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R5_EastPalestine@epa.gov

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. 1923**

Dear Mr. Peters:

Tetra Tech, Inc. (Tetra Tech) is submitting these data validation reports for one hundred and five (105) samples including nine field duplicates and thirteen field blanks were collected at the E Palestine Site. The samples were collected on April 20 and 21, 2023, and were analyzed for either both 2-Ethylhexyl Acrylate and n-Butyl Acrylate or only for n-Butyl Acrylate at their Ashland, Virginia laboratory. The final laboratory data packages were received on June 12, 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 based on the findings of this validation effort.

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

Sincerely,

Tom Hahne
Quality Reviewer

Digitally signed
by Tom Hahne
Date:
2023.07.06
04:39:09 -05'00'

Enclosure

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

ATTACHMENT

**DATA VALIDATION REPORTS
EUROFINS ANALYTICS, LLC REPORT NOS. B114-140, B114-149,
B114-150, AND B114-151**

**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 1923a | Laboratory | Eurofins Analytics, LLC, Ashland VA |
| Laboratory Report No. | B114-140 | | |
| Analyses | n-Butyl Acrylate analysis by NIOSH Method 1450M Modified GC/FID | | |
| Samples and Matrix | Thirty two (32) Air Samples including three field duplicates and four field blanks. | | |
| Collection Date(s) | 04/20/2023 | | |
| Field Duplicate Pairs | EPD-PB-CM-08-042023-2/EPD-PB-CM-088-042023-2 EPD-PB-CM-12-042023-2/EPD-PB-CM-122-042023-2 EPD-PB-WA-02-042023-2/EPD-PB-WA-022-042023-2 | | |
| Field QC Blanks | EPD-PB-FB-02-042023-2 EPD-PB-FB-03-042023-2 EPD-PB-MB-02-042023-2 EPD-PB-MB-03-042023-2 | | |

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 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 4 package was reviewed. |

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

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).

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 | Method blank samples LMB IHG230424A had detections of n-butyl acrylate below the RL. Associated sample results were non-detect for this analyte. No data were qualified. |

Field blanks:

| Within Criteria | Exceedance/Notes |
|------------------------|-------------------------|
| Y | None. |

**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 | The LCS and LCSD recoverd above QC limits for n-Butyl acrylate. No qualification was made as all affected sample results were non detects and therefore not impacted.. |

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. B114-140

| Sample_ID | Method | CAS# | Analyte | Lab_Result | Lab_Qual | MDL | RL | Units | VAL_Result | VAL_Qual |
|-------------------------|--------------------|----------|------------------|------------|----------|-----|--------|-------|------------|----------|
| EPD-PB-BKBA-01-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-BKBA-02-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-06-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-07-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-08-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-088-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-09-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-10-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-11-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-12-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-122-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-CM-14-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-DW-A-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-FB-02-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | 2 | ug | 2 | U |
| EPD-PB-FB-03-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | 2 | ug | 2 | U |
| EPD-PB-MB-02-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | 2 | ug | 2 | U |
| EPD-PB-MB-03-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | 2 | ug | 2 | U |
| EPD-PB-OD-01-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-OD-02-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-OD-03-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-OD-04-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-OD-05-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-OD-06-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-OD-07-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-UW-E-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-01-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-02-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-022-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-03-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-04-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-05-042023-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | 0.0091 | ppm | 0.0091 | U |
| EPD-PB-WA-06-042023-2 | 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 | E Palestine Site - ER | TO/TOLIN No. | 68HE0520F0032/0001EB201 |
| Document Tracking No. | DTN 1923b | Laboratory | Eurofins Analytics, LLC, Ashland VA |
| Laboratory Report No. | B114-149 | | |
| Analyses | n-Butyl Acrylate analysis by NIOSH Method 1450M Modified GC/FID | | |
| Samples and Matrix | Thirty two (32) Air Samples including three field duplicates and four field blanks. | | |
| Collection Date(s) | 04/21/2023 | | |
| Field Duplicate Pairs | EPD-PB-BKBA-02-042123-2/EPD-PB-BKBA-022-042123-2 EPD-PB-CM-09-042123-2/EPD-PB-CM-099-042123-2 EPD-PB-WA-03-042123-2/EPD-PB-WA-033-042123-2 | | |
| Field QC Blanks | EPD-PB-MB-03-042123-2 EPD-PB-MB-02-042123-2 EPD-PB-FB-02-042123-2 EPD-PB-FB-03-042123-2 | | |

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 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 4 package was reviewed. |

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

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).

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. |

**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 | None. |

LCSS/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 | |

**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. B114-149

| Sample_ID | Method | CAS# | Analyte | Lab_Result | Lab_Qual | MDL | RL | Units | VAL_Result | VAL_Qual |
|--------------------------|--------------------|----------|------------------|------------|----------|-----|----|------------|------------|----------|
| EPD-PB-BKBA-01-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-BKBA-02-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-BKBA-022-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-06-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-07-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-08-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-09-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-099-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-10-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-11-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-12-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-14-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-DW-A-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-FB-02-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | | 2 ug | 2 | U |
| EPD-PB-FB-03-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | | 2 ug | 2 | U |
| EPD-PB-MB-02-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | | 2 ug | 2 | U |
| EPD-PB-MB-03-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | | 2 ug | 2 | U |
| EPD-PB-OD-01-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-02-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-03-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-04-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-05-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-06-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-07-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-UW-E-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-01-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-02-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-03-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-033-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-04-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-05-042123-2 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-06-042123-2 | 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 | E Palestine Site - ER | TO/TOLIN No. | 68HE0520F0032/0001EB201 |
| Document Tracking No. | DTN 1923c | Laboratory | Eurofins Analytics, LLC, Ashland VA |
| Laboratory Report No. | B114-150 | Analyses | |
| Analyses | 2-Ethylhexyl Acrylate and n-Butyl Acrylate analysis by a proprietary method IHGC-P029 (IH9805) GC/FID | | |
| Samples and Matrix | Twelve (12) Air Samples including one field duplicate and three field blanks | | |
| Collection Date(s) | 04/21/2023 | | |
| Field Duplicate Pairs | EPD-ST-8H-WA-44-042123-2/EPD-ST-8H-WA-04-042123-2 | | |
| Field QC Blanks | EPD-ST-FB-042123-2 | | |
| | EPD-ST-MB-02-042123-2 | | |
| | EPD-ST-MB-01-042123-2 | | |
| | | | |

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 level 4 package was reviewed.</p> <p>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.”</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**

| | |
|--|--|
| | <p>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.</p> <p>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.</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> |
|--|--|

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. LCS and LCSD recoveries for n-Butyl acrylate were below the QC limit. All associated samples were affected and were qualified as estimate, 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. B114-150

| Sample_ID | Method | CAS# | Analyte | Lab_Result | Lab_Qual | MDL | RL | Units | VAL_Result | VAL_Qual |
|--------------------------|-----------|----------|-----------------------|------------|----------|-----|----|-------|------------|----------|
| EPD-ST-8H-DW-A-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-DW-A-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-UW-E-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-UW-E-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-01-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-01-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-02-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-02-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-03-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-03-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-04-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-04-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-05-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-05-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-06-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-06-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-8H-WA-44-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 0.015 | U | | | ppm | 0.015 | U |
| EPD-ST-8H-WA-44-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 0.01 | U | | | ppm | 0.010 | UJ |
| EPD-ST-FB-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 2.8 | U | | | ug | 2.8 | U |
| EPD-ST-FB-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 1.3 | U | | | ug | 1.3 | UJ |
| EPD-ST-MB-01-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 2.8 | U | | | ug | 2.8 | U |
| EPD-ST-MB-01-042123-2 | IHGC-P029 | 141-32-2 | n-Butyl acrylate | 1.3 | U | | | ug | 1.3 | UJ |
| EPD-ST-MB-02-042123-2 | IHGC-P029 | 103-11-7 | 2-Ethylhexyl acrylate | 2.8 | U | | | ug | 2.8 | U |
| EPD-ST-MB-02-042123-2 | 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 1923d | Laboratory | Eurofins Analytics, LLC, Ashland VA |
| Laboratory Report No. | B114-151 | | |
| 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) | 04/21/2023 | | |
| Field Duplicate Pairs | EPD-PB-OD-03-042123-1/EPD-PB-OD-033-042123-1 EPD-PB-CM-144-042123-1/EPD-PB-CM-14-042123-1 | | |
| 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 4 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 | |

**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. B114-151

| Sample_ID | Method | CAS# | Analyte | Lab_Result | Lab_Qual | MDL | RL | Units | VAL_Result | VAL_Qual |
|-------------------------|--------------------|----------|------------------|------------|----------|-----|----|------------|------------|----------|
| EPD-PB-BKBA-01-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-BKBA-02-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-CM-06-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-CM-07-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-08-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-09-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-10-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-11-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-12-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-14-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-CM-144-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-DW-A-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-FB-01-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | | 2 ug | 2 | U |
| EPD-PB-MB-01-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 2 | U | | | 2 ug | 2 | U |
| EPD-PB-OD-01-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-02-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-03-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-033-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-04-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-OD-05-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0089 | U | | | 0.0089 ppm | 0.0089 | U |
| EPD-PB-OD-06-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-OD-07-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-UW-E-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.009 | U | | | 0.009 ppm | 0.0090 | U |
| EPD-PB-WA-01-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-02-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-03-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-04-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-05-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |
| EPD-PB-WA-06-042123-1 | NIOSH Method 1450M | 141-32-2 | n-Butyl acrylate | 0.0091 | U | | | 0.0091 ppm | 0.0091 | U |