TETRA TECH

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December 12, 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. 2214

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for 47 air samples (including 3 field duplicate samples, 4 field blank samples, and 1 media blank sample) collected at the E Palestine site. The samples were collected on August 14, 15, and 16, 2023, and were analyzed for acrylates by Eurofins Analytics, LLC. The final laboratory data package was received on August 18, 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 qualification or rejection of results was required for these data packages. The results may be used as reported by the laboratory.

If you have any questions regarding this data validation report, please contact me via the project manager.

Sincerely,

Kayla Phye
Digitally signed by Kayla Phye
Date: 2023.12.12 04:49:30 -07'00'

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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ATTACHMENTS

DATA VALIDATION REPORT
EUROFINS ANALYTICS, LLC REPORT NOS.
B228-010, B229-001, B229-002, B229-003

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

Site Name	E Palestine Site – ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	2214a		
Laboratory Report No.	B228-010	Laboratory	Eurofins Analytics, LLC – Ashland, VA
Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029		
Samples and Matrix	Nine air samples including one field blank sample		
Collection Date(s)	08/14/2023		
Field Duplicate Pairs	None		
Field QC Blanks	EPD-ST-FB-081423-1		

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, 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 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	The results for the field blank sample were reported in units of micrograms (µg) while the other sample results were reported in units of µg, milligrams per cubic meter (mg/m3), and parts per million (ppm) (volume) in the laboratory report and only in units of ppm in the laboratory electronic data deliverable (EDD). Rohm & Haas IH9805 was cited in the AIHA certification as "IHGC-P029" and may be cited by the abbreviation "Rohm & Haas IH9805" or "IHGC-P029" interchangeably throughout the laboratory report. Note, the following fields in the laboratory EDD may be formatted as date only or as date/time: Date_Collected, Date_Received, Date_Extracted, and Date_Analyzed. The time value was not required to be provided in the EDD. If no time value was provided, then the entered value may appear as date only or with a default time value of 0:00, 00:00, or similar. The analysis date for sample EPD-ST-8H-WA-02-081423-1 (B228010006) in the laboratory EDD did not match the laboratory report. During the data validation effort, the analysis date was corrected to match the date in the analytical log in the laboratory report.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230816A and laboratory reagent blank LRB IHG230816A were reported as "0" in the laboratory EDD rather than at the reporting limit (RL). The laboratory was contacted on August 28, 2023, and agreed to report nondetect laboratory method blank and LRB results at the RL in future laboratory EDDs.

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	

Field duplicates:

Within Criteria	Exceedance/Notes
N	Per the site-specific QAPP, 1 field duplicate sample is required per 20 samples collected. However, fewer than 1 field duplicate sample per 20 samples were collected with this sample group. Based on professional judgement, no qualifications were applied.

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Method detection limits (MDL) were not reported. Nondetect sample results were reported as less than the RL in the laboratory report and at the RL (flagged U) in the validated EDD and attached analytical results summary.

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, LLC REPORT NO. B228-010

Sample ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-C-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U	0.014	ppm	0.014	U
EPD-ST-8H-DW-C-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-UW-G-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-UW-G-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-01-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-01-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-02-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-02-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-03-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-04-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-05-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-05-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-06-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-081423-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-081423-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-081423-1	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.	2214b		
Laboratory Report No.	B229-001	Laboratory	Eurofins Analytics, LLC – Ashland, VA
Analyses	n-Butyl acrylate by NIOSH Method 1450M		
Samples and Matrix	19 air samples including 1 field blank, 1 media blank, and 2 field duplicate pairs		
Collection Date(s)	08/16/2023		
Field Duplicate Pairs	EPD-PB-OD-06-081623/EPD-PB-OD-066-081623 EPD-PB-WA-01-081623/EPD-PB-WA-011-081623		
Field QC Blanks	EPD-PB-FB-01-081623 and EPD-PB-MB-01-081623		

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 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	The results for the field blank sample and media blank sample were reported in units of micrograms (µg) while the other field sample results were reported in units of µg, milligrams per cubic meter (mg/m3), and parts per million (ppm) (volume) in the laboratory report and only in units of ppm in the laboratory electronic data deliverable (EDD). The site-specific QAPP specifies analysis of acrylates in air by Eurofins Analytics, LLC standard operating procedure (SOP) IHGC-001-v.22-3. The laboratory confirmed that NIOSH Method 1450M, which is mentioned in the laboratory deliverables, is equivalent to SOP IHGC-001-v.22-3; therefore, these method references may be used interchangeably. Note, the following fields in the laboratory EDD may be formatted as date only or as date/time: Date_Collected, Date_Received, Date_Extracted, and Date_Analyzed. The time value was not required to be provided in the EDD. If no time value was provided, then the entered value may appear as date only or with a default time value of 0:00, 00:00, or similar.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230817A and laboratory reagent blank LRB IHG230817A were reported as "0" in the laboratory EDD rather than at the reporting limit (RL). The laboratory was contacted on August 28, 2023, and agreed to report nondetect laboratory method blank and LRB results at the RL in future laboratory EDDs. No qualifications were applied.

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	

Field duplicates:

Within Criteria	Exceedance/Notes
Y	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Method detection limits (MDL) were not reported. Nondetect sample results were reported as less than the RL in the laboratory report and at the RL (flagged U) in the validated EDD and attached analytical results summary.

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, LLC REPORT NO. B229-001

Sample ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-PB-DW-B-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-FB-01-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U	2	ug	2	U
EPD-PB-MB-01-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U	2	ug	2	U
EPD-PB-OD-01-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-02-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-03-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-04-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-05-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-06-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-066-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-OD-07-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-UW-F-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-01-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-011-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-02-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-03-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-04-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-05-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	U
EPD-PB-WA-06-081623	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0045	U	0.0045	ppm	0.0045	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.	2214c		
Laboratory Report No.	B229-002	Laboratory	Eurofins Analytics, LLC – Ashland, VA
Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029		
Samples and Matrix	10 air samples including 1 field blank and 1 field duplicate pair		
Collection Date(s)	08/15/2023		
Field Duplicate Pairs	EPD-ST-8H-WA-03-081523-2/EPD-ST-8H-WA-33-081523-2		
Field QC Blanks	EPD-ST-FB-081523-2		

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, 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 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	The results for the field blank sample were reported in units of micrograms (µg) while the other sample results were reported in units of µg, milligrams per cubic meter (mg/m3), and parts per million (ppm) (volume) in the laboratory report and only in units of ppm in the laboratory electronic data deliverable (EDD). Rohm & Haas IH9805 was cited in the AIHA certification as "IHGC-P029" and may be cited by the abbreviation "Rohm & Haas IH9805" or "IHGC-P029" interchangeably throughout the laboratory report. Note, the following fields in the laboratory EDD may be formatted as date only or as date/time: Date_Collected, Date_Received, Date_Extracted, and Date_Analyzed. The time value was not required to be provided in the EDD. If no time value was provided, then the entered value may appear as date only or with a default time value of 0:00, 00:00, or similar.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230817B and laboratory reagent blank LRB IHG230817B were reported as "0" in the laboratory EDD rather than at the reporting limit (RL). The laboratory was contacted on August 28, 2023, and agreed to report nondetect laboratory method blank and LRB results at the RL in future laboratory EDDs.

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	

Field duplicates:

Within Criteria	Exceedance/Notes
Y	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Method detection limits (MDL) were not reported. Nondetect sample results were reported as less than the RL in the laboratory report and at the RL (flagged U) in the validated EDD and attached analytical results summary.

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, LLC REPORT NO. B229-002

Sample ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-B-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-DW-B-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-UW-F-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-UW-F-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-01-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-01-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-02-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-02-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-03-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-04-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-05-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U	0.016	ppm	0.016	U
EPD-ST-8H-WA-05-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.011	U	0.011	ppm	0.011	U
EPD-ST-8H-WA-06-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-33-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U	0.016	ppm	0.016	U
EPD-ST-8H-WA-33-081523-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-081523-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-081523-2	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.	2214d		
Laboratory Report No.	B229-003	Laboratory	Eurofins Analytics, LLC – Ashland, VA
Analyses	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029		
Samples and Matrix	Nine air samples including one field blank		
Collection Date(s)	08/15/2023		
Field Duplicate Pairs	None		
Field QC Blanks	EPD-ST-FB-081523-1		

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, 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 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	The results for the field blank sample were reported in units of micrograms (µg) while the other sample results were reported in units of µg, milligrams per cubic meter (mg/m3), and parts per million (ppm) (volume) in the laboratory report and only in units of ppm in the laboratory electronic data deliverable (EDD). Rohm & Haas IH9805 was cited in the AIHA certification as "IHGC-P029" and may be cited by the abbreviation "Rohm & Haas IH9805" or "IHGC-P029" interchangeably throughout the laboratory report. Note, the following fields in the laboratory EDD may be formatted as date only or as date/time: Date_Collected, Date_Received, Date_Extracted, and Date_Analyzed. The time value was not required to be provided in the EDD. If no time value was provided, then the entered value may appear as date only or with a default time value of 0:00, 00:00, or similar. The analysis date for sample EPD-ST-8H-WA-01-081523-1 (B229003007) in the laboratory EDD did not match the laboratory report. During the data validation effort, the analysis date was corrected to match the date in the analytical log in the laboratory report.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230817B and laboratory reagent blank LRB IHG230817B were reported as "0" in the laboratory EDD rather than at the reporting limit (RL). The laboratory was contacted on August 28, 2023, and agreed to report nondetect laboratory method blank and LRB results at the RL in future laboratory EDDs.

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	

Field duplicates:

Within Criteria	Exceedance/Notes
N	Per the site-specific QAPP, 1 field duplicate sample is required per 20 samples collected. However, fewer than 1 field duplicate sample per 20 samples were collected with this sample group. Based on professional judgement, no qualifications were applied.

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Method detection limits (MDL) were not reported. Nondetect sample results were reported as less than the RL in the laboratory report and at the RL (flagged U) in the validated EDD and attached analytical results summary.

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, LLC REPORT NO. B229-003

Sample ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-A-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-DW-A-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-UW-E-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-UW-E-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-01-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-01-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-02-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-02-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-03-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-04-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-05-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-05-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-06-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-081523-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-081523-1	IHGC-P029	141-32-2	n-Butyl acrylate	1.3	U	1.3	ug	1.3	U