



We are in the process of ensuring this document is accessible to all audiences. If you need assistance accessing this document, or any material on the EPA East Palestine, Ohio emergency response web pages, please contact the Region 5 Public Information Officer on-call at: R5\_EastPalestine@epa.gov

July 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 Report  
E Palestine Site - ER  
EPA Contract No.: 68HE0519D0005  
Task Order/Task Order Line Item No.: 68HE0520F0032/0001EB201  
Document Tracking No. 1967**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for thirty-nine air samples (including three field duplicate and three field blank samples) collected at the E Palestine ER. The samples were collected on April 24 and April 26, 2023, and were analyzed for acrylates (including 2-Ethylhexyl acrylate and n-Butyl acrylate or only n-Butyl acrylate) by Eurofins Analytics, LLC at their Ashland, Virginia laboratory. The final laboratory data packages were received on June 1 and June 5, 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), 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 based on the findings of this validation effort.

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

Sincerely,

**Tom  
Hahne** Digitally signed  
by Tom Hahne  
Date: 2023.07.28  
15:37:18 -05'00'

Quality Reviewer

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 REPORT  
EUROFINS ANALYTICS REPORT NO. B116-027 AND B118-246**

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

<b>Site Name</b>	E Palestine Site - ER	<b>TO/TOLIN No.</b>	68HE0520F0032/0001EB201
<b>Document Tracking No.</b>	1967a	<b>Laboratory</b>	Eurofins Analytics, LLC, Ashland VA
<b>Laboratory Report No.</b>	B116-027		
<b>Analyses</b>	2-Ethylhexyl acrylate and n-butyl acrylate by laboratory standard operating procedure (SOP) IHGC-P029		
<b>Samples and Matrix</b>	Ten air samples, including one field blank and one duplicate pair		
<b>Collection Date(s)</b>	4/24/2023		
<b>Field Duplicate Pairs</b>	EPD-ST-8H-WA-03-042423-2/EPD-ST-8H-WA-033-042423-2		
<b>Field QC Blanks</b>	EPD-ST-FB-042423-2		

**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, 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 results for the field blank were reported in units of micrograms (<math>\mu\text{g}</math>) while the other sample results were reported in units of <math>\mu\text{g}</math>, milligram per cubic meter (<math>\text{mg}/\text{m}^3</math>), and parts per million (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (EDD).</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” interchangeably.</p>

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

	<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 was not required for the EDD; therefore, this value was not manually revised.</p> <p>The extraction date and time was not reported for the samples. The extraction date and time was not required for the EDD; therefore, this value was not manually revised.</p>
--	--

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

Within Criteria	Exceedance/Notes
Y	

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

**Field blanks:**

Within Criteria	Exceedance/Notes
Y	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
N/A	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
N/A	

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

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
N/A	

**Field duplicates:**

Within Criteria	Exceedance/Notes
Y	

**LCSs/LCSDs:**

Within Criteria	Exceedance/Notes
N	<p>Recoveries for 2-Ethylhexyl acrylate exceeded laboratory control limits in LCSD IHG230426C 10X. All associated sample results are non-detect; therefore, no results were qualified.</p> <p>A unique sample ID was not provided for the LCSD in the EDD. Unique IDs are needed to keep from overwriting QC sample IDs when EDDs are uploaded to the client database. In addition, the LCS was identified as “LCS IHG230426C 10X” in the Samp_no field and “LCS IHG230” in the Lab_Samp_No field in the EDD, which did not match the laboratory report. The LCSD and LCS IDs (in the Samp_No and Lab_Samp_No fields) in the EDD were manually revised to match the laboratory report.</p>

**Sample dilutions:**

Within Criteria	Exceedance/Notes
N/A	

**Re-extraction and reanalysis:**

Within Criteria	Exceedance/Notes
N/A	

**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
N/A	

**Other [None]:**

Within Criteria	Exceedance/Notes
N/A	

**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. B116-027

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-ST-8H-DW-C-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-DW-C-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-8H-UW-G-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			0.015 ppm	0.015	U
EPD-ST-8H-UW-G-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.01	U
EPD-ST-8H-WA-01-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-WA-01-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-8H-WA-02-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-WA-02-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-8H-WA-03-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U			0.015 ppm	0.015	U
EPD-ST-8H-WA-03-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U			0.01 ppm	0.01	U
EPD-ST-8H-WA-033-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-WA-033-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-8H-WA-04-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.013	U			0.013 ppm	0.013	U
EPD-ST-8H-WA-04-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-8H-WA-05-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.018	U			0.018 ppm	0.018	U
EPD-ST-8H-WA-05-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.012	U			0.012 ppm	0.012	U
EPD-ST-8H-WA-06-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U			0.014 ppm	0.014	U
EPD-ST-8H-WA-06-042423-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U			0.009 ppm	0.009	U
EPD-ST-FB-042423-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U			2.8 ug	2.8	U
EPD-ST-FB-042423-2	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**

<b>Site Name</b>	E Palestine Site - ER	<b>TO/TOLIN No.</b>	68HE0520F0032/0001EB201
<b>Document Tracking No.</b>	1967b		
<b>Laboratory Report No.</b>	B118-246	<b>Laboratory</b>	Eurofins Analytics, LLC, Ashland VA
<b>Analyses</b>	n-Butyl Acrylate by NIOSH Method 1450M		
<b>Samples and Matrix</b>	Twenty-nine samples including two field blanks and two duplicate pairs		
<b>Collection Date(s)</b>	4/26/2023		
<b>Field Duplicate Pairs</b>	EPD-PB-WA-044-042623-1/EPD-PB-WA-04-042623-1 EPD-PB-WA-066-042623-1/EPD-PB-WA-06-042623-1		
<b>Field QC Blanks</b>	EPD-PB-FB-01-042623-1 EPD-PB-MB-01-042623-1		

**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 results for the field blanks were reported in units of micrograms (<math>\mu\text{g}</math>) while the other sample results were reported in units of <math>\mu\text{g}</math>, milligram per cubic meter (<math>\text{mg}/\text{m}^3</math>), and parts per million (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (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 was not required for the EDD; therefore, this value was not manually revised.</p>



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

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

Within Criteria	Exceedance/Notes
Y	

**Method blanks:**

Within Criteria	Exceedance/Notes
Y	

**Field blanks:**

Within Criteria	Exceedance/Notes
Y	

**Surrogates and labeled compounds:**

Within Criteria	Exceedance/Notes
N/A	

**MS/MSDs:**

Within Criteria	Exceedance/Notes
N/A	

**Laboratory duplicates:**

Within Criteria	Exceedance/Notes
N/A	

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

**Field duplicates:**

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

**LCSs/LCSDs:**

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

**Sample dilutions:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N/A	

**Re-extraction and reanalysis:**

<b>Within Criteria</b>	<b>Exceedance/Notes</b>
N/A	

**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>
N/A	

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

**Other [None]:**

Within Criteria	Exceedance/Notes
N/A	

**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. B118-246

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab_Qual	MDL	RL	Units	VAL_Result	VAL_Qual
EPD-PB-BKBA-01-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-BKBA-02-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-06-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-07-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-08-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-09-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-10-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-11-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-12-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-CM-14-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-DW-B-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-FB-01-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U		2	ug	2	U
EPD-PB-MB-01-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U		2	ug	2	U
EPD-PB-OD-01-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-OD-02-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-OD-03-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-OD-04-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-OD-05-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-OD-06-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-OD-07-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-UW-F-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-01-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-02-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-03-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-04-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-044-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-05-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-06-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U
EPD-PB-WA-066-042623-1	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U		0.0091	ppm	0.0091	U