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June 28, 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. 1902**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting these data validation reports for 110 air samples (including nine field duplicate air samples and six field blank samples collected at the East Palestine site. The samples were collected on April 7-9, 2023, and were analyzed for acrylates by Eurofins Analytics, LLC in their Ashland, Virginia laboratory. The final laboratory data package was received on June 8, 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), 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 received from the laboratory.

If you have any questions regarding these data validation reports, please feel free to contact me via the project Tetra Tech project manager.

Sincerely,

**Deb Kutsal** Digitally signed by Deb Kutsal  
Date: 2023.06.28 16:09:01  
-07'00'

Environmental Chemist

Enclosure

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

**ATTACHMENT**

**DATA VALIDATION REPORTS  
EUROFINS ANALYTICS, LLC REPORT NOS. B100-105, B102-012,  
B102-015, AND B102-019**

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

Site Name	East Palestine Site	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1902a	Laboratory	Eurofins Analytics, LLC, Ashland, VA
Laboratory Report No.	B100-105	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029	
Analyses	Nineteen air samples (including one field blank sample)		
Samples and Matrix	04/07/2023		
Collection Date(s)	None		
Field Duplicate Pairs	EPD-ST-FB-040723-1		
Field QC Blanks			

**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 qualification or rejection of results was required for this data package. The results may be used as received from the laboratory.

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

**Data completeness:**

Within Criteria	Exceedance/Notes
N	<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>Level II laboratory report does not include the required QC results; thus, the Level IV report was used for this data validation.</p> <p>The results for the field blank are reported in units of micrograms (µg) while the other sample results are 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> <p>A unique sample ID is not provided for LCSD in the laboratory EDD. Unique IDs are needed to keep from overwriting QC sample IDs when validated EDDs are uploaded to the client database. The LCSD ID (in the Samp_No and Lab_Samp_No fields) in the validated EDD were manually revised to match the laboratory report.</p> <p>The extraction date information in the laboratory EDD did not match the laboratory report or was blank. The client project management team confirmed that this information is not needed in the validated EDD; therefore, all extraction date information except the field header was deleted from the validated EDD.</p> <p>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 is not required for the validated EDD; therefore, this value was left as is.</p>

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

Within Criteria	Exceedance/Notes
Y	

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

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

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
NA	

**LCSS/LCSDs:**

Within Criteria	Exceedance/Notes
Y	

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

**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 are not provided in the laboratory report or laboratory EDD. Non-detect sample results are reported as less than the reporting limit in the laboratory report in the laboratory report and at the reporting limit and flagged U in the laboratory EDD, validated EDD, and attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [NA]:**

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.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
EUROFINS ANALYTICS, LLC REPORT NO. B100-105

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-C-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-DW-C-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-8H-WA-04-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.013	U			0.013 ppm	0.013	U
EPD-ST-8H-WA-04-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-DW-C-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.030	U
EPD-ST-DW-C-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-DW-C-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.032	U			0.032 ppm	0.032	U
EPD-ST-DW-C-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U
EPD-ST-FB-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U			2.8 ug	2.8	U
EPD-ST-FB-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	1.3	U			1.3 ug	1.3	U
EPD-ST-UW-G-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U			0.029 ppm	0.029	U
EPD-ST-UW-G-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-UW-G-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-UW-G-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-WA-01-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-WA-01-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-WA-01-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U			0.031 ppm	0.031	U
EPD-ST-WA-01-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U
EPD-ST-WA-02-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.027	U			0.027 ppm	0.027	U
EPD-ST-WA-02-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.018	U			0.018 ppm	0.018	U
EPD-ST-WA-02-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.029	U			0.029 ppm	0.029	U
EPD-ST-WA-02-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	U
EPD-ST-WA-03-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-WA-03-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-WA-03-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.031	U			0.031 ppm	0.031	U
EPD-ST-WA-03-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.021	U			0.021 ppm	0.021	U
EPD-ST-WA-04-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.028	U			0.028 ppm	0.028	U
EPD-ST-WA-04-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	U
EPD-ST-WA-04-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.028	U			0.028 ppm	0.028	U
EPD-ST-WA-04-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.019	U			0.019 ppm	0.019	U
EPD-ST-WA-05-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-WA-05-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-WA-05-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-WA-05-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-WA-06-040723-1	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-WA-06-040723-1	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U
EPD-ST-WA-06-040723-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.03	U			0.03 ppm	0.03	U
EPD-ST-WA-06-040723-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.02	U			0.02 ppm	0.02	U



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

Site Name	East Palestine Site	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1902b	Laboratory	Eurofins Analytics, LLC/Ashland, VA
Laboratory Report No.	B102-012	n-Butyl acrylate by National Institute for Occupational Safety and Health (NIOSH) Method 1450M	
Analyses	29 air samples including four field duplicate air samples		
Samples and Matrix	04/08/2023 – 04/9/2023		
Collection Date(s)	EPD-PB-OD-07-040823-1/ EPD-PB-OD-77-040823-1		
Field Duplicate Pairs	EPD-PB-CM-09-040823-1/ EPD-PB-CM-99-040823-1		
	EPD-PB-CM-10-040823-1/ EPD-PB-CM-100-040823-1		
	EPD-PB-CM-11-040823-1/EPD-PB-CM-111-040823-1		
Field QC Blanks	None		

**INTRODUCTION**

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the Tetra Tech *Quality Assurance Project Plan East Palestine Train Derailment Site East Palestine, Columbiana County, Ohio, Revision 3* (April 2023), the Tetra Tech *Quality Assurance Project Plan, Superfund Technical Assessment and Response Team (START V), EPA Region 5, Revision 4* (August 2022), and the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

**OVERALL EVALUATION**

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

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

**Data completeness:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	<p>The results for the samples were reported in units of micrograms (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> <p>A unique sample ID is not provided for LCSD in the laboratory EDD. Unique sample 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 validated EDD was manually revised to match the laboratory report.</p> <p>The extraction date information in the laboratory EDD does not match the laboratory report or was blank. The client project management team confirmed that this information is not needed in the validated EDD; therefore, all extraction date information except the field header was deleted from the validated EDD.</p> <p>The sample analysis time was reported as a default value of 12 AM or 00:00 hour for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD is not required for the validated EDD; therefore, this value was left as is.</p> <p>A revised COC was submitted to the laboratory with the corrected start and end times for sample EPD-PB-CM-08-040823-1. The total minutes run by the pump are unaffected. Both COC forms are included in the laboratory report.</p>

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

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

**Method blanks:**

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

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

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	

**LCSS/LCSDs:**

Within Criteria	Exceedance/Notes
Y	

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

**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. 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 laboratory EDD and, therefore, in the attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [NA]:**

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.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
EUROFINS ANALYTICS, LLC REPORT NO. B102-012

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-PB-BKBA-01-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-BKBA-02-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-06-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-07-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-08-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-09-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-100-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-10-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-11-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-111-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-12-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-14-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-CM-99-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-DW-D-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-01-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-02-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-03-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-04-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-05-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-06-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-07-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-OD-77-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-UW-H-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-01-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-02-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-03-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-04-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-05-040823-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			ppm	0.0091	U
EPD-PB-WA-06-040823-1	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	East Palestine Site	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1902c	Laboratory	Eurofins Analytics, LLC, Ashland, VA
Laboratory Report No.	B102-015	n-Butyl acrylate by National Institute for Occupational Safety and Health (NIOSH) Method 1450M	
Analyses	29 air samples including two field duplicate air samples and one field blank sample		
Samples and Matrix	04/10/2023		
Collection Date(s)	EPD-PB-WA-04-041023-1/ EPD-PB-WA-044-041023-1		
Field Duplicate Pairs	EPD-PB-WA-06-041023-1/ EPD-PB-WA-066-041023-1		
Field QC Blanks	EPD-PB-FB-01-041023-1		

**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 qualification or rejection of results was required for this data package. The results may be used as received from the laboratory.

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

**Data completeness:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N	<p>Level II data package does not have all the required QC results; thus the Level IV package was used for this data validation effort. 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 laboratory electronic data deliverable (EDD).</p> <p>A unique sample ID is not provided for LCSD in the laboratory. Unique sample 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 validated EDD was manually revised to match the laboratory report.</p> <p>The extraction date information in the laboratory EDD does not match the laboratory report or was blank. The client project management team confirmed that this information is not needed in the validated EDD; therefore, all extraction date information except the field header was deleted from the validated EDD.</p> <p>The sample analysis time was reported as a default value of 12 AM or 00:00 hour for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD is not required for the validated EDD; therefore, this value was left as is.</p>

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

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

**Method blanks:**

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



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

**Field blanks:**

Within Criteria	Exceedance/Notes
NA	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
NA	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
NA	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
NA	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
N	The laboratory report and laboratory EDD have minor discrepancies in the LCS result that were verified with the laboratory to be a result of a discrepancy in significant figures. No qualifications were applied.

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

**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. 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 laboratory EDD and, therefore, in the attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [NA]:**

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.

E PALESTINE SITE - ER AIR ANALYTICAL RESULTS SUMMARY  
 EUROFINs ANALYTICS, LLC REPORT NO. B102-015

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-PB-BKBA-01-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-BKBA-02-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-06-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-07-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-08-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-09-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-10-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-11-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-12-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-14-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-DW-F-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-FB-01-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-MB-01-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-OD-01-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-02-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-03-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-04-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-05-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-06-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-07-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-UW-B-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-01-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-02-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-03-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-04-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-044-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-05-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-06-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-066-041023-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U

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

Site Name	East Palestine Site	TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1902d	Laboratory	Eurofins Analytics, LLC, Ashland, VA
Laboratory Report No.	B102-019	n-Butyl acrylate by National Institute for Occupational Safety and Health (NIOSH) Method 1450M	
Analyses	33 air samples including three field duplicate air samples and four field blank samples		
Samples and Matrix	04/9/2023		
Collection Date(s)	EPD-PB-BKBA-022-040923-2/ EPD-PB-BKBA-02-040923-2 EPD-PB-CM-066-040923-2/ EPD-PB-CM-06-040923-2 EPD-PB-BKBA-011-040923-2/ EPD-PB-BKBA-01-040923-2		
Field Duplicate Pairs	EPD-PB-FB-03-040923-2 EPD-PB-FB-04-040923-2 EPD-PB-MB-03-040923-2 EPD-PB-MB-02-040923-2		
Field QC Blanks			

**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 qualification or rejection of results was required for this data package. The results may be used as received from the laboratory.

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

**Data completeness:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
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, 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> <p>A unique sample ID is not provided for the LCSD. Unique sample 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 validated EDD was manually revised to match the laboratory report.</p> <p>The extraction date information in the laboratory EDD does not match the laboratory report or was blank. The client project management team confirmed that this information is not needed in the validated EDD; therefore, all extraction date information except the field header was deleted from the validated EDD.</p> <p>The sample analysis time was reported as a default value of 12 AM or 00:00 hour for the LCSD in the analysis date field. The analysis date was correct. The sample analysis time for the LCSD is not required for the validated EDD; therefore, this value was left as is.</p>

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

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

**Method blanks:**

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

**Field blanks:**

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

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

**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	

**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 laboratory EDD, and therefore, in the attached qualified data table.

**Tentatively identified compounds:**

Within Criteria	Exceedance/Notes
NA	

**Other [NA]:**

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.
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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. B102-019

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-PB-BKBA-01-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-BKBA-011-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-BKBA-02-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-BKBA-022-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-CM-06-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-066-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-07-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-08-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-09-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-CM-10-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-CM-11-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-CM-12-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-CM-14-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-DW-F-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-FB-03-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-FB-04-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-MB-02-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-MB-03-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U			2 ug	2	U
EPD-PB-OD-01-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-02-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-03-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-04-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-05-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-06-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-OD-07-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-UW-B-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-PB-UW-C-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-01-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-02-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-03-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-04-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-05-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U
EPD-PB-WA-06-040923-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U			0.0091 ppm	0.0091	U