



20-Apr-2023

[REDACTED]  
TETRATECH-CHICAGO  
1 South Wacker Drive  
37th Floor  
Chicago, IL 60606

Re: **Richmond Industrial Fire**

Work Order: **23040744**

Dear [REDACTED]

ALS Environmental received 2 samples on 20-Apr-2023 06:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

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

Sincerely,

[REDACTED]

Electronically approved by: Danielle Strasinger

[REDACTED]

Project Manager

## Report of Laboratory Analysis

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

## ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**Work Order:** 23040744

## Work Order Sample Summary

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| <u>Lab Samp ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Tag Number</u> | <u>Collection Date</u> | <u>Date Received</u> | <u>Hold</u>              |
|--------------------|-------------------------|---------------|-------------------|------------------------|----------------------|--------------------------|
| 23040744-01        | RIF-AA34-230419         | Air           |                   | 4/19/2023 08:24        | 4/20/2023 06:45      | <input type="checkbox"/> |
| 23040744-02        | RIF-AA35-230419         | Air           |                   | 4/19/2023 10:36        | 4/20/2023 06:45      | <input type="checkbox"/> |

## ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**Work Order:** 23040744

## Case Narrative

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The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

Propene reporting limit is elevated due low level contamination in the calibration standards. Propene was not detected in these samples.

# ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**Sample ID:** RIF-AA34-230419  
**Collection Date:** 4/19/2023 08:24 AM

**Work Order:** 23040744  
**Lab ID:** 23040744-01  
**Matrix:** AIR

| Analyses                  | Result      | Qual | Report Limit  | Units       | Dilution Factor     | Date Analyzed      |
|---------------------------|-------------|------|---------------|-------------|---------------------|--------------------|
| <b>TO-15 BY GC/MS</b>     |             |      | <b>ETO-15</b> |             | Analyst: <b>MRJ</b> |                    |
| 1,1,1-Trichloroethane     | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,1,2,2-Tetrachloroethane | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,1,2-Trichloroethane     | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,1-Dichloroethane        | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,1-Dichloroethene        | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,2,4-Trichlorobenzene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,2,4-Trimethylbenzene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dibromoethane         | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dichlorobenzene       | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dichloroethane        | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dichloropropane       | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,3,5-Trimethylbenzene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,3-Butadiene             | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,3-Dichlorobenzene       | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,4-Dichlorobenzene       | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 1,4-Dioxane               | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 2-Butanone                | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 2-Hexanone                | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 2-Propanol                | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 4-Ethyltoluene            | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| 4-Methyl-2-pentanone      | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Acetone</b>            | <b>2.0</b>  |      | <b>1.0</b>    | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| <b>Benzene</b>            | <b>1.8</b>  |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| Benzyl chloride           | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Bromodichloromethane      | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Bromoform                 | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Bromomethane              | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Carbon disulfide          | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Carbon tetrachloride      | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Chlorobenzene             | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Chloroethane              | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Chloroform                | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Chloromethane</b>      | <b>0.73</b> |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| cis-1,2-Dichloroethene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| cis-1,3-Dichloropropene   | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Cumene</b>             | <b>0.65</b> |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| Cyclohexane               | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Dibromochloromethane      | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Dichlorodifluoromethane   | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |

**Note:**

# ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**Sample ID:** RIF-AA34-230419  
**Collection Date:** 4/19/2023 08:24 AM

**Work Order:** 23040744  
**Lab ID:** 23040744-01  
**Matrix:** AIR

| Analyses                  | Result      | Qual | Report Limit  | Units       | Dilution Factor     | Date Analyzed      |
|---------------------------|-------------|------|---------------|-------------|---------------------|--------------------|
| Ethyl acetate             | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Ethylbenzene</b>       | <b>3.0</b>  |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| Freon 113                 | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Freon 114                 | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Heptane                   | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Hexachlorobutadiene       | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Hexane                    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| m,p-Xylene                | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Methylene chloride        | ND          |      | 2.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| MTBE                      | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Naphthalene</b>        | <b>0.21</b> |      | <b>0.20</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| o-Xylene                  | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Propene                   | ND          |      | 2.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Styrene</b>            | <b>12</b>   |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| Tetrachloroethene         | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Tetrahydrofuran           | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| <b>Toluene</b>            | <b>3.5</b>  |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:00 PM |
| trans-1,2-Dichloroethene  | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| trans-1,3-Dichloropropene | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Trichloroethene           | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Trichlorofluoromethane    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Vinyl acetate             | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Vinyl chloride            | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:00 PM |
| Surr: Bromofluorobenzene  | 99.5        |      | 60-140        | %REC        | 1                   | 4/20/2023 01:00 PM |
| <b>TO-15 BY GC/MS</b>     |             |      | <b>ETO-15</b> |             | <b>Analyst: MRJ</b> |                    |
| 1,1,1-Trichloroethane     | ND          |      | 2.73          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,1,2,2-Tetrachloroethane | ND          |      | 3.43          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,1,2-Trichloroethane     | ND          |      | 1.09          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,1-Dichloroethane        | ND          |      | 2.02          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,1-Dichloroethene        | ND          |      | 1.98          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,2,4-Trichlorobenzene    | ND          |      | 3.71          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,2,4-Trimethylbenzene    | ND          |      | 2.46          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dibromoethane         | ND          |      | 1.54          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dichlorobenzene       | ND          |      | 3.01          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dichloroethane        | ND          |      | 0.809         | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,2-Dichloropropane       | ND          |      | 2.31          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,3,5-Trimethylbenzene    | ND          |      | 2.46          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,3-Butadiene             | ND          |      | 0.442         | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,3-Dichlorobenzene       | ND          |      | 3.01          | µg/m3       | 1                   | 4/20/2023 01:00 PM |
| 1,4-Dichlorobenzene       | ND          |      | 1.20          | µg/m3       | 1                   | 4/20/2023 01:00 PM |

**Note:**

# ALS Environmental

Date: 20-Apr-23

Client: TETRATECH-CHICAGO

Project: Richmond Industrial Fire

Sample ID: RIF-AA34-230419

Collection Date: 4/19/2023 08:24 AM

Work Order: 23040744

Lab ID: 23040744-01

Matrix: AIR

| Analyses                | Result      | Qual | Report Limit | Units        | Dilution Factor | Date Analyzed      |
|-------------------------|-------------|------|--------------|--------------|-----------------|--------------------|
| 1,4-Dioxane             | ND          |      | 3.60         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| 2-Butanone              | ND          |      | 2.95         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| 2-Hexanone              | ND          |      | 4.10         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| 2-Propanol              | ND          |      | 2.46         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| 4-Ethyltoluene          | ND          |      | 2.46         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| 4-Methyl-2-pentanone    | ND          |      | 4.10         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| <b>Acetone</b>          | <b>4.80</b> |      | <b>2.38</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| <b>Benzene</b>          | <b>5.91</b> |      | <b>1.60</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| Benzyl chloride         | ND          |      | 5.18         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Bromodichloromethane    | ND          |      | 1.34         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Bromoform               | ND          |      | 5.17         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Bromomethane            | ND          |      | 1.94         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Carbon disulfide        | ND          |      | 1.56         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Carbon tetrachloride    | ND          |      | 3.15         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Chlorobenzene           | ND          |      | 2.30         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Chloroethane            | ND          |      | 1.32         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Chloroform              | ND          |      | 0.976        | µg/m3        | 1               | 4/20/2023 01:00 PM |
| <b>Chloromethane</b>    | <b>1.51</b> |      | <b>1.03</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| cis-1,2-Dichloroethene  | ND          |      | 1.98         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| cis-1,3-Dichloropropene | ND          |      | 2.27         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| <b>Cumene</b>           | <b>3.20</b> |      | <b>2.46</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| Cyclohexane             | ND          |      | 1.72         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Dibromochloromethane    | ND          |      | 4.26         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Dichlorodifluoromethane | ND          |      | 2.47         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Ethyl acetate           | ND          |      | 1.80         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| <b>Ethylbenzene</b>     | <b>13.2</b> |      | <b>2.17</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| Freon 113               | ND          |      | 3.83         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Freon 114               | ND          |      | 3.50         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Heptane                 | ND          |      | 2.05         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Hexachlorobutadiene     | ND          |      | 2.13         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Hexane                  | ND          |      | 1.76         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| m,p-Xylene              | ND          |      | 2.17         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Methylene chloride      | ND          |      | 7.00         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| MTBE                    | ND          |      | 1.80         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| <b>Naphthalene</b>      | <b>1.10</b> |      | <b>1.05</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| o-Xylene                | ND          |      | 2.17         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Propene                 | ND          |      | 0.861        | µg/m3        | 1               | 4/20/2023 01:00 PM |
| <b>Styrene</b>          | <b>49.6</b> |      | <b>2.13</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:00 PM |
| Tetrachloroethene       | ND          |      | 3.39         | µg/m3        | 1               | 4/20/2023 01:00 PM |
| Tetrahydrofuran         | ND          |      | 1.47         | µg/m3        | 1               | 4/20/2023 01:00 PM |

Note:

## ALS Environmental

Date: 20-Apr-23

Client: TETRATECH-CHICAGO

Project: Richmond Industrial Fire

Sample ID: RIF-AA34-230419

Collection Date: 4/19/2023 08:24 AM

Work Order: 23040744

Lab ID: 23040744-01

Matrix: AIR

| Analyses                  | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed      |
|---------------------------|--------|------|--------------|-------|-----------------|--------------------|
| Toluene                   | 13.1   |      | 1.88         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| trans-1,2-Dichloroethene  | ND     |      | 1.98         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| trans-1,3-Dichloropropene | ND     |      | 2.27         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| Trichloroethene           | ND     |      | 1.07         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| Trichlorofluoromethane    | ND     |      | 2.81         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| Vinyl acetate             | ND     |      | 3.52         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| Vinyl chloride            | ND     |      | 1.28         | µg/m3 | 1               | 4/20/2023 01:00 PM |
| Surr: Bromofluorobenzene  | 99.5   |      | 60-140       | %REC  | 1               | 4/20/2023 01:00 PM |

Note:

# ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**Sample ID:** RIF-AA35-230419  
**Collection Date:** 4/19/2023 10:36 AM

**Work Order:** 23040744  
**Lab ID:** 23040744-02  
**Matrix:** AIR

| Analyses                  | Result      | Qual | Report Limit  | Units       | Dilution Factor     | Date Analyzed      |
|---------------------------|-------------|------|---------------|-------------|---------------------|--------------------|
| <b>TO-15 BY GC/MS</b>     |             |      | <b>ETO-15</b> |             | Analyst: <b>MRJ</b> |                    |
| 1,1,1-Trichloroethane     | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,1,2,2-Tetrachloroethane | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,1,2-Trichloroethane     | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,1-Dichloroethane        | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,1-Dichloroethene        | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,2,4-Trichlorobenzene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,2,4-Trimethylbenzene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dibromoethane         | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dichlorobenzene       | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dichloroethane        | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dichloropropane       | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,3,5-Trimethylbenzene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,3-Butadiene             | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,3-Dichlorobenzene       | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,4-Dichlorobenzene       | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 1,4-Dioxane               | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 2-Butanone                | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 2-Hexanone                | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 2-Propanol                | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 4-Ethyltoluene            | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| 4-Methyl-2-pentanone      | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| <b>Acetone</b>            | <b>2.0</b>  |      | <b>1.0</b>    | <b>ppbv</b> | 1                   | 4/20/2023 01:45 PM |
| <b>Benzene</b>            | <b>1.4</b>  |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:45 PM |
| Benzyl chloride           | ND          |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Bromodichloromethane      | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Bromoform                 | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Bromomethane              | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Carbon disulfide          | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Carbon tetrachloride      | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Chlorobenzene             | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Chloroethane              | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Chloroform                | ND          |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| <b>Chloromethane</b>      | <b>0.73</b> |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:45 PM |
| cis-1,2-Dichloroethene    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| cis-1,3-Dichloropropene   | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Cumene                    | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Cyclohexane               | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Dibromochloromethane      | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Dichlorodifluoromethane   | ND          |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |

**Note:**



# ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**Sample ID:** RIF-AA35-230419  
**Collection Date:** 4/19/2023 10:36 AM

**Work Order:** 23040744  
**Lab ID:** 23040744-02  
**Matrix:** AIR

| Analyses                  | Result     | Qual | Report Limit  | Units       | Dilution Factor     | Date Analyzed      |
|---------------------------|------------|------|---------------|-------------|---------------------|--------------------|
| Ethyl acetate             | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| <b>Ethylbenzene</b>       | <b>1.6</b> |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:45 PM |
| Freon 113                 | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Freon 114                 | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Heptane                   | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Hexachlorobutadiene       | ND         |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Hexane                    | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| m,p-Xylene                | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Methylene chloride        | ND         |      | 2.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| MTBE                      | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Naphthalene               | ND         |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| o-Xylene                  | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Propene                   | ND         |      | 2.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| <b>Styrene</b>            | <b>3.7</b> |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:45 PM |
| Tetrachloroethene         | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Tetrahydrofuran           | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| <b>Toluene</b>            | <b>1.8</b> |      | <b>0.50</b>   | <b>ppbv</b> | 1                   | 4/20/2023 01:45 PM |
| trans-1,2-Dichloroethene  | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| trans-1,3-Dichloropropene | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Trichloroethene           | ND         |      | 0.20          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Trichlorofluoromethane    | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Vinyl acetate             | ND         |      | 1.0           | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Vinyl chloride            | ND         |      | 0.50          | ppbv        | 1                   | 4/20/2023 01:45 PM |
| Surr: Bromofluorobenzene  | 95.3       |      | 60-140        | %REC        | 1                   | 4/20/2023 01:45 PM |
| <b>TO-15 BY GC/MS</b>     |            |      | <b>ETO-15</b> |             | Analyst: <b>MRJ</b> |                    |
| 1,1,1-Trichloroethane     | ND         |      | 2.73          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,1,2,2-Tetrachloroethane | ND         |      | 3.43          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,1,2-Trichloroethane     | ND         |      | 1.09          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,1-Dichloroethane        | ND         |      | 2.02          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,1-Dichloroethene        | ND         |      | 1.98          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,2,4-Trichlorobenzene    | ND         |      | 3.71          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,2,4-Trimethylbenzene    | ND         |      | 2.46          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dibromoethane         | ND         |      | 1.54          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dichlorobenzene       | ND         |      | 3.01          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dichloroethane        | ND         |      | 0.809         | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,2-Dichloropropane       | ND         |      | 2.31          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,3,5-Trimethylbenzene    | ND         |      | 2.46          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,3-Butadiene             | ND         |      | 0.442         | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,3-Dichlorobenzene       | ND         |      | 3.01          | µg/m3       | 1                   | 4/20/2023 01:45 PM |
| 1,4-Dichlorobenzene       | ND         |      | 1.20          | µg/m3       | 1                   | 4/20/2023 01:45 PM |

**Note:**

# ALS Environmental

Date: 20-Apr-23

Client: TETRATECH-CHICAGO

Project: Richmond Industrial Fire

Sample ID: RIF-AA35-230419

Collection Date: 4/19/2023 10:36 AM

Work Order: 23040744

Lab ID: 23040744-02

Matrix: AIR

| Analyses                | Result      | Qual | Report Limit | Units        | Dilution Factor | Date Analyzed      |
|-------------------------|-------------|------|--------------|--------------|-----------------|--------------------|
| 1,4-Dioxane             | ND          |      | 3.60         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| 2-Butanone              | ND          |      | 2.95         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| 2-Hexanone              | ND          |      | 4.10         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| 2-Propanol              | ND          |      | 2.46         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| 4-Ethyltoluene          | ND          |      | 2.46         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| 4-Methyl-2-pentanone    | ND          |      | 4.10         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| <b>Acetone</b>          | <b>4.77</b> |      | <b>2.38</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:45 PM |
| <b>Benzene</b>          | <b>4.60</b> |      | <b>1.60</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:45 PM |
| Benzyl chloride         | ND          |      | 5.18         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Bromodichloromethane    | ND          |      | 1.34         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Bromoform               | ND          |      | 5.17         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Bromomethane            | ND          |      | 1.94         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Carbon disulfide        | ND          |      | 1.56         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Carbon tetrachloride    | ND          |      | 3.15         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Chlorobenzene           | ND          |      | 2.30         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Chloroethane            | ND          |      | 1.32         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Chloroform              | ND          |      | 0.976        | µg/m3        | 1               | 4/20/2023 01:45 PM |
| <b>Chloromethane</b>    | <b>1.51</b> |      | <b>1.03</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:45 PM |
| cis-1,2-Dichloroethene  | ND          |      | 1.98         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| cis-1,3-Dichloropropene | ND          |      | 2.27         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Cumene                  | ND          |      | 2.46         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Cyclohexane             | ND          |      | 1.72         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Dibromochloromethane    | ND          |      | 4.26         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Dichlorodifluoromethane | ND          |      | 2.47         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Ethyl acetate           | ND          |      | 1.80         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| <b>Ethylbenzene</b>     | <b>7.03</b> |      | <b>2.17</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:45 PM |
| Freon 113               | ND          |      | 3.83         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Freon 114               | ND          |      | 3.50         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Heptane                 | ND          |      | 2.05         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Hexachlorobutadiene     | ND          |      | 2.13         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Hexane                  | ND          |      | 1.76         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| m,p-Xylene              | ND          |      | 2.17         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Methylene chloride      | ND          |      | 7.00         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| MTBE                    | ND          |      | 1.80         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Naphthalene             | ND          |      | 1.05         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| o-Xylene                | ND          |      | 2.17         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Propene                 | ND          |      | 3.44         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| <b>Styrene</b>          | <b>15.6</b> |      | <b>2.13</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:45 PM |
| Tetrachloroethene       | ND          |      | 3.39         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Tetrahydrofuran         | ND          |      | 1.47         | µg/m3        | 1               | 4/20/2023 01:45 PM |

Note:

## ALS Environmental

Date: 20-Apr-23

Client: TETRATECH-CHICAGO

Project: Richmond Industrial Fire

Sample ID: RIF-AA35-230419

Collection Date: 4/19/2023 10:36 AM

Work Order: 23040744

Lab ID: 23040744-02

Matrix: AIR

| Analyses                  | Result      | Qual | Report Limit | Units        | Dilution Factor | Date Analyzed      |
|---------------------------|-------------|------|--------------|--------------|-----------------|--------------------|
| <b>Toluene</b>            | <b>6.93</b> |      | <b>1.88</b>  | <b>µg/m3</b> | 1               | 4/20/2023 01:45 PM |
| trans-1,2-Dichloroethene  | ND          |      | 1.98         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| trans-1,3-Dichloropropene | ND          |      | 2.27         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Trichloroethene           | ND          |      | 1.07         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Trichlorofluoromethane    | ND          |      | 2.81         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Vinyl acetate             | ND          |      | 3.52         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Vinyl chloride            | ND          |      | 1.28         | µg/m3        | 1               | 4/20/2023 01:45 PM |
| Surr: Bromofluorobenzene  | 95.3        |      | 60-140       | %REC         | 1               | 4/20/2023 01:45 PM |

Note:

# ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Work Order:** 23040744  
**Project:** Richmond Industrial Fire

## QC BATCH REPORT

Batch ID: **R215632** Instrument ID **VMS4** Method: **ETO-15**

| MBLK                      |        | Sample ID: MBLK-R215632 |         |               |      | Units: ppbv    |               | Analysis Date: 4/20/2023 12:15 PM |           |       |
|---------------------------|--------|-------------------------|---------|---------------|------|----------------|---------------|-----------------------------------|-----------|-------|
| Client ID:                |        | Run ID: VMS4_230420A    |         |               |      | SeqNo: 3024308 |               | Prep Date:                        |           | DF: 1 |
| Analyte                   | Result | PQL                     | SPK Val | SPK Ref Value | %REC | Control Limit  | RPD Ref Value | %RPD                              | RPD Limit | Qual  |
| 1,1,1-Trichloroethane     | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,1,2,2-Tetrachloroethane | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,1,2-Trichloroethane     | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| 1,1-Dichloroethane        | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,1-Dichloroethene        | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,2,4-Trichlorobenzene    | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,2,4-Trimethylbenzene    | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,2-Dibromoethane         | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| 1,2-Dichlorobenzene       | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,2-Dichloroethane        | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| 1,2-Dichloropropane       | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,3,5-Trimethylbenzene    | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,3-Butadiene             | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| 1,3-Dichlorobenzene       | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 1,4-Dichlorobenzene       | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| 1,4-Dioxane               | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| 2-Butanone                | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| 2-Hexanone                | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| 2-Propanol                | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| 4-Ethyltoluene            | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| 4-Methyl-2-pentanone      | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| Acetone                   | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| Benzene                   | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Benzyl chloride           | ND     | 1.0                     |         |               |      |                |               |                                   |           |       |
| Bromodichloromethane      | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| Bromoform                 | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Bromomethane              | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Carbon disulfide          | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Carbon tetrachloride      | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Chlorobenzene             | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Chloroethane              | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Chloroform                | ND     | 0.20                    |         |               |      |                |               |                                   |           |       |
| Chloromethane             | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| cis-1,2-Dichloroethene    | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| cis-1,3-Dichloropropene   | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Cumene                    | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Cyclohexane               | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Dibromochloromethane      | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Dichlorodifluoromethane   | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Ethyl acetate             | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |
| Ethylbenzene              | ND     | 0.50                    |         |               |      |                |               |                                   |           |       |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** TETRATECH-CHICAGO  
**Work Order:** 23040744  
**Project:** Richmond Industrial Fire

## QC BATCH REPORT

| Batch ID: <b>R215632</b>        |      | Instrument ID <b>VMS4</b> |    | Method: <b>ETO-15</b> |      |        |   |   |
|---------------------------------|------|---------------------------|----|-----------------------|------|--------|---|---|
| Freon 113                       | ND   | 0.50                      |    |                       |      |        |   |   |
| Freon 114                       | ND   | 0.50                      |    |                       |      |        |   |   |
| Heptane                         | ND   | 0.50                      |    |                       |      |        |   |   |
| Hexachlorobutadiene             | ND   | 0.20                      |    |                       |      |        |   |   |
| Hexane                          | ND   | 0.50                      |    |                       |      |        |   |   |
| m,p-Xylene                      | ND   | 0.50                      |    |                       |      |        |   |   |
| Methylene chloride              | ND   | 2.0                       |    |                       |      |        |   |   |
| MTBE                            | ND   | 0.50                      |    |                       |      |        |   |   |
| Naphthalene                     | ND   | 0.20                      |    |                       |      |        |   |   |
| o-Xylene                        | ND   | 0.50                      |    |                       |      |        |   |   |
| Propene                         | 0.11 | 2.0                       |    |                       |      |        |   | J |
| Styrene                         | ND   | 0.50                      |    |                       |      |        |   |   |
| Tetrachloroethene               | ND   | 0.50                      |    |                       |      |        |   |   |
| Tetrahydrofuran                 | ND   | 0.50                      |    |                       |      |        |   |   |
| Toluene                         | ND   | 0.50                      |    |                       |      |        |   |   |
| trans-1,2-Dichloroethene        | ND   | 0.50                      |    |                       |      |        |   |   |
| trans-1,3-Dichloropropene       | ND   | 0.50                      |    |                       |      |        |   |   |
| Trichloroethene                 | ND   | 0.20                      |    |                       |      |        |   |   |
| Trichlorofluoromethane          | ND   | 0.50                      |    |                       |      |        |   |   |
| Vinyl acetate                   | ND   | 1.0                       |    |                       |      |        |   |   |
| Vinyl chloride                  | ND   | 0.50                      |    |                       |      |        |   |   |
| <i>Surr: Bromofluorobenzene</i> | 9.26 | 0                         | 10 | 0                     | 92.6 | 60-140 | 0 |   |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: TETRATECH-CHICAGO  
 Work Order: 23040744  
 Project: Richmond Industrial Fire

## QC BATCH REPORT

Batch ID: R215632 Instrument ID VMS4 Method: ETO-15

| LCS                       |        |      |                      | Sample ID: LCS-R215632 |                | Units: ppbv   |               | Analysis Date: 4/20/2023 11:31 AM |           |      |
|---------------------------|--------|------|----------------------|------------------------|----------------|---------------|---------------|-----------------------------------|-----------|------|
| Client ID:                |        |      | Run ID: VMS4_230420A |                        | SeqNo: 3024307 |               | Prep Date:    |                                   | DF: 1     |      |
| Analyte                   | Result | PQL  | SPK Val              | SPK Ref Value          | %REC           | Control Limit | RPD Ref Value | %RPD                              | RPD Limit | Qual |
| 1,1,1-Trichloroethane     | 10.03  | 0.50 | 10                   | 0                      | 100            | 58.8-163      | 0             |                                   |           |      |
| 1,1,2,2-Tetrachloroethane | 9.96   | 0.50 | 10                   | 0                      | 99.6           | 60-140        | 0             |                                   |           |      |
| 1,1,2-Trichloroethane     | 10.32  | 0.20 | 10                   | 0                      | 103            | 60-140        | 0             |                                   |           |      |
| 1,1-Dichloroethane        | 10     | 0.50 | 10                   | 0                      | 100            | 60-140        | 0             |                                   |           |      |
| 1,1-Dichloroethene        | 9.96   | 0.50 | 10                   | 0                      | 99.6           | 60-140        | 0             |                                   |           |      |
| 1,2,4-Trichlorobenzene    | 7.8    | 0.50 | 10                   | 0                      | 78             | 49.3-150      | 0             |                                   |           |      |
| 1,2,4-Trimethylbenzene    | 9.83   | 0.50 | 10                   | 0                      | 98.3           | 50.1-162      | 0             |                                   |           |      |
| 1,2-Dibromoethane         | 10.3   | 0.20 | 10                   | 0                      | 103            | 60-140        | 0             |                                   |           |      |
| 1,2-Dichlorobenzene       | 9.71   | 0.50 | 10                   | 0                      | 97.1           | 41.9-141      | 0             |                                   |           |      |
| 1,2-Dichloroethane        | 10.2   | 0.20 | 10                   | 0                      | 102            | 60-140        | 0             |                                   |           |      |
| 1,2-Dichloropropane       | 10.15  | 0.50 | 10                   | 0                      | 102            | 60-140        | 0             |                                   |           |      |
| 1,3,5-Trimethylbenzene    | 9.84   | 0.50 | 10                   | 0                      | 98.4           | 60-140        | 0             |                                   |           |      |
| 1,3-Butadiene             | 9.89   | 0.20 | 10                   | 0                      | 98.9           | 50.6-140      | 0             |                                   |           |      |
| 1,3-Dichlorobenzene       | 9.8    | 0.50 | 10                   | 0                      | 98             | 60-140        | 0             |                                   |           |      |
| 1,4-Dichlorobenzene       | 9.61   | 0.20 | 10                   | 0                      | 96.1           | 55.1-145      | 0             |                                   |           |      |
| 1,4-Dioxane               | 10.08  | 1.0  | 10                   | 0                      | 101            | 60-140        | 0             |                                   |           |      |
| 2-Butanone                | 10.56  | 1.0  | 10                   | 0                      | 106            | 60-140        | 0             |                                   |           |      |
| 2-Hexanone                | 10.23  | 1.0  | 10                   | 0                      | 102            | 56.2-162      | 0             |                                   |           |      |
| 2-Propanol                | 9.34   | 1.0  | 10                   | 0                      | 93.4           | 60-140        | 0             |                                   |           |      |
| 4-Ethyltoluene            | 10.13  | 0.50 | 10                   | 0                      | 101            | 60-140        | 0             |                                   |           |      |
| 4-Methyl-2-pentanone      | 9.92   | 1.0  | 10                   | 0                      | 99.2           | 60-140        | 0             |                                   |           |      |
| Acetone                   | 7.14   | 1.0  | 10                   | 0                      | 71.4           | 60-140        | 0             |                                   |           |      |
| Benzene                   | 10.04  | 0.50 | 10                   | 0                      | 100            | 60-140        | 0             |                                   |           |      |
| Benzyl chloride           | 9.24   | 1.0  | 10                   | 0                      | 92.4           | 31.9-174      | 0             |                                   |           |      |
| Bromodichloromethane      | 10.3   | 0.20 | 10                   | 0                      | 103            | 60-140        | 0             |                                   |           |      |
| Bromoform                 | 9.96   | 0.50 | 10                   | 0                      | 99.6           | 60-140        | 0             |                                   |           |      |
| Bromomethane              | 11.64  | 0.50 | 10                   | 0                      | 116            | 60-140        | 0             |                                   |           |      |
| Carbon disulfide          | 9.8    | 0.50 | 10                   | 0                      | 98             | 60-140        | 0             |                                   |           |      |
| Carbon tetrachloride      | 10.06  | 0.50 | 10                   | 0                      | 101            | 60-140        | 0             |                                   |           |      |
| Chlorobenzene             | 9.75   | 0.50 | 10                   | 0                      | 97.5           | 60-140        | 0             |                                   |           |      |
| Chloroethane              | 10.16  | 0.50 | 10                   | 0                      | 102            | 60-140        | 0             |                                   |           |      |
| Chloroform                | 10.05  | 0.20 | 10                   | 0                      | 100            | 60-140        | 0             |                                   |           |      |
| Chloromethane             | 9.2    | 0.50 | 10                   | 0                      | 92             | 60-140        | 0             |                                   |           |      |
| cis-1,2-Dichloroethene    | 10.36  | 0.50 | 10                   | 0                      | 104            | 60-140        | 0             |                                   |           |      |
| cis-1,3-Dichloropropene   | 10.22  | 0.50 | 10                   | 0                      | 102            | 60-140        | 0             |                                   |           |      |
| Cumene                    | 9.93   | 0.50 | 10                   | 0                      | 99.3           | 60-140        | 0             |                                   |           |      |
| Cyclohexane               | 9.97   | 0.50 | 10                   | 0                      | 99.7           | 60-140        | 0             |                                   |           |      |
| Dibromochloromethane      | 10.37  | 0.50 | 10                   | 0                      | 104            | 60-140        | 0             |                                   |           |      |
| Dichlorodifluoromethane   | 9.66   | 0.50 | 10                   | 0                      | 96.6           | 60-140        | 0             |                                   |           |      |
| Ethyl acetate             | 9.59   | 0.50 | 10                   | 0                      | 95.9           | 60-140        | 0             |                                   |           |      |
| Ethylbenzene              | 9.85   | 0.50 | 10                   | 0                      | 98.5           | 60-140        | 0             |                                   |           |      |
| Freon 113                 | 10.03  | 0.50 | 10                   | 0                      | 100            | 60-140        | 0             |                                   |           |      |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** TETRATECH-CHICAGO  
**Work Order:** 23040744  
**Project:** Richmond Industrial Fire

## QC BATCH REPORT

| Batch ID: <b>R215632</b>        |             | Instrument ID <b>VMS4</b> |           | Method: <b>ETO-15</b> |             |               |          |  |
|---------------------------------|-------------|---------------------------|-----------|-----------------------|-------------|---------------|----------|--|
| Freon 114                       | 9.94        | 0.50                      | 10        | 0                     | 99.4        | 60-140        | 0        |  |
| Heptane                         | 9.56        | 0.50                      | 10        | 0                     | 95.6        | 60-140        | 0        |  |
| Hexachlorobutadiene             | 8.47        | 0.20                      | 10        | 0                     | 84.7        | 60-140        | 0        |  |
| Hexane                          | 8.26        | 0.50                      | 10        | 0                     | 82.6        | 60-140        | 0        |  |
| m,p-Xylene                      | 20.3        | 0.50                      | 20        | 0                     | 102         | 60-140        | 0        |  |
| Methylene chloride              | 8.71        | 2.0                       | 10        | 0                     | 87.1        | 60-140        | 0        |  |
| MTBE                            | 9.93        | 0.50                      | 10        | 0                     | 99.3        | 60.8-151      | 0        |  |
| Naphthalene                     | 7.16        | 0.20                      | 10        | 0                     | 71.6        | 53.1-152      | 0        |  |
| o-Xylene                        | 9.86        | 0.50                      | 10        | 0                     | 98.6        | 60-140        | 0        |  |
| Propene                         | 9.78        | 0.50                      | 10        | 0                     | 97.8        | 34.4-139      | 0        |  |
| Styrene                         | 9.87        | 0.50                      | 10        | 0                     | 98.7        | 60-140        | 0        |  |
| Tetrachloroethene               | 10.39       | 0.50                      | 10        | 0                     | 104         | 60-140        | 0        |  |
| Tetrahydrofuran                 | 9.78        | 0.50                      | 10        | 0                     | 97.8        | 60-140        | 0        |  |
| Toluene                         | 10.26       | 0.50                      | 10        | 0                     | 103         | 60-140        | 0        |  |
| trans-1,2-Dichloroethene        | 9.92        | 0.50                      | 10        | 0                     | 99.2        | 60-140        | 0        |  |
| trans-1,3-Dichloropropene       | 10          | 0.50                      | 10        | 0                     | 100         | 60-140        | 0        |  |
| Trichloroethene                 | 10.2        | 0.20                      | 10        | 0                     | 102         | 60-140        | 0        |  |
| Trichlorofluoromethane          | 9.86        | 0.50                      | 10        | 0                     | 98.6        | 60-140        | 0        |  |
| Vinyl acetate                   | 9.54        | 1.0                       | 10        | 0                     | 95.4        | 48.4-145      | 0        |  |
| Vinyl chloride                  | 11.01       | 0.50                      | 10        | 0                     | 110         | 60-140        | 0        |  |
| <i>Surr: Bromofluorobenzene</i> | <i>9.81</i> | <i>0</i>                  | <i>10</i> | <i>0</i>              | <i>98.1</i> | <i>60-140</i> | <i>0</i> |  |

The following samples were analyzed in this batch: 23040744-01A 23040744-02A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# ALS Environmental

Date: 20-Apr-23

**Client:** TETRATECH-CHICAGO  
**Project:** Richmond Industrial Fire  
**WorkOrder:** 23040744

## QUALIFIERS, ACRONYMS, UNITS

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| <u>Qualifier</u> | <u>Description</u>  |
|------------------|---|
| *                | Value exceeds Regulatory Limit  |
| a                | Not accredited  |
| B                | Analyte detected in the associated Method Blank above the Reporting Limit |
| E                | Value above quantitation range  |
| H                | Analyzed outside of Holding Time  |
| J                | Analyte detected below quantitation limit                                 |
| n                | Not offered for accreditation   |
| ND               | Not Detected at the Reporting Limit                                       |
| O                | Sample amount is > 4 times amount spiked                                  |
| P                | Dual Column results percent difference > 40%                              |
| R                | RPD above laboratory control limit  |
| S                | Spike Recovery outside laboratory control limits                          |
| U                | Analyzed but not detected above the MDL                                   |

| <u>Acronym</u> | <u>Description</u>                  |
|----------------|-------------------------------------|
| DUP            | Method Duplicate                    |
| E              | EPA Method                          |
| LCS            | Laboratory Control Sample           |
| LCSD           | Laboratory Control Sample Duplicate |
| MBLK           | Method Blank                        |
| MDL            | Method Detection Limit              |
| MQL            | Method Quantitation Limit           |
| MS             | Matrix Spike                        |
| MSD            | Matrix Spike Duplicate              |
| PDS            | Post Digestion Spike                |
| PQL            | Practical Quantitation Limit        |
| SDL            | Sample Detection Limit              |
| SW             | SW-846 Method                       |

| <u>Units Reported</u> | <u>Description</u> |
|-----------------------|--------------------|
| µg/m3                 |                    |
| ppbv                  |                    |



## Sample Receipt Checklist

Client Name: **TETRATECH-CHICAGO**

Date/Time Received: **20-Apr-23 06:45**

Work Order: **23040744**

Received by: **PMH**

Checklist completed by [Redacted]

eSignature

20-Apr-23

Date

Reviewed by: [Redacted]

eSignature

20-Apr-23

Date

Matrices: air

Carrier name: Client

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Sample(s) received on ice?

Yes ☐

No ☒

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

-

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: