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April 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. 1756**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting these data validation reports for thirty-seven sorbent tube air samples collected at the E Palestine site. The samples were collected on March 13, 2023, and were analyzed for acrylates by Eurofins Analytics. The final laboratory data package was received on April 10, 2023.

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

No rejection of results was required for this data package. The results may be used as reported by the laboratory.

If you have any questions regarding these data validation reports, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads 'Trinh Vu'.

Trinh Vu
Environmental Chemist

Enclosure

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

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ATTACHMENT

**DATA VALIDATION REPORTS
EUROFINS ANALYTICS REPORT NOS. B073200, B073201,
B073202, AND B073203**

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1756a	Laboratory	Eurofins Analytics – Ashland, VA
Laboratory Report No.	B073200		
Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029		
Samples and Matrix	Ten sorbent tube air samples (including one field blank)		
Collection Date(s)	3/13/2023		
Field Duplicate Pairs	None		
Field QC Blanks	EPD-ST-FB-031323-1		

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), the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection or qualification of results was required for this data package. The results may be used as reported by the laboratory.

Data completeness:

Within Criteria	Exceedance/Notes
N	<p>Samples 1-10 on the chain-of-custody (COC) form are reported in laboratory report B073200. Samples 11-20, 21-30, and 31-38 are reported in laboratory reports B073201, B073202, and B073203, respectively.</p> <p>The sample IDs were incorrectly transcribed by the laboratory as “EDP-” instead of “EPD-”. The sample IDs in the attached qualified data table were manually corrected to “EPD-”.</p> <p>The results for the field blank were reported in units of micrograms (µg) while the other sample results were reported in units of µg, milligram per cubic meter (mg/m³), and parts per million (volume) (ppmV) in the laboratory report and ppmV only in the electronic data deliverable (EDD).</p>

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	During collection of sample EPD-ST-UW-01-031323-1, the tube fell on the ground. No qualifications were applied.

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
Y	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
NA	

MS/MSDs:

Within Criteria	Exceedance/Notes
NA	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	

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

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and as the reporting limit with a “U” qualifier in the EDD and attached qualified data table.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

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

Other [none]:

Within Criteria	Exceedance/Notes
NA	

Overall Qualifications:

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

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
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 ANALYTICS REPORT NO. B073200

Sample_ID	Method	CAS_NO	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-01-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U			0.016 ppm	0.016	U
EPD-ST-8H-DW-01-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.011	U			0.011 ppm	0.011	U
EPD-ST-DW-01-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U			0.029 ppm	0.029	U
EPD-ST-DW-01-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	U
EPD-ST-UW-01-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.030	U
EPD-ST-UW-01-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.020	U
EPD-ST-WA-01-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.027	U			0.027 ppm	0.027	U
EPD-ST-WA-01-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.018	U			0.018 ppm	0.018	U
EPD-ST-WA-02-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U			0.029 ppm	0.029	U
EPD-ST-WA-02-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	U
EPD-ST-WA-03-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U			0.029 ppm	0.029	U
EPD-ST-WA-03-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	U
EPD-ST-WA-04-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.030	U
EPD-ST-WA-04-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.020	U
EPD-ST-WA-05-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.030	U
EPD-ST-WA-05-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.020	U
EPD-ST-WA-06-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.028	U			0.028 ppm	0.028	U
EPD-ST-WA-06-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	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.	1756b	Laboratory	Eurofins Analytics – Ashland, VA
Laboratory Report No.	B073201	Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029
Samples and Matrix	Ten sorbent tube air samples (including one field blank)		
Collection Date(s)	3/13/2023		
Field Duplicate Pairs	None		
Field QC Blanks	EPD-ST-FB-031323-2		

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), the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection or qualification of results was required for this data package. The results may be used as reported by the laboratory.

Data completeness:

Within Criteria	Exceedance/Notes
N	<p>Samples 11-20 on the chain-of-custody (COC) form are reported in laboratory report B073201. Samples 1-10, 21-30, and 31-38 are reported in laboratory reports B073200, B073202, and B073203, respectively.</p> <p>Samples EPD-ST-DW-01-031323-2, EPD-ST-WA-03-031323-2, and EPD-ST-FB-031323-2 were analyzed for acrylates but the analyses requested on the Laboratory Test Request form incorrectly references “IHGC-P030”, “IHGC-P031”, and “IHGC-P032”, respectively. All samples were analyzed by laboratory SOP IHGC-P029.</p> <p>The results for the field blank were reported in units of micrograms (µg) while the other sample results were reported in units of µg, milligram per cubic meter (mg/m³), and parts per million (volume) (ppmV) in the laboratory report and ppmV only in the electronic data deliverable (EDD).</p>

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
Y	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
NA	

MS/MSDs:

Within Criteria	Exceedance/Notes
NA	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	

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

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and as the reporting limit with a “U” qualifier in the EDD and attached qualified data table.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

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

Other [none]:

Within Criteria	Exceedance/Notes
NA	

Overall Qualifications:

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

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
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 ANALYTICS REPORT NO. B073201

Sample_ID	Method	CAS_NO	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-WA-06-031323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.017	U		0.017	ppm	0.017	U
EPD-ST-8H-WA-06-031323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.011	U		0.011	ppm	0.011	U
EPD-ST-DW-01-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.027	U		0.027	ppm	0.027	U
EPD-ST-DW-01-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.018	U		0.018	ppm	0.018	U
EPD-ST-UW-01-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U		0.029	ppm	0.029	U
EPD-ST-UW-01-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-WA-01-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.025	U		0.025	ppm	0.025	U
EPD-ST-WA-01-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.017	U		0.017	ppm	0.017	U
EPD-ST-WA-02-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U		0.03	ppm	0.030	U
EPD-ST-WA-02-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U		0.02	ppm	0.020	U
EPD-ST-WA-03-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U		0.029	ppm	0.029	U
EPD-ST-WA-03-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-WA-04-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U		0.029	ppm	0.029	U
EPD-ST-WA-04-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-WA-05-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U		0.03	ppm	0.030	U
EPD-ST-WA-05-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U		0.02	ppm	0.020	U
EPD-ST-WA-06-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.028	U		0.028	ppm	0.028	U
EPD-ST-WA-06-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-FB-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U		2.8	ug	2.8	U
EPD-ST-FB-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	1.3	U		1.3	ug	1.3	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.	1756c	Laboratory	Eurofins Analytics – Ashland, VA
Laboratory Report No.	B073202	Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029
Samples and Matrix	Nine sorbent tube air samples		
Collection Date(s)	3/13/2023		
Field Duplicate Pairs	None		
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, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection or qualification of results was required for this data package. The results may be used as reported by the laboratory.

Data completeness:

Within Criteria	Exceedance/Notes
N	<p>Samples 21-30 on the chain-of-custody (COC) form were reported in laboratory report B073202. Samples 1-10, 11-20, and 31-38 were reported in laboratory reports B073200, B073201, and B073203, respectively. Sample 30 was voided due to pump failure. The Laboratory Test Request form says sample EPD-ST-WA-03-031323-3 was collected at 15:32 on 3/13/2023 and sample EPD-ST-8H-DW-01-031323-2 was collected at 15:43 on 03/13/2023; however, the chain-of-custody (COC) form and sample labels say that sample EPD-ST-8H-DW-01-031323-2 was collected at 15:32 and sample EPD-ST-8H-WA-04-031323-2 was collected at 15:43. The samples were processed with the collection times on the COC form and sample labels.</p> <p>Samples EPD-ST-WA-03-031323-3, EPD-ST-8H-DW-01-031323-2, and EPD-ST-8H-WA-04-031323-2 were analyzed for acrylates but the analysis requested on the Laboratory Test Request form incorrectly references “IHGC-P030”, “IHGC-P031”, and “IHGC-P032”, respectively. All samples were analyzed by laboratory SOP IHGC-P029.</p> <p>Sample “EPD-ST-8H-WA-04-031323-2” (sample 30 on the Tetra Tech COC form) was voided by Tetra Tech due to a pump failure; therefore, this sample was not analyzed.</p>

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

Data completeness (continued):

Within Criteria	Exceedance/Notes
N	The results for the field blank were reported in units of micrograms (μg) while the other sample results were reported in units of μg , milligram per cubic meter (mg/m^3), and parts per million (volume) (ppmV) in the laboratory report and ppmV only in the electronic data deliverable (EDD).

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
NA	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
NA	

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	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and as the reporting limit with a “U” qualifier in the EDD and attached qualified data table.

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

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

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.
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 ANALYTICS REPORT NO. B073202

Sample_ID	Method	CAS_NO	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-01-031323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U		0.016	ppm	0.016	U
EPD-ST-8H-DW-01-031323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.011	U		0.011	ppm	0.011	U
EPD-ST-DW-01-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U		0.031	ppm	0.031	U
EPD-ST-DW-01-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U		0.02	ppm	0.020	U
EPD-ST-UW-01-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U		0.029	ppm	0.029	U
EPD-ST-UW-01-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-WA-01-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.028	U		0.028	ppm	0.028	U
EPD-ST-WA-01-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-WA-02-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U		0.031	ppm	0.031	U
EPD-ST-WA-02-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U		0.021	ppm	0.021	U
EPD-ST-WA-03-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.028	U		0.028	ppm	0.028	U
EPD-ST-WA-03-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U		0.019	ppm	0.019	U
EPD-ST-WA-04-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.032	U		0.032	ppm	0.032	U
EPD-ST-WA-04-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U		0.021	ppm	0.021	U
EPD-ST-WA-05-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.032	U		0.032	ppm	0.032	U
EPD-ST-WA-05-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U		0.021	ppm	0.021	U
EPD-ST-WA-06-031323-3	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U		0.029	ppm	0.029	U
EPD-ST-WA-06-031323-3	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U		0.02	ppm	0.020	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.	1756d	Laboratory	Eurofins Analytics – Ashland, VA
Laboratory Report No.	B073203	Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029
Samples and Matrix	Eight sorbent tube air samples		
Collection Date(s)	3/13/2023		
Field Duplicate Pairs	None		
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, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection or qualification of results was required for this data package. The results may be used as reported by the laboratory.

Data completeness:

Within Criteria	Exceedance/Notes
N	<p>Samples 31-38 on the chain-of-custody (COC) form were reported in laboratory report B073203. Samples 1-10, 11-20, and 21-30 were reported in laboratory reports B073200, B073201, and B073202, respectively.</p> <p>Sample EPD-ST-WA-03-031323-4 was analyzed for acrylates but the analysis requested on the Laboratory Test Request form incorrectly references “IHGC-P031”. All samples were analyzed by laboratory SOP IHGC-P029.</p> <p>The results for the field blank were reported in units of micrograms (µg) while the other sample results were reported in units of µg, milligram per cubic meter (mg/m³), and parts per million (volume) (ppmV) in the laboratory report and ppmV only in the electronic data deliverable (EDD).</p>

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

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
NA	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
NA	

MS/MSDs:

Within Criteria	Exceedance/Notes
NA	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	

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

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and as the reporting limit with a “U” qualifier in the EDD and attached qualified data table.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

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

Other [none]:

Within Criteria	Exceedance/Notes
NA	

Overall Qualifications:

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

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
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 ANALYTICS REPORT NO. B073203

Sample_ID	Method	CAS_NO	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-DW-01-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U			0.031 ppm	0.031	U
EPD-ST-DW-01-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U
EPD-ST-UW-01-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.033	U			0.033 ppm	0.033	U
EPD-ST-UW-01-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.022	U			0.022 ppm	0.022	U
EPD-ST-WA-01-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U			0.031 ppm	0.031	U
EPD-ST-WA-01-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U
EPD-ST-WA-02-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U			0.031 ppm	0.031	U
EPD-ST-WA-02-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U
EPD-ST-WA-03-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.036	U			0.036 ppm	0.036	U
EPD-ST-WA-03-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.024	U			0.024 ppm	0.024	U
EPD-ST-WA-04-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U			0.029 ppm	0.029	U
EPD-ST-WA-04-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.020	U
EPD-ST-WA-05-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.033	U			0.033 ppm	0.033	U
EPD-ST-WA-05-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.022	U			0.022 ppm	0.022	U
EPD-ST-WA-06-031323-4	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.032	U			0.032 ppm	0.032	U
EPD-ST-WA-06-031323-4	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U