223	TO-15	67-63-0	2-PROPANOL	2.6 J		0.31	6.8	UG/M3	2.6	J
EPD-UW-D-090223	TO-15	107-05-1	3-CHLOROPROPENE	2.2 U		0.24	2.2	UG/M3	2.2	U
EPD-UW-D-090223	TO-15	622-96-8	4-ETHYLTOLUENE	0.3 J		0.17	0.68	UG/M3	0.30	J
EPD-UW-D-090223	TO-15	108-10-1	4-METHYL-2-PENTANONE	0.57 U		0.18	0.57	UG/M3	0.57	U
EPD-UW-D-090223	TO-15	67-64-1	ACETONE	13		0.96	6.6	UG/M3	13	
EPD-UW-D-090223	TO-15	100-44-7	ALPHA-CHLOROTOLUENE	0.72 U		0.12	0.72	UG/M3	0.72	U
EPD-UW-D-090223	TO-15	75-27-4	BROMODICHLOROMETHANE	0.93 U		0.12	0.93	UG/M3	0.93	U
EPD-UW-D-090223	TO-15	75-25-2	BROMOFORM	1.4 U		0.21	1.4	UG/M3	1.4	U
EPD-UW-D-090223	TO-15	74-83-9	BROMOMETHANE	27 U		1.1	27	UG/M3	27	U
EPD-UW-D-090223	TO-15	75-15-0	CARBON DISULFIDE	2.2 U		0.58	2.2	UG/M3	2.2	U
EPD-UW-D-090223	TO-15	108-90-7	CHLOROBENZENE	0.64 U		0.051	0.64	UG/M3	0.64	U
EPD-UW-D-090223	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	0.63 U		0.098	0.63	UG/M3	0.63	U
EPD-UW-D-090223	TO-15	98-82-8	CUMENE	0.68 U		0.087	0.68	UG/M3	0.68	U
EPD-UW-D-090223	TO-15	110-82-7	CYCLOHEXANE	9.6		0.23	2.4	UG/M3	9.6	
EPD-UW-D-090223	TO-15	124-48-1	DIBROMOCHLOROMETHANE	1.2 U		0.14	1.2	UG/M3	1.2	U
EPD-UW-D-090223	TO-15	64-17-5	ETHANOL	12		0.41	5.2	UG/M3	12	
EPD-UW-D-090223	TO-15	75-69-4	FREON 11	1.1		0.12	0.78	UG/M3	1.1	
EPD-UW-D-090223	TO-15	76-13-1	FREON 113	0.5 J		0.17	1.1	UG/M3	0.50	J
EPD-UW-D-090223	TO-15	142-82-5	HEPTANE	0.22 J		0.22	2.8	UG/M3	0.22	J
EPD-UW-D-090223	TO-15	87-68-3	HEXACHLOROBUTADIENE	7.4 U		1.7	7.4	UG/M3	7.4	U
EPD-UW-D-090223	TO-15	110-54-3	HEXANE	0.46 J		0.22	2.4	UG/M3	0.46	J
EPD-UW-D-090223	TO-15	75-09-2	METHYLENE CHLORIDE	1.2		0.87	0.96	UG/M3	1.2	
EPD-UW-D-090223	TO-15	103-65-1	PROPYLBENZENE	0.68 U		0.14	0.68	UG/M3	0.68	U
EPD-UW-D-090223	TO-15	100-42-5	STYRENE	0.48 J		0.12	0.59	UG/M3	0.48	J
EPD-UW-D-090223	TO-15	109-99-9	TETRAHYDROFURAN	2 U		0.42	2	UG/M3	2.0	U
EPD-UW-D-090223	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	0.63 U		0.16	0.63	UG/M3	0.63	U
EPD-UW-D-090223	TO-15	104-76-7	2-ETHYL-1-HEXANOL	0 U				ppbv	0	U,NF
EPD-UW-D-090223	TO-15	78-78-4	BUTANE, 2-METHYL-	1.8 NJ				ppbv	1.8	NJ
EPD-UW-D-090223	TO-15	141-32-2	BUTYL ACRYLATE (2-PROPENOIC ACID ,BUTYL ESTER)	0 U				ppbv	0	U,NF
EPD-UW-D-090223	TO-15	107-46-0	DISILOXANE, HEXAMETHYL-	7.4 NJ				ppbv	7.4	NJ
EPD-UW-D-090223	TO-15	NA	UNKNOWN TIC	7 NJ				ppbv	7.0	J
EPD-UW-D-090223	TO-15	NA	UNKNOWN TIC	410 NJ				ppbv	410	J
EPD-UW-D-090223	TO-15	NA	UNKNOWN TIC	3.9 NJ				ppbv	3.9	J
EPD-UW-D-090223	TO-15	NA	UNKNOWN TIC	17 NJ				ppbv	17	J
EPD-UW-D-090223	TO-15	NA	UNKNOWN TIC	1.1 J				ppbv	1.1	J
EPD-UW-D-090223	TO-15 SIM	71-55-6	1,1,1-TRICHLOROETHANE	0.15 U		0.012	0.15	UG/M3	0.15	U
EPD-UW-D-090223	TO-15 SIM	79-34-5	1,1,2,2-TETRACHLOROETHANE	0.19 U		0.052	0.19	UG/M3	0.19	U
EPD-UW-D-090223	TO-15 SIM	79-00-5	1,1,2-TRICHLOROETHANE	0.15 U		0.0086	0.15	UG/M3	0.15	U
EPD-UW-D-090223	TO-15 SIM	75-34-3	1,1-DICHLOROETHANE	0.11 U		0.012	0.11	UG/M3	0.11	U
EPD-UW-D-090223	TO-15 SIM	75-35-4	1,1-DICHLOROETHENE	0.055 U		0.011	0.055	UG/M3	0.055	U
EPD-UW-D-090223	TO-15 SIM	106-93-4	1,2-DIBROMOETHANE (EDB)	0.21 U		0.013	0.21	UG/M3	0.21	U
EPD-UW-D-090223	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.031 J		0.011	0.11	UG/M3	0.031	J
EPD-UW-D-090223	TO-15 SIM	106-46-7	1,4-DICHLOROETHENE	0.17 UJ		0.083	0.17	UG/M3	0.17	UJ
EPD-UW-D-090223	TO-15 SIM	71-43-2	BENZENE	0.71		0.018	0.22	UG/M3	0.71	
EPD-UW-D-090223	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.41		0.0076	0.41	UG/M3	0.41	
EPD-UW-D-090223	TO-15 SIM	75-00-3	CHLOROETHANE	0.18 U		0.033	0.18	UG/M3	0.18	U
EPD-UW-D-090223	TO-15 SIM	67-66-3	CHLOROFORM	0.098 J		0.0083	0.14	UG/M3	0.098	J
EPD-UW-D-090223	TO-15 SIM	74-87-3	CHLOROMETHANE	1.1 J		0.21	1.4	UG/M3	1.1	J
EPD-UW-D-090223	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.11 U		0.0079	0.11	UG/M3	0.11	U
EPD-UW-D-090223	TO-15 SIM	100-41-4	ETHYL BENZENE	0.19		0.006	0.12	UG/M3	0.19	
EPD-UW-D-090223	TO-15 SIM	76-14-2	FREON 114	0.097 J		0.012	0.19	UG/M3	0.097	J
EPD-UW-D-090223	TO-15 SIM	75-71-8	FREON 12	1.9		0.0086	0.34	UG/M3	1.9	
EPD-UW-D-090223	TO-15 SIM	179601-23-1	M,P-XYLENE	0.64		0.012	0.24	UG/M3	0.64	
EPD-UW-D-090223	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.5 U		0.0062	0.5	UG/M3	0.50	U
EPD-UW-D-090223	TO-15 SIM	91-20-3	NAPHTHALENE	0.16 J		0.095	0.36	UG/M3	0.16	J
EPD-UW-D-090223	TO-15 SIM	95-47-6	O-XYLENE	0.25		0.018	0.12	UG/M3	0.25	
EPD-UW-D-090223	TO-15 SIM	127-18-4	TETRACHLOROETHENE	1.1		0.013	0.19	UG/M3	1.1	
EPD-UW-D-090223	TO-15 SIM	108-88-3	TOLUENE	1.2		0.012	0.26	UG/M3	1.2	
EPD-UW-D-090223	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.083 J		0.009	0.55	UG/M3	0.083	J
EPD-UW-D-090223	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.021 J		0.016	0.15	UG/M3	0.021	J
EPD-UW-D-090223	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.036 U		0.0053	0.036	UG/M3	0.036	U
EPD-WA-01-090223	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	5.4 U		1.1	5.4	UG/M3	5.4	U
EPD-WA-01-090223	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	0.3 J		0.14	0.71	UG/M3	0.30	J
EPD-WA-01-090223	TO-15	95-50-1	1,2-DICHLOROBENZENE	0.87 U		0.19	0.87	UG/M3	0.87	U
EPD-WA-01-090223	TO-15	78-87-5	1,2-DICHLOROPROPANE	0.67 U		0.19	0.67	UG/M3	0.67	U
EPD-WA-01-090223	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	0.71 U		0.13	0.71	UG/M3	0.71	U
EPD-WA-01-090223	TO-15	106-99-0	1,3-BUTADIENE	0.32 U		0.056	0.32	UG/M3	0.32	U
EPD-WA-01-090223	TO-15	541-73-1	1,3-DICHLOROBENZENE	0.87 U		0.13	0.87	UG/M3	0.87	U
EPD-WA-01-090223	TO-15	123-91-1	1,4-DIOXANE	0.52 U		0.14	0.52	UG/M3	0.52	U
EPD-WA-01-090223	TO-15	540-84-1	2,2,4-TRIMETHYLPENTANE	0.37 J		0.27	3.4	UG/M3	0.37	J
EPD-WA-01-090223	TO-15	78-93-3	2-BUTANONE (METHYL ETHYL KETONE)	1.2 J		0.2	2.1	UG/M3	1.2	J
EPD-WA-01-090223	TO-15	591-78-6	2-HEXANONE	3 U		0.45	3	UG/M3	3.0	U
EPD-WA-01-090223	TO-15	67-63-0	2-PROPANOL	1 J		0.33	7.1	UG/M3	1.0	J
EPD-WA-01-090223	TO-15	107-05-1	3-CHLOROPROPENE	2.3 U		0.25	2.3	UG/M3	2.3	U
EPD-WA-01-090223	TO-15	622-96-8	4-ETHYLTOLUENE	0.71 U		0.18	0.71	UG/M3	0.71	U
EPD-WA-01-090223	TO-15	108-10-1	4-METHYL-2-PENTANONE	0.21 J		0.19	0.59	UG/M3	0.21	J
EPD-WA-01-090223	TO-15	67-64-1	ACETONE	15		1	6.9	UG/M3	15	
EPD-WA-01-090223	TO-15	100-44-7	ALPHA-CHLOROTOLUENE	0.75 U		0.12	0.75	UG/M3	0.75	U
EPD-WA-01-090223	TO-15	75-27-4	BROMODICHLOROMETHANE	0.97 U		0.13	0.97	UG/M3	0.97	U
EPD-WA-01-090223	TO-15	75-25-2	BROMOFORM	1.5 U		0.22	1.5	UG/M3	1.5	U

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
 EUROFINS AIR TOXICS, LLC REPORT NO. 2309043

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-01-090223	TO-15	74-83-9	BROMOMETHANE	28 U			1.2	28 UG/M3	28 U	
EPD-WA-01-090223	TO-15	75-15-0	CARBON DISULFIDE	2.2 U			0.61	2.2 UG/M3	2.2 U	
EPD-WA-01-090223	TO-15	108-90-7	CHLOROBENZENE	0.67 U			0.053	0.67 UG/M3	0.67 U	
EPD-WA-01-090223	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	0.66 U			0.1	0.66 UG/M3	0.66 U	
EPD-WA-01-090223	TO-15	98-82-8	CUMENE	0.71 U			0.091	0.71 UG/M3	0.71 U	
EPD-WA-01-090223	TO-15	110-82-7	CYCLOHEXANE	2.5 U			0.24	2.5 UG/M3	2.5 U	
EPD-WA-01-090223	TO-15	124-48-1	DIBROMOCHLOROMETHANE	1.2 U			0.15	1.2 UG/M3	1.2 U	
EPD-WA-01-090223	TO-15	64-17-5	ETHANOL	2.5 J			0.43	5.5 UG/M3	2.5 J	
EPD-WA-01-090223	TO-15	75-69-4	FREON 11	1.1			0.13	0.81 UG/M3	1.1	
EPD-WA-01-090223	TO-15	76-13-1	FREON 113	0.46 J			0.18	1.1 UG/M3	0.46 J	
EPD-WA-01-090223	TO-15	142-82-5	HEPTANE	0.26 J			0.23	3 UG/M3	0.26 J	
EPD-WA-01-090223	TO-15	87-68-3	HEXACHLOROBUTADIENE	7.7 U			1.8	7.7 UG/M3	7.7 U	
EPD-WA-01-090223	TO-15	110-54-3	HEXANE	0.53 J			0.23	2.6 UG/M3	0.53 J	
EPD-WA-01-090223	TO-15	75-09-2	METHYLENE CHLORIDE	1 U			0.91	1 UG/M3	1.0 U	
EPD-WA-01-090223	TO-15	103-65-1	PROPYLBENZENE	0.71 U			0.14	0.71 UG/M3	0.71 U	
EPD-WA-01-090223	TO-15	100-42-5	STYRENE	0.62 U			0.12	0.62 UG/M3	0.62 U	
EPD-WA-01-090223	TO-15	109-99-9	TETRAHYDROFURAN	2.1 U			0.44	2.1 UG/M3	2.1 U	
EPD-WA-01-090223	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	0.66 U			0.16	0.66 UG/M3	0.66 U	
EPD-WA-01-090223	TO-15	78-79-5	1,3-BUTADIENE, 2-METHYL-	0.83 NJ				ppbv	0.83 NJ	
EPD-WA-01-090223	TO-15	104-76-7	2-ETHYL-1-HEXANOL	0 U				ppbv	0 U,NF	
EPD-WA-01-090223	TO-15	78-78-4	BUTANE, 2-METHYL-	0.89 NJ				ppbv	0.89 NJ	
EPD-WA-01-090223	TO-15	141-32-2	BUTYL ACRYLATE (2-PROPENOIC ACID ,BUTYL ESTER)	0 U				ppbv	0 U,NF	
EPD-WA-01-090223	TO-15	NA	UNKNOWN TIC	5.7 NJ				ppbv	5.7 J	
EPD-WA-01-090223	TO-15	NA	UNKNOWN TIC	0.95 J				ppbv	0.95 J	
EPD-WA-01-090223	TO-15 SIM	71-55-6	1,1,1-TRICHLOROETHANE	0.16 U			0.012	0.16 UG/M3	0.16 U	
EPD-WA-01-090223	TO-15 SIM	79-34-5	1,1,2,2-TETRACHLOROETHANE	0.2 U			0.054	0.2 UG/M3	0.20 U	
EPD-WA-01-090223	TO-15 SIM	79-00-5	1,1,2-TRICHLOROETHANE	0.16 U			0.009	0.16 UG/M3	0.16 U	
EPD-WA-01-090223	TO-15 SIM	75-34-3	1,1-DICHLOROETHANE	0.12 U			0.013	0.12 UG/M3	0.12 U	
EPD-WA-01-090223	TO-15 SIM	75-35-4	1,1-DICHLOROETHENE	0.057 U			0.011	0.057 UG/M3	0.057 U	
EPD-WA-01-090223	TO-15 SIM	106-93-4	1,2-DIBROMOETHANE (EDB)	0.22 U			0.014	0.22 UG/M3	0.22 U	
EPD-WA-01-090223	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.032 J			0.011	0.12 UG/M3	0.032 J	
EPD-WA-01-090223	TO-15 SIM	106-46-7	1,4-DICHLOROETHANE	0.17 UJ			0.087	0.17 UG/M3	0.17 UJ	
EPD-WA-01-090223	TO-15 SIM	71-43-2	BENZENE	0.61			0.019	0.23 UG/M3	0.61	
EPD-WA-01-090223	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.39			0.0079	0.18 UG/M3	0.39	
EPD-WA-01-090223	TO-15 SIM	75-00-3	CHLOROETHANE	0.19 U			0.034	0.19 UG/M3	0.19 U	
EPD-WA-01-090223	TO-15 SIM	67-66-3	CHLOROFORM	0.088 J			0.0086	0.14 UG/M3	0.088 J	
EPD-WA-01-090223	TO-15 SIM	74-87-3	CHLOROMETHANE	0.6 J			0.22	1.5 UG/M3	0.60 J	
EPD-WA-01-090223	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.11 U			0.0082	0.11 UG/M3	0.11 U	
EPD-WA-01-090223	TO-15 SIM	100-41-4	ETHYL BENZENE	0.19			0.0063	0.12 UG/M3	0.19	
EPD-WA-01-090223	TO-15 SIM	76-14-2	FREON 114	0.094 J			0.012	0.2 UG/M3	0.094 J	
EPD-WA-01-090223	TO-15 SIM	75-71-8	FREON 12	1.9			0.009	0.36 UG/M3	1.9	
EPD-WA-01-090223	TO-15 SIM	179601-23-1	M,P-XYLENE	0.73			0.013	0.25 UG/M3	0.73	
EPD-WA-01-090223	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.52 U			0.0065	0.52 UG/M3	0.52 U	
EPD-WA-01-090223	TO-15 SIM	91-20-3	NAPHTHALENE	0.15 J			0.099	0.38 UG/M3	0.38 U	
EPD-WA-01-090223	TO-15 SIM	95-47-6	O-XYLENE	0.28			0.018	0.12 UG/M3	0.28	
EPD-WA-01-090223	TO-15 SIM	127-18-4	TETRACHLOROETHENE	1			0.013	0.2 UG/M3	1.0	
EPD-WA-01-090223	TO-15 SIM	108-88-3	TOLUENE	1.2			0.012	0.27 UG/M3	1.2	
EPD-WA-01-090223	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.57 U			0.0094	0.57 UG/M3	0.57 U	
EPD-WA-01-090223	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.16 U			0.017	0.16 UG/M3	0.16 U	
EPD-WA-01-090223	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.037 U			0.0055	0.037 UG/M3	0.037 U	
EPD-WA-02-090223	TO-15	120-82-1	1,2,4-TRICHLOROBENZENE	5.4 U			1.1	5.4 UG/M3	5.4 U	
EPD-WA-02-090223	TO-15	95-63-6	1,2,4-TRIMETHYLBENZENE	0.35 J			0.14	0.71 UG/M3	0.35 J	
EPD-WA-02-090223	TO-15	95-50-1	1,2-DICHLOROBENZENE	0.87 U			0.19	0.87 UG/M3	0.87 U	
EPD-WA-02-090223	TO-15	78-87-5	1,2-DICHLOROPROPANE	0.67 U			0.19	0.67 UG/M3	0.67 U	
EPD-WA-02-090223	TO-15	108-67-8	1,3,5-TRIMETHYLBENZENE	0.17 J			0.13	0.71 UG/M3	0.17 J	
EPD-WA-02-090223	TO-15	106-99-0	1,3-BUTADIENE	0.067 J			0.056	0.32 UG/M3	0.067 J	
EPD-WA-02-090223	TO-15	541-73-1	1,3-DICHLOROBENZENE	0.87 U			0.13	0.87 UG/M3	0.87 U	
EPD-WA-02-090223	TO-15	123-91-1	1,4-DIOXANE	0.52 U			0.14	0.52 UG/M3	0.52 U	
EPD-WA-02-090223	TO-15	540-84-1	2,2,4-TRIMETHYLPENTANE	0.35 J			0.27	3.4 UG/M3	0.35 J	
EPD-WA-02-090223	TO-15	78-93-3	2-BUTANONE (METHYL ETHYL KETONE)	1.1 J			0.2	2.1 UG/M3	1.1 J	
EPD-WA-02-090223	TO-15	591-78-6	2-HEXANONE	3 U			0.45	3 UG/M3	3.0 U	
EPD-WA-02-090223	TO-15	67-63-0	2-PROPANOL	7.1 U			0.33	7.1 UG/M3	7.1 U	
EPD-WA-02-090223	TO-15	107-05-1	3-CHLOROPROPENE	2.3 U			0.25	2.3 UG/M3	2.3 U	
EPD-WA-02-090223	TO-15	622-96-8	4-ETHYLTOLUENE	0.36 J			0.18	0.71 UG/M3	0.36 J	
EPD-WA-02-090223	TO-15	108-10-1	4-METHYL-2-PENTANONE	0.59 U			0.19	0.59 UG/M3	0.59 U	
EPD-WA-02-090223	TO-15	67-64-1	ACETONE	6 J			1	6.9 UG/M3	6.0 J	
EPD-WA-02-090223	TO-15	100-44-7	ALPHA-CHLOROTOLUENE	0.75 U			0.12	0.75 UG/M3	0.75 U	
EPD-WA-02-090223	TO-15	75-27-4	BROMODICHLOROMETHANE	0.97 U			0.13	0.97 UG/M3	0.97 U	
EPD-WA-02-090223	TO-15	75-25-2	BROMOFORM	1.5 U			0.22	1.5 UG/M3	1.5 U	
EPD-WA-02-090223	TO-15	74-83-9	BROMOMETHANE	28 U			1.2	28 UG/M3	28 U	
EPD-WA-02-090223	TO-15	75-15-0	CARBON DISULFIDE	2.2 U			0.61	2.2 UG/M3	2.2 U	
EPD-WA-02-090223	TO-15	108-90-7	CHLOROBENZENE	0.67 U			0.053	0.67 UG/M3	0.67 U	
EPD-WA-02-090223	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	0.66 U			0.1	0.66 UG/M3	0.66 U	
EPD-WA-02-090223	TO-15	98-82-8	CUMENE	0.71 U			0.091	0.71 UG/M3	0.71 U	
EPD-WA-02-090223	TO-15	110-82-7	CYCLOHEXANE	2.5 U			0.24	2.5 UG/M3	2.5 U	
EPD-WA-02-090223	TO-15	124-48-1	DIBROMOCHLOROMETHANE	1.2 U			0.15	1.2 UG/M3	1.2 U	
EPD-WA-02-090223	TO-15	64-17-5	ETHANOL	1.5 J			0.43	5.5 UG/M3	1.5 J	
EPD-WA-02-090223	TO-15	75-69-4	FREON 11	1.1			0.13	0.81 UG/M3	1.1	
EPD-WA-02-090223	TO-15	76-13-1	FREON 113	0.48 J			0.18	1.1 UG/M3	0.48 J	
EPD-WA-02-090223	TO-15	142-82-5	HEPTANE	0.23 J			0.23	3 UG/M3	0.23 J	
EPD-WA-02-090223	TO-15	87-68-3	HEXACHLOROBUTADIENE	7.7 U			1.8	7.7 UG/M3	7.7 U	

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY
EUROFINS AIR TOXICS, LLC REPORT NO. 2309043

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-WA-11-090223	TO-15	67-63-0	2-PROPANOL	0.34	J	0.31	6.8	UG/M3	0.34	J
EPD-WA-11-090223	TO-15	107-05-1	3-CHLOROPROPENE	2.2	U	0.24	2.2	UG/M3	2.2	U
EPD-WA-11-090223	TO-15	622-96-8	4-ETHYLTOLUENE	0.31	J	0.17	0.68	UG/M3	0.31	J
EPD-WA-11-090223	TO-15	108-10-1	4-METHYL-2-PENTANONE	0.57	U	0.18	0.57	UG/M3	0.57	U
EPD-WA-11-090223	TO-15	67-64-1	ACETONE	4.5	J	0.96	6.6	UG/M3	4.5	J
EPD-WA-11-090223	TO-15	100-44-7	ALPHA-CHLOROTOLUENE	0.72	U	0.12	0.72	UG/M3	0.72	U
EPD-WA-11-090223	TO-15	75-27-4	BROMODICHLOROMETHANE	0.93	U	0.12	0.93	UG/M3	0.93	U
EPD-WA-11-090223	TO-15	75-25-2	BROMOFORM	1.4	U	0.21	1.4	UG/M3	1.4	U
EPD-WA-11-090223	TO-15	74-83-9	BROMOMETHANE	27	U	1.1	27	UG/M3	27	U
EPD-WA-11-090223	TO-15	75-15-0	CARBON DISULFIDE	2.2	U	0.58	2.2	UG/M3	2.2	U
EPD-WA-11-090223	TO-15	108-90-7	CHLOROBENZENE	0.64	U	0.051	0.64	UG/M3	0.64	U
EPD-WA-11-090223	TO-15	10061-01-5	CIS-1,3-DICHLOROPROPENE	0.63	U	0.098	0.63	UG/M3	0.63	U
EPD-WA-11-090223	TO-15	98-82-8	CUMENE	0.68	U	0.087	0.68	UG/M3	0.68	U
EPD-WA-11-090223	TO-15	110-82-7	CYCLOHEXANE	2.4	U	0.23	2.4	UG/M3	2.4	U
EPD-WA-11-090223	TO-15	124-48-1	DIBROMOCHLOROMETHANE	1.2	U	0.14	1.2	UG/M3	1.2	U
EPD-WA-11-090223	TO-15	64-17-5	ETHANOL	2.2	J	0.41	5.2	UG/M3	2.2	J
EPD-WA-11-090223	TO-15	75-69-4	FREON 11	1		0.12	0.78	UG/M3	1.0	
EPD-WA-11-090223	TO-15	76-13-1	FREON 113	0.46	J	0.17	1.1	UG/M3	0.46	J
EPD-WA-11-090223	TO-15	142-82-5	HEPTANE	0.25	J	0.22	2.8	UG/M3	0.25	J
EPD-WA-11-090223	TO-15	87-68-3	HEXACHLOROBUTADIENE	7.4	U	1.7	7.4	UG/M3	7.4	U
EPD-WA-11-090223	TO-15	110-54-3	HEXANE	0.6	J	0.22	2.4	UG/M3	0.60	J
EPD-WA-11-090223	TO-15	75-09-2	METHYLENE CHLORIDE	0.96	U	0.87	0.96	UG/M3	0.96	U
EPD-WA-11-090223	TO-15	103-65-1	PROPYLBENZENE	0.68	U	0.14	0.68	UG/M3	0.68	U
EPD-WA-11-090223	TO-15	100-42-5	STYRENE	0.59	U	0.12	0.59	UG/M3	0.59	U
EPD-WA-11-090223	TO-15	109-99-9	TETRAHYDROFURAN	2	U	0.42	2	UG/M3	2.0	U
EPD-WA-11-090223	TO-15	10061-02-6	TRANS-1,3-DICHLOROPROPENE	0.63	U	0.16	0.63	UG/M3	0.63	U
EPD-WA-11-090223	TO-15	78-79-5	1,3-BUTADIENE, 2-METHYL-	0.72	NJ			ppbv	0.72	NJ
EPD-WA-11-090223	TO-15	104-76-7	2-ETHYL-1-HEXANOL	0	U			ppbv	0	U,NF
EPD-WA-11-090223	TO-15	78-78-4	BUTANE, 2-METHYL-	0.85	NJ			ppbv	0.85	NJ
EPD-WA-11-090223	TO-15	141-32-2	BUTYL ACRYLATE (2-PROPENOIC ACID ,BUTYL ESTER)	0	U			ppbv	0	U,NF
EPD-WA-11-090223	TO-15 SIM	71-55-6	1,1,1-TRICHLOROETHANE	0.15	U	0.012	0.15	UG/M3	0.15	U
EPD-WA-11-090223	TO-15 SIM	79-34-5	1,1,2,2-TETRACHLOROETHANE	0.19	U	0.052	0.19	UG/M3	0.19	U
EPD-WA-11-090223	TO-15 SIM	79-00-5	1,1,2-TRICHLOROETHANE	0.15	U	0.0086	0.15	UG/M3	0.15	U
EPD-WA-11-090223	TO-15 SIM	75-34-3	1,1-DICHLOROETHANE	0.11	U	0.012	0.11	UG/M3	0.11	U
EPD-WA-11-090223	TO-15 SIM	75-35-4	1,1-DICHLOROETHENE	0.055	U	0.011	0.055	UG/M3	0.055	U
EPD-WA-11-090223	TO-15 SIM	106-93-4	1,2-DIBROMOETHANE (EDB)	0.21	U	0.013	0.21	UG/M3	0.21	U
EPD-WA-11-090223	TO-15 SIM	107-06-2	1,2-DICHLOROETHANE	0.028	J	0.011	0.11	UG/M3	0.028	J
EPD-WA-11-090223	TO-15 SIM	106-46-7	1,4-DICHLOROBENZENE	0.17	UJ	0.083	0.17	UG/M3	0.17	UJ
EPD-WA-11-090223	TO-15 SIM	71-43-2	BENZENE	0.62		0.018	0.22	UG/M3	0.62	
EPD-WA-11-090223	TO-15 SIM	56-23-5	CARBON TETRACHLORIDE	0.4		0.0076	0.17	UG/M3	0.40	
EPD-WA-11-090223	TO-15 SIM	75-00-3	CHLOROETHANE	0.18	U	0.033	0.18	UG/M3	0.18	U
EPD-WA-11-090223	TO-15 SIM	67-66-3	CHLOROFORM	0.088	J	0.0083	0.14	UG/M3	0.088	J
EPD-WA-11-090223	TO-15 SIM	74-87-3	CHLOROMETHANE	0.62	J	0.21	1.4	UG/M3	0.62	J
EPD-WA-11-090223	TO-15 SIM	156-59-2	CIS-1,2-DICHLOROETHENE	0.11	U	0.0079	0.11	UG/M3	0.11	U
EPD-WA-11-090223	TO-15 SIM	100-41-4	ETHYL BENZENE	0.19		0.006	0.12	UG/M3	0.19	
EPD-WA-11-090223	TO-15 SIM	76-14-2	FREON 114	0.095	J	0.012	0.19	UG/M3	0.095	J
EPD-WA-11-090223	TO-15 SIM	75-71-8	FREON 12	1.9		0.0086	0.34	UG/M3	1.9	
EPD-WA-11-090223	TO-15 SIM	179601-23-1	M,P-XYLENE	0.72		0.012	0.24	UG/M3	0.72	
EPD-WA-11-090223	TO-15 SIM	1634-04-4	METHYL TERT-BUTYL ETHER	0.5	U	0.0062	0.5	UG/M3	0.50	U
EPD-WA-11-090223	TO-15 SIM	91-20-3	NAPHTHALENE	0.15	J	0.095	0.36	UG/M3	0.36	U
EPD-WA-11-090223	TO-15 SIM	95-47-6	O-XYLENE	0.31		0.018	0.12	UG/M3	0.31	
EPD-WA-11-090223	TO-15 SIM	127-18-4	TETRACHLOROETHENE	1		0.013	0.19	UG/M3	1.0	
EPD-WA-11-090223	TO-15 SIM	108-88-3	TOLUENE	1.2		0.012	0.26	UG/M3	1.2	
EPD-WA-11-090223	TO-15 SIM	156-60-5	TRANS-1,2-DICHLOROETHENE	0.55	U	0.009	0.55	UG/M3	0.55	U
EPD-WA-11-090223	TO-15 SIM	79-01-6	TRICHLOROETHENE	0.15	U	0.016	0.15	UG/M3	0.15	U
EPD-WA-11-090223	TO-15 SIM	75-01-4	VINYL CHLORIDE	0.036	U	0.0053	0.036	UG/M3	0.036	U