

July 30, 2023

Mr. Josh Peters
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 5
Superfund and Emergency Management Division
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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. 1964

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for forty-two air samples which included five field duplicate air samples and five blank samples collected at the E Palestine Site. The samples were collected on April 22-23, 2023, and were analyzed for acrylates by Eurofins Analytics, LLC in 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 these data packages. 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 Digitally signed by Tom Hahne Date:

Hahne 2023.07.31 09:53:33-05'00'

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 NOS. B115-185 AND B115-186

Site Name E Palestine Site - ER		TO/TOLIN No.	68HE0520F0032/0001EB201
Document Tracking No.	1964a	10/10LIN No.	08HEU32UFUU32/UUU1EB2U1
Laboratory Report No.	B115-185	Laboratory	Eurofins Analytics, LLC, Ashland VA
Analyses	lyses n-Butyl acrylate by National Institute for Occupational Safety and Health (NIOSH) Method 1450M		ealth (NIOSH) Method 1450M
Samples and Matrix	Thirty-two air samples including three field duplicate air samples and four blank samples		
Collection Date(s)	ection Date(s) 4/22/2023		
Field Developte Daine	EPD-PB-WA-03-042223-2/ EPD-PB-WA-033-042223-2; EPD-PB-WA-06-042223-2/ EPD-PB-WA-066-042223-2; and		
Field Duplicate Pairs	EPD-PB-CM-07-042223-2. EPD-PB-CM-077-042223-2		
Field QC Blanks	ld QC Blanks EPD-PB-MB-03-042223-2, EPD-PB-MB-02-042223-2, EPD-PB-FB-03-042223-2, and EPD-PB-FB-02-042223-2		042223-2, and EPD-PB-FB-02-042223-2

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

OVERALL EVALUATION

No rejections of results were required for this data package. The results may be used as qualified based on this validation effort.



Data completeness:

Within Criteria	Exceedance/Notes
	The results for the field blanks were reported in units of micrograms (μ g) while the other sample results were reported in units of μ g, milligram per cubic meter (m g/ m ³), and parts per million (ppm) (volume) in the laboratory report and only ppm in the electronic data deliverable (EDD). The data appears appropriately reported.
	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. The LCSD ID (in the Samp_No and Lab_Samp_No fields) in the EDD was manually revised to match the laboratory report.
Y	The extraction date information in the EDD did not match the laboratory report. 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.

Method blanks:

Within Criteria	Fyreedance/Notes
Υ	

Field blanks:

Within Criteria	Exceedance/Notes
Υ	



Surrogates ar	d labeled	l compo	ounds:
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Exceedance/Notes
Exceedance/Notes
Exceedance/Notes
Exceedance/Notes
Exceedance/Notes
Exceedance/Notes

Exceedance/Notes



Within

Criteria NA

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes	
Υ	Method detection limit (MDL) values were not reported in the laboratory report or EDD. 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 [Level IV Data Package]:

-	• •
Within	Even adams a / Notas
Criteria	Exceedance/Notes
Υ	The Level II and Level IV data packages had no conflicting data results.

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 REPORT NO. B115-185

Sample_ID	Method	CAS#	Analyte	Lab_Resul	Lab Qualifier	MDL RL	Units	VAL_Resul V	AL_Qual
EPD-PB-WA-033-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-WA-066-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-PB-CM-077-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0088	U	0.0088	ppm	0.0088	U
EPD-PB-MB-03-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U	2	ug	2	U
EPD-PB-MB-02-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U	2	ug	2	U
EPD-PB-FB-03-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U	2	ug	2	U
EPD-PB-FB-02-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	2	U	2	ug	2	U
EPD-PB-DW-C-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-UW-G-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-BKBA-01-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0088	U	0.0088	ppm	0.0088	U
EPD-PB-CM-06-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0088	U	0.0088	ppm	0.0088	U
EPD-PB-BKBA-02-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-OD-06-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-WA-05-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0088	U	0.0088	ppm	0.0088	U
EPD-PB-OD-05-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-CM-07-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0088	U	0.0088	ppm	0.0088	U
EPD-PB-CM-08-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0088	U	0.0088	ppm	0.0088	U
EPD-PB-OD-01-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-WA-03-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-OD-02-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-PB-WA-06-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-PB-OD-04-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0089	U	0.0089	ppm	0.0089	U
EPD-PB-WA-02-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-PB-CM-14-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.009	U	0.009	ppm	0.009	U
EPD-PB-WA-04-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-WA-01-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-OD-03-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-CM-12-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-CM-11-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-CM-10-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-CM-09-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U
EPD-PB-OD-07-042223-2	NIOSH Method 1450M	141-32-2	n-Butyl acrylate	0.0091	U	0.0091	ppm	0.0091	U

Site Name	E Palestine Site - ER		TO/TOLIN No.	68HE0520F0032/0001EB201	
Document Tracking No.	1964b		10/10LIN NO.	00010032010032/000168201	
Laboratory Report No.	B115-186		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	Ten air samples including two field duplicates and one field blank				
Collection Date(s)	4/22/2023				
Field Duplicate Pairs	EPD-ST-8H-WA-02-042323-2/ EPD-ST-8H-WA-22-042323-2				
Field QC Blanks	EPD-ST-FB-03-042223-2				

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

OVERALL EVALUATION

No rejection of data 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
	A revised COC was submitted to the laboratory with the corrected average flow rate for sample EPD-ST-8H-WA-06-042323-2. The corrected and original COC are both included in the laboratory report and the information from the corrected COC was used in the laboratory report.
	The results for the field blanks were reported in units of micrograms (μ g) while the other sample results were reported in units of μ g, milligram per cubic meter (m g/ m ³), and parts per million (p pm) (volume) in the laboratory report and only p pm in the electronic data deliverable (EDD). The data appears appropriately reported.
Y	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. The LCSD ID (in the Samp_No and Lab_Samp_No fields) in the EDD was manually revised to match the laboratory report.
	The laboratory report included the following note: "The method reference, Rohm & Haas IH9805 is referenced to the AIHA certification as IHGC-P029." The method is referred to by the abbreviation "Rohm & Haas IH9805" or "IHGC-P029" interchangeably.
	The extraction date information in the EDD did not match the laboratory report. 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
Υ	



Metl	hod	blan	ks:
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Within Criteria	Exceedance/Notes
Υ	

Field blanks:

Within Criteria	Exceedance/Notes
Υ	

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:

	ithin iteria	Exceedance/Notes
·	Υ	



LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Υ	

Sample dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes							
Υ	Method detection limit (MDL) values were not reported in the laboratory report or EDD. 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 [Level IV Data Package]:

Within Criteria	Exceedance/Notes					
Υ	The Level II and Level IV data packages had no conflicting data results.					



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 REPORT NO. B115-186

Sample_ID	Method	CAS#	Analyte	Lab_Result	Lab Qualifier	MDL RL		Units	VAL_Res(\	/AL_Qual
EPD-ST-FB-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	2.8	U		2.8	ug	2.8	U
EPD-ST-FB-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	1.3	U		1.3	ug	1.3	U
EPD-ST-8H-WA-02-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U		0.014	ppm	0.014	U
EPD-ST-8H-WA-02-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U		0.01	ppm	0.01	U
EPD-ST-8H-WA-06-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U		0.014	ppm	0.014	U
EPD-ST-8H-WA-06-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U		0.009	ppm	0.009	U
EPD-ST-8H-WA-03-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U		0.014	ppm	0.014	U
EPD-ST-8H-WA-03-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U		0.009	ppm	0.009	U
EPD-ST-8H-UW-G-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U		0.014	ppm	0.014	U
EPD-ST-8H-UW-G-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U		0.01	ppm	0.01	U
EPD-ST-8H-WA-05-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U		0.014	ppm	0.014	U
EPD-ST-8H-WA-05-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U		0.01	ppm	0.01	U
EPD-ST-8H-WA-22-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.012	U		0.012	ppm	0.012	U
EPD-ST-8H-WA-22-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.008	U		0.008	ppm	0.008	U
EPD-ST-8H-WA-01-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.014	U		0.014	ppm	0.014	U
EPD-ST-8H-WA-01-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U		0.01	ppm	0.01	U
EPD-ST-8H-WA-04-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.013	U		0.013	ppm	0.013	U
EPD-ST-8H-WA-04-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.009	U		0.009	ppm	0.009	U
EPD-ST-8H-DW-C-042323-2	IHGC-P029	103-11-7	2-Ethylhexyl acrylate	0.015	U		0.015	ppm	0.015	U
EPD-ST-8H-DW-C-042323-2	IHGC-P029	141-32-2	n-Butyl acrylate	0.01	U		0.01	ppm	0.01	U