



December 20, 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

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**Subject: Data Validation Report  
E Palestine Site - ER  
EPA Contract No.: 68HE0519D0005  
Task Order/Task Order Line-Item No.: 68HE0520F0032/0001EB201  
Document Tracking No. 2313**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for 38 air samples (including 2 field duplicate samples and 4 field blank samples) collected at the E Palestine site. The samples were collected on May 22 and July 22-23, 2023, and were analyzed for acrylates by Eurofins Analytics, LLC. The final laboratory data package was received on September 26, 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.

Please contact me if you have any questions regarding this data validation report.

Sincerely,  
**Kierra  
Johnson**  
Environmental Chemist

Digitally signed by Kierra  
Johnson  
Date: 2023.12.20  
18:10:28 -07'00'

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

Tetra Tech, Inc.  
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**ATTACHMENT**

**DATA VALIDATION REPORT  
EUROFINS ANALYTICS, LLC NOS.  
B144-001, B206-113, B206-114, AND B206-115**

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	2313a		
Laboratory Report No.	B144-001	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)	05/22/2023		
Field Duplicate Pairs	None		
Field QC Blanks	EPD-ST-FB-052223-1		

**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 (QAPP), 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 VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Data completeness:**

Within Criteria	Exceedance/Notes
N	<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, 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).</p> <p>Rohm &amp; Haas IH9805 was cited in the AIHA certification as “IHGC-P029” and may be cited by the abbreviation “Rohm &amp; Haas IH9805” or “IHGC-P029” interchangeably throughout the laboratory report.</p> <p>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.</p> <p>The extraction date and time information in the laboratory EDD did not match the laboratory report or were absent. During the data validation effort, the extraction dates were added or corrected (as needed) to match those in the preparation log in the laboratory report.</p> <p>A unique sample ID for laboratory control sample duplicate (LCSD) was not provided in the laboratory EDD. Unique sample IDs are needed to avoid overwriting other quality control (QC) sample data when validated EDDs are uploaded to the Scribe database. The LCSD ID in the Samp_No and Lab_Samp_No fields of the validated EDD were manually revised to match those in the laboratory report.</p> <p>The Date_Analyzed for LCSD IHG230524A 10X was incorrect and updated to 05/26/2023 18:04, to match Form 8 Analytical Sequence in the Level IV data package.</p> <p>This report was amended, to update the total time, average flow rate, and volume for sample EPD-ST-8H-WA-05-052223-1, per client request.</p> <p>This report was amended, to update the average flow rate for sample EPD-ST-8H-UW-H-052223-1, per client request.</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
N	Nondetect results for laboratory method blank LMB IHG230628C and laboratory reagent blank (LRB) LRB IHG230628C 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	

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

**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 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.

**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, LLC REPORT NO. B144-001

Sample_ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-D-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U	0.014	ppm	0.014	U
EPD-ST-8H-DW-D-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-UW-H-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.013	U	0.013	ppm	0.013	U
EPD-ST-8H-UW-H-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-ST-8H-WA-01-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U	0.014	ppm	0.014	U
EPD-ST-8H-WA-01-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-ST-8H-WA-02-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U	0.014	ppm	0.014	U
EPD-ST-8H-WA-02-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U	0.014	ppm	0.014	U
EPD-ST-8H-WA-03-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.018	U	0.018	ppm	0.018	U
EPD-ST-8H-WA-04-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.012	U	0.012	ppm	0.012	U
EPD-ST-8H-WA-05-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U	0.014	ppm	0.014	U
EPD-ST-8H-WA-05-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-06-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-052223-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-052223-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-052223-1	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.	2313b		
Laboratory Report No.	B206-113	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)	07/23/2023		
Field Duplicate Pairs	EPD-ST-8H-WA-06-072323-2/EPD-ST-8H-WA-66-072323-2		
Field QC Blanks	EPD-ST-FB-072323-2		

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

**Data completeness:**

Within Criteria	Exceedance/Notes
N	<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, 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).</p> <p>Rohm &amp; Haas IH9805 was cited in the AIHA certification as “IHGC-P029” and may be cited by the abbreviation “Rohm &amp; Haas IH9805” or “IHGC-P029” interchangeably throughout the laboratory report.</p> <p>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.</p> <p>The extraction date and time information in the laboratory EDD did not match the laboratory report or were absent. During the data validation effort, the extraction dates were added or corrected (as needed) to match those in the preparation log in the laboratory report.</p> <p>A unique sample ID for laboratory control sample duplicate (LCSD) was not provided in the laboratory EDD. Unique sample IDs are needed to avoid overwriting other quality control (QC) sample data when validated EDDs are uploaded to the Scribe database. The LCSD ID in the Samp_No and Lab_Samp_No fields of the validated EDD were manually revised to match those in the laboratory report.</p> <p>The Date_Analyzed for LCSD IHG230725E 10X was incorrect and updated to 07/26/2023 18:37, to match Form 8 Analytical Sequence in the Level IV data package.</p>

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

Within Criteria	Exceedance/Notes
Y	

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

**Method blanks:**

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230725E and laboratory reagent blank (LRB) LRB IHG230725E 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	

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

**LCSs/LCSDs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	The laboratory report(s) and the laboratory EDD have one or more minor discrepancies in the laboratory control sample (LCS)/LCSD results (+/- 1 ug), relative percent differences (+/-2%) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualifications were applied.

**Sample dilutions:**

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

**Re-extraction and reanalysis:**

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

**MDLs/RLs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Method detection limits 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:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
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, LLC REPORT NO. B206-113

Sample_ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-B-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-DW-B-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-UW-F-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-UW-F-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-01-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-01-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-02-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-02-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-03-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-04-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-05-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-05-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-06-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-66-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U	0.016	ppm	0.016	U
EPD-ST-8H-WA-66-072323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-072323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-072323-2	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.	2313c		
Laboratory Report No.	B206-114	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)	07/22/2023		
Field Duplicate Pairs	EPD-ST-8H-WA-02-072223-2/EPD-ST-8H-WA-22-072223-2		
Field QC Blanks	EPD-ST-FB-072223-2		

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

**Data completeness:**

Within Criteria	Exceedance/Notes
N	<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, 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).</p> <p>Rohm &amp; Haas IH9805 was cited in the AIHA certification as “IHGC-P029” and may be cited by the abbreviation “Rohm &amp; Haas IH9805” or “IHGC-P029” interchangeably throughout the laboratory report.</p> <p>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.</p> <p>The extraction date and time information in the laboratory EDD did not match the laboratory report or were absent. During the data validation effort, the extraction dates were added or corrected (as needed) to match those in the preparation log in the laboratory report.</p> <p>A unique sample ID for laboratory control sample duplicate (LCSD) was not provided in the laboratory EDD. Unique sample IDs are needed to avoid overwriting other quality control (QC) sample data when validated EDDs are uploaded to the Scribe database. The LCSD ID in the Samp_No and Lab_Samp_No fields of the validated EDD were manually revised to match those in the laboratory report.</p> <p>The Date_Analyzed for LCSD IHG230725E 10X was incorrect and updated to 07/26/2023 18:37, to match Form 8 Analytical Sequence in the Level IV data package.</p>

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

Within Criteria	Exceedance/Notes
Y	



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

**Method blanks:**

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230725E and laboratory reagent blank (LRB) LRB IHG230725E 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	

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

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
N	The laboratory report(s) and the laboratory EDD have one or more minor discrepancies in the laboratory control sample (LCS)/LCSD results (+/- 1 ug), relative percent differences (+/-2%) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualifications were applied.

**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 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	

**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, LLC REPORT NO. B206-114

Sample_ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-D-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-DW-D-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-UW-H-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-UW-H-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-01-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-01-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-02-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-02-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-03-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-04-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-05-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-05-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-06-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-22-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-22-072223-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-072223-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-072223-2	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.	2313d		
Laboratory Report No.	B206-115	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)	07/23/2023		
Field Duplicate Pairs	None		
Field QC Blanks	EPD-ST-FB-072323-1		

**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 (QAPP), 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 VALIDATION CHECKLIST – STAGE 2A  
EPA REGION 5 START CONTRACT**

**Data completeness:**

Within Criteria	Exceedance/Notes
N	<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, 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).</p> <p>Rohm &amp; Haas IH9805 was cited in the AIHA certification as “IHGC-P029” and may be cited by the abbreviation “Rohm &amp; Haas IH9805” or “IHGC-P029” interchangeably throughout the laboratory report.</p> <p>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.</p> <p>The extraction date and time information in the laboratory EDD did not match the laboratory report or were absent. During the data validation effort, the extraction dates were added or corrected (as needed) to match those in the preparation log in the laboratory report.</p> <p>A unique sample ID for laboratory control sample duplicate (LCSD) was not provided in the laboratory EDD. Unique sample IDs are needed to avoid overwriting other quality control (QC) sample data when validated EDDs are uploaded to the Scribe database. The LCSD ID in the Samp_No and Lab_Samp_No fields of the validated EDD were manually revised to match those in the laboratory report.</p> <p>The Date_Analyzed for LCSD IHG230725E 10X was incorrect and updated to 07/26/2023 18:37, to match Form 8 Analytical Sequence in the Level IV data package.</p> <p>The report was amended on 7/28/23 to correct volume for sample EPD-ST-8H-WA-06-072323-1 per client request.</p>

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

Within Criteria	Exceedance/Notes
Y	

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

**Method blanks:**

Within Criteria	Exceedance/Notes
N	Nondetect results for laboratory method blank LMB IHG230725E and laboratory reagent blank (LRB) LRB IHG230725E 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	

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

**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
N	The laboratory report(s) and the laboratory EDD have one or more minor discrepancies in the laboratory control sample (LCS)/LCSD results (+/- 1 ug), relative percent differences (+/-2%) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualifications were applied.

**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 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.



**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, LLC REPORT NO. B206-115

Sample_ID	Method	CAS#	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-D-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U	0.016	ppm	0.016	U
EPD-ST-8H-DW-D-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.011	U	0.011	ppm	0.011	U
EPD-ST-8H-UW-H-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-UW-H-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-01-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-01-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-02-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-02-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-03-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-03-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-04-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-04-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-05-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-05-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-8H-WA-06-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U	0.015	ppm	0.015	U
EPD-ST-8H-WA-06-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U	0.01	ppm	0.01	U
EPD-ST-FB-072323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U	2.8	ug	2.8	U
EPD-ST-FB-072323-1	IHGC-P029	141-32-2	n-Butyl acrylate	1.3	U	1.3	ug	1.3	U