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July 6, 2023

Mr. Josh Peters  
On-Scene Coordinator  
U.S. Environmental Protection Agency, Region 5  
Superfund and Emergency Management Division  
2565 Plymouth Road  
Ann Arbor, MI 48105

**Subject: Data Validation Reports  
E Palestine Site - ER  
EPA Contract No.: 68HE0519D0005  
Task Order/Task Order Line Item No.: 68HE0520F0032/0001EB201  
Document Tracking No. 1924**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting these data validation reports for seventy-five (75) samples including four field duplicates and six field blanks were collected at the E Palestine Site. The samples were collected on April 21, 22 and 23, 2023, and were analyzed for either 2-Ethylhexyl Acrylate and n-Butyl Acrylate or only for n-Butyl Acrylate by Eurofins Analytics, LLC at their Ashland, Virginia laboratory. The final laboratory data packages were received on June 10, 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, EPA Region 5, Revision 3* (April 2023), the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

No rejection of results was required for this data package. The results may be used as qualified in accordance with this report.

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

Sincerely,

Tom  
Hahne  Digitally signed  
by Tom Hahne  
Date: 2023.07.06  
13:12:24 -05'00'

Quality Reviewer

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

**ATTACHMENT**

**DATA VALIDATION REPORTS  
EUROFINS ANALYTICS, LLC REPORT NOS. B114-152, B115-180  
B115-181, AND B115-182**

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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	DTN 1924a	Laboratory	Eurofins Analytics, LLC, Ashland VA
Laboratory Report No.	B114-152	Analyses	
Analyses	2-Ethylhexyl Acrylate and n-Butyl Acrylate analysis by a proprietary method IHGC-P029 (IH9805) GC/FID		
Samples and Matrix	Nine (9) Air Samples including one field blank		
Collection Date(s)	04/21/2023		
Field Duplicate Pairs	NA		
Field QC Blanks	EPD-ST-FB-042123-1		

**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, EPA Region 5, 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), the *EPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

**OVERALL EVALUATION**

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort. .

**Data completeness:**

Within Criteria	Exceedance/Notes
Y	<p>The level 2 package was reviewed.</p> <p>The laboratory report included the following note: “The method reference, Rohm &amp; Haas IH9805 is referenced to the AIHA certification as IHGC-P029.” The method is referred to by the abbreviation “Rohm &amp; Haas IH9805” or “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 (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (EDD).</p>

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

A unique sample ID not provided for LCSD. Unique IDs are needed to keep from overwriting QC sample IDs when EDDs are uploaded to the client database. The LCSD ID (in the Samp\_No and Lab\_Samp\_No fields) in the EDD was manually revised to match the laboratory report.

The extraction date information in the EDD did not match the laboratory report or was blank. The project management team confirmed that this information was not needed in the EDD; therefore, all extraction date information except the field header was deleted from the EDD.

The sample analysis time was reported as a default value of 12 AM or 00:00 hours for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD was not required for the EDD; therefore, this value was not manually revised.

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

Within Criteria	Exceedance/Notes
Y	None.

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Field blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

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

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	None.

**LCs/LCSDs:**

Within Criteria	Exceedance/Notes
N	<p>LCS was analyzed at a 10X dilution.</p> <p>LCS and LCSD recoveries for n-Butyl acrylate were below the QC limit. All associated samples were affected and were qualified as estimated, flagged UJ, due to this deficiency.</p> <p>The laboratory report and the EDD have one or more minor discrepancies in the LCS/LCSD results (+/- 1 ug) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualification was applied.</p>

**Sample dilutions:**

Within Criteria	Exceedance/Notes
NA	

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

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and at the reporting limit (flagged U) in the EDD and attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [specify]:**

Within Criteria	Exceedance/Notes
NA	

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

**Overall Qualifications:**

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

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
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.
NF	The tentatively identified compound was manually searched for but was not found in the sample.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
EUROFINS ANALYTICS REPORT NO. B114-152

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-A-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			ppm	0.015	U
EPD-ST-8H-DW-A-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			ppm	0.010	UJ
EPD-ST-8H-UW-E-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			ppm	0.014	U
EPD-ST-8H-UW-E-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			ppm	0.010	UJ
EPD-ST-8H-WA-01-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			ppm	0.014	U
EPD-ST-8H-WA-01-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			ppm	0.0090	UJ
EPD-ST-8H-WA-02-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			ppm	0.014	U
EPD-ST-8H-WA-02-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			ppm	0.0090	UJ
EPD-ST-8H-WA-03-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U			ppm	0.016	U
EPD-ST-8H-WA-03-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			ppm	0.010	UJ
EPD-ST-8H-WA-04-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			ppm	0.014	U
EPD-ST-8H-WA-04-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			ppm	0.010	UJ
EPD-ST-8H-WA-05-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			ppm	0.014	U
EPD-ST-8H-WA-05-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			ppm	0.0090	UJ
EPD-ST-8H-WA-06-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			ppm	0.015	U
EPD-ST-8H-WA-06-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			ppm	0.010	UJ
EPD-ST-FB-042123-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U			ug	2.8	U
EPD-ST-FB-042123-1	IHGC-P029	141-32-2	n-Butyl acrylate	1.3	U			ug	1.3	UJ



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

Site Name	E Palestine Site - ER	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	DTN 1924b	Laboratory	Eurofins Analytics, LLC, Ashland VA
Laboratory Report No.	B115-180		
Analyses	n-Butyl Acrylate analysis by NIOSH Method 1450M Modified GC/FID		
Samples and Matrix	Twenty Nine (29) Air Samples including two field duplicates and two field blanks		
Collection Date(s)	04/23/2023		
Field Duplicate Pairs	EPD-PB-OD-055-042323-1/EPD-PB-OD-05-042323-1 EPD-PB-CM-08-042323-1/EPD-PB-CM-088-042323-1		
Field QC Blanks	EPD-PB-FB-01-042123-1 EPD-PB-MB-01-042123-1		

**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, EPA Region 5, 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), 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 based on the findings of this validation effort. .

**Data completeness:**

Within Criteria	Exceedance/Notes
Y	The level 2 package was reviewed.  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 (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (EDD).

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

A unique sample ID not provided for LCSD. Unique IDs are needed to keep from overwriting QC sample IDs when EDDs are uploaded to the client database. The LCSD ID (in the Samp\_No and Lab\_Samp\_No fields) in the EDD was manually revised to match the laboratory report.

The extraction date information in the EDD did not match the laboratory report or was blank. The project management team confirmed that this information was not needed in the EDD; therefore, all extraction date information except the field header was deleted from the EDD.

The sample analysis time was reported as a default value of 12 AM or 00:00 hours for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD was not required for the EDD; therefore, this value was not manually revised.

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

Within Criteria	Exceedance/Notes
Y	None.

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Field blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

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

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	None.

**LCs/LCSDs:**

Within Criteria	Exceedance/Notes
Y	The laboratory report and the EDD have one or more minor discrepancies in the LCS/LCSD results (+/- 1 ug) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualification was applied.

**Sample dilutions:**

Within Criteria	Exceedance/Notes
NA	

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

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

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and at the reporting limit (flagged U) in the EDD and attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [specify]:**

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.
NF	The tentatively identified compound was manually searched for but was not found in the sample.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
EUROFINS ANALYTICS REPORT NO. B115-180

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-PB-BKBA-01-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-BKBA-02-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-06-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-07-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-08-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-088-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-09-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-10-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-11-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-12-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-14-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-DW-C-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			ppm	0.0090	U
EPD-PB-FB-01-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			ug	2	U
EPD-PB-MB-01-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			ug	2	U
EPD-PB-OD-01-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-02-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-03-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-04-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-05-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-055-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-06-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-07-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-UW-G-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			ppm	0.0090	U
EPD-PB-WA-01-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-02-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-03-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-04-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-05-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-06-042323-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	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.	DTN 1924c	Laboratory	Eurofins Analytics, LLC, Ashland VA
Laboratory Report No.	B115-181	Analyses	
Analyses	2-Ethylhexyl Acrylate and n-Butyl Acrylate analysis by a proprietary method IHGC-P029 (IH9805) GC/FID		
Samples and Matrix	Eight (8) Air Samples including one field blank.		
Collection Date(s)	04/23/2023		
Field Duplicate Pairs	NA		
Field QC Blanks	EPD-ST-FB-042323-1		

**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, EPA Region 5, 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), 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 based on the findings of this validation effort. .

**Data completeness:**

Within Criteria	Exceedance/Notes
Y	<p>The level 4 package was reviewed. A revised COC was issued due to incorrect sample ID and the lab revised the data package.</p> <p>The laboratory report included the following note: “The method reference, Rohm &amp; Haas IH9805 is referenced to the AIHA certification as IHGC-P029.” The method is referred to by the abbreviation “Rohm &amp; Haas IH9805” or “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 (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (EDD).</p>

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

A unique sample ID not provided for LCSD. Unique IDs are needed to keep from overwriting QC sample IDs when EDDs are uploaded to the client database. The LCSD ID (in the Samp\_No and Lab\_Samp\_No fields) in the EDD was manually revised to match the laboratory report.

The extraction date information in the EDD did not match the laboratory report or was blank. The project management team confirmed that this information was not needed in the EDD; therefore, all extraction date information except the field header was deleted from the EDD.

The sample analysis time was reported as a default value of 12 AM or 00:00 hours for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD was not required for the EDD; therefore, this value was not manually revised.

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

Within Criteria	Exceedance/Notes
Y	None.

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Field blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

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

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	None.

**LCs/LCSDs:**

Within Criteria	Exceedance/Notes
Y	LCS was analyzed at a 10X dilution. The laboratory report and the EDD have one or more minor discrepancies in the LCS/LCSD results (+/- 1 ug) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualification was applied.

**Sample dilutions:**

Within Criteria	Exceedance/Notes
NA	

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	



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

**MDLs/RLs:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
Y	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and at the reporting limit (flagged U) in the EDD and attached qualified data table.

**Tentatively identified compounds:**

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

**Other [specify]:**

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

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

**Overall Qualifications:**

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

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
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.
NF	The tentatively identified compound was manually searched for but was not found in the sample.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
EUROFINS ANALYTICS REPORT NO. B115-181

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-C-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			0.015 ppm	0.015	U
EPD-ST-8H-DW-C-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.010	U
EPD-ST-8H-UW-G-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-UW-G-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.010	U
EPD-ST-8H-WA-01-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			0.015 ppm	0.015	U
EPD-ST-8H-WA-01-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.010	U
EPD-ST-8H-WA-02-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.016	U			0.016 ppm	0.016	U
EPD-ST-8H-WA-02-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.011	U			0.011 ppm	0.011	U
EPD-ST-8H-WA-03-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-WA-03-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-ST-8H-WA-05-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			0.015 ppm	0.015	U
EPD-ST-8H-WA-05-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.010	U
EPD-ST-8H-WA-06-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			0.015 ppm	0.015	U
EPD-ST-8H-WA-06-042323-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.010	U
EPD-ST-FB-042323-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U			2.8 ug	2.8	U
EPD-ST-FB-042323-1	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.	DTN 1924d	Laboratory	Eurofins Analytics, LLC, Ashland VA
Laboratory Report No.	B115-182		
Analyses	n-Butyl Acrylate analysis by NIOSH Method 1450M Modified GC/FID		
Samples and Matrix	Twenty Nine (29) Air Samples including two field duplicates and two field blanks		
Collection Date(s)	04/22/2023		
Field Duplicate Pairs	EPD-PB-OD-022-042223-1/EPD-PB-OD-02-042223-1 EPD-PB-OD-044-042223-1/EPD-PB-OD-04-042223-1		
Field QC Blanks	EPD-PB-MB-01-042323-1 EPD-PB-FB-01-042323-1		

**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, EPA Region 5, 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), 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 based on the findings of this validation effort. .

**Data completeness:**

Within Criteria	Exceedance/Notes
Y	The level 2 package was reviewed.  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 (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (EDD).

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

A unique sample ID not provided for LCSD. Unique IDs are needed to keep from overwriting QC sample IDs when EDDs are uploaded to the client database. The LCSD ID (in the Samp\_No and Lab\_Samp\_No fields) in the EDD was manually revised to match the laboratory report.

The extraction date information in the EDD did not match the laboratory report or was blank. The project management team confirmed that this information was not needed in the EDD; therefore, all extraction date information except the field header was deleted from the EDD.

The sample analysis time was reported as a default value of 12 AM or 00:00 hours for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD was not required for the EDD; therefore, this value was not manually revised.

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

Within Criteria	Exceedance/Notes
Y	None.

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Field blanks:**

Within Criteria	Exceedance/Notes
Y	None.

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

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

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	None.

**LCs/LCSDs:**

Within Criteria	Exceedance/Notes
Y	The laboratory report and the EDD have one or more minor discrepancies in the LCS/LCSD results (+/- 1 ug) and/or percent recoveries (+/- 1%) that were verified with the laboratory to be a significant figures issue. No qualification was applied.

**Sample dilutions:**

Within Criteria	Exceedance/Notes
NA	

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
NA	

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

**MDLs/RLs:**

Within Criteria	Exceedance/Notes
Y	Method detection limits were not reported. Non-detect sample results are reported as less than the reporting limit in the laboratory report and at the reporting limit (flagged U) in the EDD and attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [specify]:**

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.
NF	The tentatively identified compound was manually searched for but was not found in the sample.

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EUROFINS ANALYTICS REPORT NO. B115-182

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-PB-BKBA-01-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-BKBA-02-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-CM-06-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-CM-07-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-08-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-09-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-10-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U			0.0089 ppm	0.0089	U
EPD-PB-CM-11-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U			0.0089 ppm	0.0089	U
EPD-PB-CM-12-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-CM-14-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-DW-A-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-FB-01-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-MB-01-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-OD-01-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-02-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-022-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-03-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U			0.0089 ppm	0.0089	U
EPD-PB-OD-04-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-044-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-05-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-06-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-07-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-UW-E-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-WA-01-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-WA-02-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-03-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-04-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-WA-05-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.0090	U
EPD-PB-WA-06-042223-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U