AECOM
40 British American Boulevard
Latham, New York 12110

518.951.2200 tel
518.951.2300 fax

June 4, 2019

Attn: Pretreatment
Oneida County Sewer District
PO Box 442
Utica, New York 13503

**Subject: Semi-Annual Self-Monitoring Report:**
**Monitoring Period December 1, 2018 – May 31, 2019**
Northeast Alloys & Metals, 2145 Dwyer Avenue, Utica, New York
Oneida County Groundwater Remediation Discharge Permit No. GW-055

To Whom It May Concern,

In accordance with the Oneida County Groundwater Remediation Discharge Permit No. GW-055, please find enclosed the Semi-Annual Self-Monitoring Report prepared by AECOM for the referenced period for the groundwater collection and treatment system at the referenced site.

The Report includes the following information:

- Reporting Form.
- A summary table presenting the quantity of treated groundwater discharged to the sanitary sewer.
- Industrial User Report Certification.
- Laboratory analytical data for the samples collected on April 30, 2019.

The laboratory analysis was performed by Eurofins Spectrum Analytical, Agawam, Massachusetts. The laboratory data indicate full compliance with permit limits.

Please feel free to contact me at (518) 951-2373 if you have any questions or require additional information.

Yours sincerely,

Lindsay Mitchell

Lindsay Mitchell, P.E.
Project Manager

Enclosures

cc (with enclosures):
Robert Strang, E.I.T. - NYSDEC
Peter Taylor, P.E. - NYSDEC, Region 6, Watertown

ONEIDA COUNTY SEWER DISTRICT
INDUSTRIAL USER REPORT CERTIFICATION

Submit To:
ATTN: PRETREATMENT
ONEIDA COUNTY SEWER DISTRICT
PO BOX 442
UTICA NY 13503

From:
NYSDEC DIV ENV REMEDIATION
317 WASHINGTON STREET
WATERTOWN NY 13601

Site:
NORTHEAST ALLOYS & METALS
2145 DWYER AVENUE
UTICA NY 13501

ATTACH TO REPORT DATED: June 4, 2019

REPORTING PERIOD: December 1, 2018 to May 31, 2019

The following certification of information provided in industrial user reports is made in compliance with the General Pretreatment Regulations.

1. Compliance or Non-Compliance Status: Ref = 40 CFR 403.12(b)(6)

Check A or B. If B is checked, attach a statement describing O&M and/or pretreatment required; include the shortest schedule by which you can provide the required O&M and/or pretreatment.

[✓] A. I certify that Pretreatment Standards are being met on a consistent basis.

[ ] B. I certify that Pretreatment Standards are NOT being met on a consistent basis, and that additional operation and maintenance (O&M) and/or additional pretreatment is required to achieve compliance with Pretreatment Standards and Requirements.

2. Information Certification: Ref = 40 CFR 403.6(a)(2)(ii)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature: Lindsey Mitchell
Title: Project Manager
Date: June 4, 2019

PLEASE ATTACH THIS CERTIFICATION TO THE SEMI-ANNUAL & OTHER REPORTS THAT YOU SUBMIT TO THE ONEIDA COUNTY SEWER DISTRICT.

ONEIDA COUNTY SEWER DISTRICT REPORTING FORM

Submit To:
ATTN: PRETREATMENT
ONEIDA COUNTY SEWER DISTRICT
PO BOX 442
UTICA NY 13503

From:
NYSDEC DIV ENV REMEDIATION
317 WASHINGTON STREET
WATERTOWN NY 13601

Site:
NORTHEAST ALLOYS & METALS
2145 DWYER AVENUE
UTICA NY 13501



REPORTING PERIOD: December 1, 2018 to May 31, 2019

SAMPLING RESULTS:

For semi-annual reporting, a grab sample of the discharge is analyzed for the pollutants listed. Attach signed Report Certification.

In response to any violations incurred, self-monitor for pollutant in violation at least once a week until there are results for three consecutive sampling events which are in full compliance with permit limits. Submit all results for all samples taken. The first resampling result is due within thirty (30) days; a complete report with all three resampling results is due within sixty (60) days. Attach signed Report Certification and copies of all city water bills, contract laboratory reports, and manifests of hazardous waste shipments for the reporting period.

| POLLUTANT PARAMETER | DAILY MAXIMUM LIMIT | ANALYSIS SAMPLE #1 | ANALYSIS SAMPLE #2 | ANALYSIS SAMPLE #3 |
|---|---|---|---|---|
| Date Sampled | | 04/30/19 | | |
| Sample Number | | SC54606-01 | | |
| Discharge Flow (Note 1) | | ATTACHED | | |
| Mercury, mg/L | 0.2 | <0.0002 | | |
| Nickel, mg/L | 2.0 | 0.001 | | |
| Total VOCs (Note 2+3) | 2.0 mg/L | 0.0164 | | |

1) Attach monthly flow totalizer data.

2) Total VOCs using EPA Method 624.

3) Individual VOCs must not exceed concentrations listed in the TCLP Regulation (40 CFR 261.24 Table 1).

Signature: Lindsay Mitchell Date: June 4, 2019

Northeast Alloys and Metals Site
Oneida County Groundwater Remediation Discharge Permit No. GW-055

Discharge data for period November 23, 2018 - May 23, 2019

| | 11/23/2018 | 5/23/2019 | Discharge Volume |
|---|---|---|---|
| Flow meter 1 | 253,865 | 987,299 | 733,434 |
| Flow meter 2 | 372,805 | 1,025,453 | 652,648 |

| | |
|---|---|
| **Total Discharge for period** | **1,386,082 gallons** |

Discharge reported after May 23, 2019 will be reported in November 2019

eurofins | Spectrum Analytical

☑ Final Report
☐ Revised Report

Report Date:
14-May-19 17:24

# *Laboratory Report*
# SC54606

AECOM Environment
40 British American Boulevard
Latham, NY 12110
Attn: Lindsay Mitchell

Project: NEAM - Utica, NY
Project #: 60284002-1

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Dawn Wojcik
Laboratory Director

Dawn E Wojcik

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 15 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

*Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).*

*Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.*

## Sample Summary

**Work Order:** SC54606

**Project:** NEAM - Utica, NY

**Project Number:** 60284002-1

| Laboratory ID | Client Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| SC54606-01 | NE-EFF 043019 | Ground Water | 30-Apr-19 11:00 | 01-May-19 10:30 |
| SC54606-02 | NE-INF 043019 | Ground Water | 30-Apr-19 11:35 | 01-May-19 10:30 |
| SC54606-03 | TB 043019 | Trip Blank | 30-Apr-19 00:00 | 01-May-19 10:30 |

**CASE NARRATIVE:**

Data has been reported to the MDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 3.1 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

**See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.**

## E624.1

**Spikes:**

CD05182-MS *Source: SC54606-03*

This parameter is outside laboratory rpd specified recovery limits.

Bromomethane

CD05182-MSD *Source: SC54606-03*

This parameter is outside laboratory rpd specified recovery limits.

Bromomethane

## Sample Acceptance Check Form

| | |
|---|---|
| Client: | AECOM Environment - Latham, NY |
| Project: | NEAM - Utica, NY / 60284002-1 |
| Work Order: | SC54606 |
| Sample(s) received on: | 5/1/2019 |

***The following outlines the condition of samples for the attached Chain of Custody upon receipt.***

| | Yes | No | N/A |
|---|---|---|---|
| Were custody seals present? | ☑ | ☐ | ☐ |
| Were custody seals intact? | ☑ | ☐ | ☐ |
| Were samples received at a temperature of ≤ 6°C? | ☑ | ☐ | ☐ |
| Were samples cooled on ice upon transfer to laboratory representative? | ☑ | ☐ | ☐ |
| Were sample containers received intact? | ☑ | ☐ | ☐ |
| Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)? | ☑ | ☐ | ☐ |
| Were samples accompanied by a Chain of Custody document? | ☑ | ☐ | ☐ |
| Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample? | ☑ | ☐ | ☐ |
| Did sample container labels agree with Chain of Custody document? | ☑ | ☐ | ☐ |
| Were samples received within method-specific holding times? | ☑ | ☐ | ☐ |

## Summary of Hits

**Lab ID:** SC54606-01 **Client ID:** NE-EFF 043019

| Parameter | Result | Flag | Reporting Limit | Units | Analytical Method |
|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | 15 | | 0.50 | ug/l | E624.1 |
| Trichloroethene | 1.4 | | 0.50 | ug/l | E624.1 |
| Nickel | 0.001 | | 0.001 | mg/l | SW6010D |

**Lab ID:** SC54606-02 **Client ID:** NE-INF 043019

| Parameter | Result | Flag | Reporting Limit | Units | Analytical Method |
|---|---|---|---|---|---|
| 1,1-Dichloroethane | 0.29 | J | 0.50 | ug/l | E624.1 |
| cis-1,2-Dichloroethene | 24 | | 0.50 | ug/l | E624.1 |
| Trichloroethene | 3.6 | | 0.50 | ug/l | E624.1 |
| Vinyl chloride | 2.7 | | 0.50 | ug/l | E624.1 |

*Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.*

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **NE-EFF 043019** | 60284002-1 | Ground Water | 30-Apr-19 11:00 | 01-May-19 |
| SC54606-01 | | | | |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Subcontracted Analyses** | | | | | | | | | | | | | |
| Subcontracted Analyses | | | | | | | | | | | | | |
| *Analysis performed by Phoenix Environmental Labs, Inc. * - CT007* | | | | | | | | | | | | | |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | E624.1 | 01-May-19 22:20 | 02-May-19 16:34 | 11301 | 477498A | |
| 79-34-5 | 1,1,2,2-tetrachloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-34-3 | 1,1-Dichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-35-4 | 1,1-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 78-87-5 | 1,2-Dichloropropane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 71-43-2 | Benzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-27-4 | Bromodichloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-25-2 | Bromoform | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 74-83-9 | Bromomethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 56-23-5 | Carbon tetrachloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 108-90-7 | Chlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-00-3 | Chloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 74-87-3 | Chloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 156-59-2 | cis-1,2-Dichloroethene | **15** | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.40 | | ug/l | 0.40 | 0.40 | 1 | " | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 179601-23-1 | m&p-Xylene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | < 1.0 | | ug/l | 1.0 | 1.0 | 1 | " | " | " | " | " | |
| 75-09-2 | Methylene chloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 95-47-6 | o-Xylene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 108-88-3 | Toluene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.40 | | ug/l | 0.40 | 0.40 | 1 | " | " | " | " | " | |
| 79-01-6 | Trichloroethene | **1.4** | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-69-4 | Trichlorofluoromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-01-4 | Vinyl chloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| *Surrogate recoveries:* | | | | | | | | | | | | | |
| *2199-69-1* | *% 1,2-dichlorobenzene-d4* | *100* | | | *70-130 %* | | | " | " | " | " | " | |
| *460-00-4* | *% Bromofluorobenzene* | *92* | | | *70-130 %* | | | " | " | " | " | " | |
| *1868-53-7* | *% Dibromofluoromethane* | *94* | | | *70-130 %* | | | " | " | " | " | " | |
| *2037-26-5* | *% Toluene-d8* | *101* | | | *70-130 %* | | | " | " | " | " | " | |
| Prepared by method SW3005A/SW3010A | | | | | | | | | | | | | |
| *Analysis performed by Phoenix Environmental Labs, Inc. * - CT007* | | | | | | | | | | | | | |
| 7440-02-0 | Nickel | **0.001** | | mg/l | 0.001 | 0.001 | 1 | SW6010D | 01-May-19 | 02-May-19 21:47 | 11301 | 477208A | |
| Prepared by method SW7470A | | | | | | | | | | | | | |

***This laboratory report is not valid without an authorized signature on the cover page.***

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **NE-EFF 043019**<br>SC54606-01 | 60284002-1 | Ground Water | 30-Apr-19 11:00 | 01-May-19 |

| *CAS No.* | *Analyte(s)* | *Result* | *Flag* | *Units* | **RDL* | *MDL* | *Dilution* | *Method Ref.* | *Prepared* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Subcontracted Analyses** | | | | | | | | | | | | | |
| Prepared by method SW7470A | | | | | | | | | | | | | |
| *Analysis performed by Phoenix Environmental Labs, Inc. * - CT007* | | | | | | | | | | | | | |
| 7439-97-6 | Mercury | < 0.0002 | | mg/l | 0.0002 | 0.0002 | 1 | SW7470A | 02-May-19 | 03-May-19 09:32 | 11301 | 477275A | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **NE-INF 043019** | 60284002-1 | Ground Water | 30-Apr-19 11:35 | 01-May-19 |
| SC54606-02 | | | | |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Subcontracted Analyses** | | | | | | | | | | | | | |
| Subcontracted Analyses | | | | | | | | | | | | | |
| *Analysis performed by Phoenix Environmental Labs, Inc. * - CT007* | | | | | | | | | | | | | |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | E624.1 | 01-May-19 22:20 | 02-May-19 16:56 | 11301 | 477498A | |
| 79-34-5 | 1,1,2,2-tetrachloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-34-3 | 1,1-Dichloroethane | **0.29** | J | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-35-4 | 1,1-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 78-87-5 | 1,2-Dichloropropane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 71-43-2 | Benzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-27-4 | Bromodichloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-25-2 | Bromoform | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 74-83-9 | Bromomethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 56-23-5 | Carbon tetrachloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 108-90-7 | Chlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-00-3 | Chloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 74-87-3 | Chloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 156-59-2 | cis-1,2-Dichloroethene | **24** | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.40 | | ug/l | 0.40 | 0.40 | 1 | " | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 179601-23-1 | m&p-Xylene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | < 1.0 | | ug/l | 1.0 | 1.0 | 1 | " | " | " | " | " | |
| 75-09-2 | Methylene chloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 95-47-6 | o-Xylene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 108-88-3 | Toluene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.40 | | ug/l | 0.40 | 0.40 | 1 | " | " | " | " | " | |
| 79-01-6 | Trichloroethene | **3.6** | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-69-4 | Trichlorofluoromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-01-4 | Vinyl chloride | **2.7** | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| *Surrogate recoveries:* | | | | | | | | | | | | | |
| *2199-69-1* | *% 1,2-dichlorobenzene-d4* | *99* | | | *70-130 %* | | | " | " | " | " | " | |
| *460-00-4* | *% Bromofluorobenzene* | *94* | | | *70-130 %* | | | " | " | " | " | " | |
| *1868-53-7* | *% Dibromofluoromethane* | *102* | | | *70-130 %* | | | " | " | " | " | " | |
| *2037-26-5* | *% Toluene-d8* | *101* | | | *70-130 %* | | | " | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **TB 043019**<br>SC54606-03 | 60284002-1 | Trip Blank | 30-Apr-19 00:00 | 01-May-19 |

| CAS No. | Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Subcontracted Analyses** | | | | | | | | | | | | | |
| Subcontracted Analyses | | | | | | | | | | | | | |
| *Analysis performed by Phoenix Environmental Labs, Inc. * - CT007* | | | | | | | | | | | | | |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | E624.1 | 01-May-19 19:41 | 02-May-19 15:52 | 11301 | 477498A | |
| 79-34-5 | 1,1,2,2-tetrachloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-34-3 | 1,1-Dichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-35-4 | 1,1-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 78-87-5 | 1,2-Dichloropropane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 71-43-2 | Benzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-27-4 | Bromodichloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-25-2 | Bromoform | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 74-83-9 | Bromomethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 56-23-5 | Carbon tetrachloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 108-90-7 | Chlorobenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-00-3 | Chloroethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 74-87-3 | Chloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.40 | | ug/l | 0.40 | 0.40 | 1 | " | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 179601-23-1 | m&p-Xylene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 1634-04-4 | Methyl tert-butyl ether (MTBE) | < 1.0 | | ug/l | 1.0 | 1.0 | 1 | " | " | " | " | " | |
| 75-09-2 | Methylene chloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 95-47-6 | o-Xylene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 108-88-3 | Toluene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.40 | | ug/l | 0.40 | 0.40 | 1 | " | " | " | " | " | |
| 79-01-6 | Trichloroethene | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-69-4 | Trichlorofluoromethane | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| 75-01-4 | Vinyl chloride | < 0.50 | | ug/l | 0.50 | 0.50 | 1 | " | " | " | " | " | |
| *Surrogate recoveries:* | | | | | | | | | | | | | |
| *2199-69-1* | *% 1,2-dichlorobenzene-d4* | *100* | | | *70-130 %* | | | " | " | " | " | " | |
| *460-00-4* | *% Bromofluorobenzene* | *91* | | | *70-130 %* | | | " | " | " | " | " | |
| *1868-53-7* | *% Dibromofluoromethane* | *102* | | | *70-130 %* | | | " | " | " | " | " | |
| *2037-26-5* | *% Toluene-d8* | *100* | | | *70-130 %* | | | " | " | " | " | " | |

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **E624.1** | | | | | | | | | | |
| **Batch 477498A - E624.1** | | | | | | | | | | |
| **Blank (CD05182-BLK)** | | | | | | Prepared & Analyzed: 02-May-19 | | | | |
| o-Xylene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Chloroethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Chloroform | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Chloromethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| cis-1,2-Dichloroethene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| cis-1,3-Dichloropropene | **ND** | | ug/l | 0.40 | | | ND | - | | |
| Dibromochloromethane | **ND** | | ug/l | 0.50 | | | ND | - | | |
| Chlorobenzene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Methyl tert-butyl ether (MTBE) | **ND** | | ug/l | 1.0 | | | ND | - | | |
| m&p-Xylene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Tetrachloroethene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Toluene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| trans-1,2-Dichloroethene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| trans-1,3-Dichloropropene | **ND** | | ug/l | 0.40 | | | ND | - | | |
| Trichloroethene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Trichlorofluoromethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Vinyl chloride | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Ethylbenzene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,2-Dichloroethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,1,1-Trichloroethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,1,2,2-tetrachloroethane | **ND** | | ug/l | 0.50 | | | ND | - | | |
| 1,1,2-Trichloroethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,1-Dichloroethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,1-Dichloroethene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Carbon tetrachloride | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Methylene chloride | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,2-Dichloropropane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,3-Dichlorobenzene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,4-Dichlorobenzene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Benzene | **ND** | | ug/l | 0.70 | | | ND | - | | |
| Bromodichloromethane | **ND** | | ug/l | 0.50 | | | ND | - | | |
| Bromoform | **ND** | | ug/l | 1.0 | | | ND | - | | |
| Bromomethane | **ND** | | ug/l | 1.0 | | | ND | - | | |
| 1,2-Dichlorobenzene | **ND** | | ug/l | 1.0 | | | ND | - | | |
| *Surrogate: % Dibromofluoromethane* | *96* | | ug/l | | *30* | | *96* | *70-130* | | |
| *Surrogate: % Bromofluorobenzene* | *93* | | ug/l | | *30* | | *93* | *70-130* | | |
| *Surrogate: % Toluene-d8* | *100* | | ug/l | | *30* | | *100* | *70-130* | | |
| *Surrogate: % 1,2-dichlorobenzene-d4* | *99* | | ug/l | | *30* | | *99* | *70-130* | | |
| **LCS (CD05182-LCS)** | | | | | | Prepared & Analyzed: 02-May-19 | | | | |
| Tetrachloroethene | **18.98** | | ug/l | 1.0 | 20 | | 95 | 73-127 | | 20 |
| Chloroform | **18.64** | | ug/l | 1.0 | 20 | | 93 | 67-133 | | 20 |
| Chloromethane | **16.50** | | ug/l | 1.0 | 20 | | 83 | 40-160 | | 20 |
| cis-1,2-Dichloroethene | **18.37** | | ug/l | 1.0 | 20 | | 92 | 69-131 | | 20 |
| cis-1,3-Dichloropropene | **18.38** | | ug/l | 0.40 | 20 | | 92 | 40-160 | | 20 |
| Dibromochloromethane | **19.60** | | ug/l | 0.50 | 20 | | 98 | 67-133 | | 20 |
| Ethylbenzene | **18.26** | | ug/l | 1.0 | 20 | | 91 | 59-141 | | 20 |
| m&p-Xylene | **37.07** | | ug/l | 1.0 | 40 | | 93 | 70-130 | | 30 |
| Methyl tert-butyl ether (MTBE) | **19.24** | | ug/l | 1.0 | 20 | | 96 | 70-130 | | 30 |
| o-Xylene | **19.13** | | ug/l | 1.0 | 20 | | 96 | 70-130 | | 30 |
| Toluene | **18.67** | | ug/l | 1.0 | 20 | | 93 | 74-126 | | 20 |

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **E624.1** | | | | | | | | | | |
| **Batch 477498A - E624.1** | | | | | | | | | | |
| **LCS (CD05182-LCS)** | | | | | Prepared & Analyzed: 02-May-19 | | | | | |
| trans-1,2-Dichloroethene | **18.72** | | ug/l | 1.0 | 20 | | 94 | 69-131 | | 20 |
| trans-1,3-Dichloropropene | **17.81** | | ug/l | 0.40 | 20 | | 89 | 50-150 | | 20 |
| Trichloroethene | **18.65** | | ug/l | 1.0 | 20 | | 93 | 66-134 | | 20 |
| Trichlorofluoromethane | **17.81** | | ug/l | 1.0 | 20 | | 89 | 48-152 | | 20 |
| Vinyl chloride | **18.32** | | ug/l | 1.0 | 20 | | 92 | 40-160 | | 20 |
| 1,1-Dichloroethene | **18.86** | | ug/l | 1.0 | 20 | | 94 | 50-150 | | 20 |
| Chloroethane | **19.12** | | ug/l | 1.0 | 20 | | 96 | 40-160 | | 20 |
| Methylene chloride | **21.41** | | ug/l | 1.0 | 20 | | 107 | 60-140 | | 20 |
| 1,2-Dichloropropane | **19.02** | | ug/l | 1.0 | 20 | | 95 | 40-160 | | 20 |
| 1,1,1-Trichloroethane | **18.47** | | ug/l | 1.0 | 20 | | 92 | 75-125 | | 20 |
| 1,1,2,2-tetrachloroethane | **19.13** | | ug/l | 0.50 | 20 | | 96 | 60-140 | | 20 |
| 1,1,2-Trichloroethane | **17.94** | | ug/l | 1.0 | 20 | | 90 | 71-129 | | 20 |
| 1,1-Dichloroethane | **18.58** | | ug/l | 1.0 | 20 | | 93 | 72-128 | | 20 |
| 1,2-Dichloroethane | **18.69** | | ug/l | 1.0 | 20 | | 93 | 68-132 | | 20 |
| Chlorobenzene | **18.58** | | ug/l | 1.0 | 20 | | 93 | 66-134 | | 20 |
| 1,2-Dichlorobenzene | **18.50** | | ug/l | 1.0 | 20 | | 93 | 63-137 | | 20 |
| 1,3-Dichlorobenzene | **18.66** | | ug/l | 1.0 | 20 | | 93 | 73-127 | | 20 |
| 1,4-Dichlorobenzene | **18.41** | | ug/l | 1.0 | 20 | | 92 | 63-137 | | 20 |
| Benzene | **18.71** | | ug/l | 0.70 | 20 | | 94 | 64-136 | | 20 |
| Bromodichloromethane | **19.45** | | ug/l | 0.50 | 20 | | 97 | 65-135 | | 20 |
| Bromoform | **18.97** | | ug/l | 1.0 | 20 | | 95 | 71-129 | | 20 |
| Bromomethane | **18.73** | | ug/l | 1.0 | 20 | | 94 | 40-160 | | 20 |
| Carbon tetrachloride | **19.09** | | ug/l | 1.0 | 20 | | 95 | 73-127 | | 20 |
| *Surrogate: % Dibromofluoromethane* | *29.38* | | ug/l | | *30* | | *98* | *70-130* | | |
| *Surrogate: % Bromofluorobenzene* | *30.17* | | ug/l | | *30* | | *101* | *70-130* | | |
| *Surrogate: % 1,2-dichlorobenzene-d4* | *30.52* | | ug/l | | *30* | | *102* | *70-130* | | |
| *Surrogate: % Toluene-d8* | *30.15* | | ug/l | | *30* | | *100* | *70-130* | | |
| **LCS Dup (CD05182-LCSD)** | | | **Source: CD05182-LCS** | | Prepared & Analyzed: 02-May-19 | | | | | |
| 1,2-Dichloropropane | **19.14** | | ug/l | 1.0 | 20 | | 96 | 40-160 | 1.0 | 20 |
| Chloroethane | **19.17** | | ug/l | 1.0 | 20 | | 96 | 40-160 | 0.0 | 20 |
| Chloromethane | **16.59** | | ug/l | 1.0 | 20 | | 83 | 40-160 | 0.0 | 20 |
| Carbon tetrachloride | **19.08** | | ug/l | 1.0 | 20 | | 95 | 73-127 | 0.0 | 20 |
| Bromomethane | **19.20** | | ug/l | 1.0 | 20 | | 96 | 40-160 | 2.1 | 20 |
| Bromoform | **19.80** | | ug/l | 1.0 | 20 | | 99 | 71-129 | 4.1 | 20 |
| Bromodichloromethane | **19.34** | | ug/l | 0.50 | 20 | | 97 | 65-135 | 0.0 | 20 |
| Benzene | **18.72** | | ug/l | 0.70 | 20 | | 94 | 64-136 | 0.0 | 20 |
| 1,1,1-Trichloroethane | **18.64** | | ug/l | 1.0 | 20 | | 93 | 75-125 | 1.1 | 20 |
| 1,3-Dichlorobenzene | **18.44** | | ug/l | 1.0 | 20 | | 92 | 73-127 | 1.1 | 20 |
| 1,2-Dichloroethane | **19.18** | | ug/l | 1.0 | 20 | | 96 | 68-132 | 3.2 | 20 |
| 1,2-Dichlorobenzene | **18.32** | | ug/l | 1.0 | 20 | | 92 | 63-137 | 1.1 | 20 |
| 1,1-Dichloroethene | **18.46** | | ug/l | 1.0 | 20 | | 92 | 50-150 | 2.2 | 20 |
| 1,1-Dichloroethane | **18.65** | | ug/l | 1.0 | 20 | | 93 | 72-128 | 0.0 | 20 |
| 1,1,2-Trichloroethane | **18.47** | | ug/l | 1.0 | 20 | | 92 | 71-129 | 2.2 | 20 |
| 1,1,2,2-tetrachloroethane | **19.38** | | ug/l | 0.50 | 20 | | 97 | 60-140 | 1.0 | 20 |
| Chloroform | **18.31** | | ug/l | 1.0 | 20 | | 92 | 67-133 | 1.1 | 20 |
| 1,4-Dichlorobenzene | **18.38** | | ug/l | 1.0 | 20 | | 92 | 63-137 | 0.0 | 20 |
| Trichloroethene | **18.63** | | ug/l | 1.0 | 20 | | 93 | 66-134 | 0.0 | 20 |
| Chlorobenzene | **18.57** | | ug/l | 1.0 | 20 | | 93 | 66-134 | 0.0 | 20 |
| cis-1,2-Dichloroethene | **19.08** | | ug/l | 1.0 | 20 | | 95 | 69-131 | 3.2 | 20 |
| Trichlorofluoromethane | **17.65** | | ug/l | 1.0 | 20 | | 88 | 48-152 | 1.1 | 20 |

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **E624.1** | | | | | | | | | | |
| **Batch 477498A - E624.1** | | | | | | | | | | |
| **LCS Dup (CD05182-LCSD)** | | | **Source: CD05182-LCS** | | Prepared & Analyzed: 02-May-19 | | | | | |
| trans-1,3-Dichloropropene | **17.98** | | ug/l | 0.40 | 20 | | 90 | 50-150 | 1.1 | 20 |
| trans-1,2-Dichloroethene | **18.96** | | ug/l | 1.0 | 20 | | 95 | 69-131 | 1.1 | 20 |
| Toluene | **18.68** | | ug/l | 1.0 | 20 | | 93 | 74-126 | 0.0 | 20 |
| Tetrachloroethene | **18.84** | | ug/l | 1.0 | 20 | | 94 | 73-127 | 1.1 | 20 |
| Methylene chloride | **21.18** | | ug/l | 1.0 | 20 | | 106 | 60-140 | 0.9 | 20 |
| Methyl tert-butyl ether (MTBE) | **19.73** | | ug/l | 1.0 | 20 | | 99 | 70-130 | 3.1 | 30 |
| m&p-Xylene | **37.66** | | ug/l | 1.0 | 40 | | 94 | 70-130 | 1.1 | 30 |
| Ethylbenzene | **18.74** | | ug/l | 1.0 | 20 | | 94 | 59-141 | 3.2 | 20 |
| Dibromochloromethane | **20.65** | | ug/l | 0.50 | 20 | | 103 | 67-133 | 5.0 | 20 |
| cis-1,3-Dichloropropene | **18.48** | | ug/l | 0.40 | 20 | | 92 | 40-160 | 0.0 | 20 |
| o-Xylene | **19.27** | | ug/l | 1.0 | 20 | | 96 | 70-130 | 0.0 | 30 |
| Vinyl chloride | **18.28** | | ug/l | 1.0 | 20 | | 91 | 40-160 | 1.1 | 20 |
| *Surrogate: % Toluene-d8* | *29.94* | | ug/l | | *30* | | *100* | *70-130* | | |
| *Surrogate: % 1,2-dichlorobenzene-d4* | *29.59* | | ug/l | | *30* | | *99* | *70-130* | | |
| *Surrogate: % Dibromofluoromethane* | *30.22* | | ug/l | | *30* | | *101* | *70-130* | | |
| *Surrogate: % Bromofluorobenzene* | *30.33* | | ug/l | | *30* | | *101* | *70-130* | | |
| **Matrix Spike (CD05182-MS)** | | | **Source: SC54606-03** | | Prepared & Analyzed: 02-May-19 | | | | | |
| Chloromethane | **15.41** | | ug/l | 1.0 | 20 | BRL | 77 | 40-160 | | 20 |
| m&p-Xylene | **38.70** | | ug/l | 1.0 | 40 | BRL | 97 | 70-130 | | 30 |
| Ethylbenzene | **18.82** | | ug/l | 1.0 | 20 | BRL | 94 | 59-141 | | 20 |
| Dibromochloromethane | **20.57** | | ug/l | 0.50 | 20 | BRL | 103 | 67-133 | | 20 |
| cis-1,2-Dichloroethene | **18.98** | | ug/l | 1.0 | 20 | BRL | 95 | 69-131 | | 20 |
| Chloroform | **20.09** | | ug/l | 1.0 | 20 | BRL | 100 | 67-133 | | 20 |
| Chloroethane | **19.98** | | ug/l | 1.0 | 20 | BRL | 100 | 40-160 | | 20 |
| cis-1,3-Dichloropropene | **17.79** | | ug/l | 0.40 | 20 | BRL | 89 | 40-160 | | 20 |
| Methyl tert-butyl ether (MTBE) | **18.91** | | ug/l | 1.0 | 20 | BRL | 95 | 70-130 | | 30 |
| o-Xylene | **19.68** | | ug/l | 1.0 | 20 | BRL | 98 | 70-130 | | 30 |
| Toluene | **18.79** | | ug/l | 1.0 | 20 | BRL | 94 | 74-126 | | 20 |
| Chlorobenzene | **18.73** | | ug/l | 1.0 | 20 | BRL | 94 | 66-134 | | 20 |
| trans-1,3-Dichloropropene | **17.36** | | ug/l | 0.40 | 20 | BRL | 87 | 50-150 | | 20 |
| Methylene chloride | **22.05** | | ug/l | 1.0 | 20 | BRL | 110 | 60-140 | | 20 |
| Trichloroethene | **19.01** | | ug/l | 1.0 | 20 | BRL | 95 | 66-134 | | 20 |
| Trichlorofluoromethane | **20.05** | | ug/l | 1.0 | 20 | BRL | 100 | 48-152 | | 20 |
| Vinyl chloride | **17.22** | | ug/l | 1.0 | 20 | BRL | 86 | 40-160 | | 20 |
| trans-1,2-Dichloroethene | **18.91** | | ug/l | 1.0 | 20 | BRL | 95 | 69-131 | | 20 |
| 1,1,2,2-tetrachloroethane | **17.76** | | ug/l | 0.50 | 20 | BRL | 89 | 60-140 | | 20 |
| Carbon tetrachloride | **20.03** | | ug/l | 1.0 | 20 | BRL | 100 | 73-127 | | 20 |
| Tetrachloroethene | **18.77** | | ug/l | 1.0 | 20 | BRL | 94 | 73-127 | | 20 |
| 1,1,1-Trichloroethane | **20.67** | | ug/l | 1.0 | 20 | BRL | 103 | 75-125 | | 20 |
| 1,1,2-Trichloroethane | **17.65** | | ug/l | 1.0 | 20 | BRL | 88 | 71-129 | | 20 |
| 1,1-Dichloroethane | **19.16** | | ug/l | 1.0 | 20 | BRL | 96 | 72-128 | | 20 |
| 1,1-Dichloroethene | **18.64** | | ug/l | 1.0 | 20 | BRL | 93 | 50-150 | | 20 |
| 1,2-Dichlorobenzene | **18.56** | | ug/l | 1.0 | 20 | BRL | 93 | 63-137 | | 20 |
| 1,2-Dichloropropane | **18.79** | | ug/l | 1.0 | 20 | BRL | 94 | 40-160 | | 20 |
| 1,3-Dichlorobenzene | **18.45** | | ug/l | 1.0 | 20 | BRL | 92 | 73-127 | | 20 |
| 1,4-Dichlorobenzene | **18.11** | | ug/l | 1.0 | 20 | BRL | 91 | 63-137 | | 20 |
| Benzene | **18.91** | | ug/l | 0.70 | 20 | BRL | 95 | 64-136 | | 20 |
| Bromodichloromethane | **20.54** | | ug/l | 0.50 | 20 | BRL | 103 | 65-135 | | 20 |
| 1,2-Dichloroethane | **20.82** | | ug/l | 1.0 | 20 | BRL | 104 | 68-132 | | 20 |
| Bromomethane | **13.99** | r | ug/l | 1.0 | 20 | BRL | 70 | 40-160 | | 20 |

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **E624.1** | | | | | | | | | | |
| **Batch 477498A - E624.1** | | | | | | | | | | |
| **Matrix Spike (CD05182-MS)** | | | **Source: SC54606-03** | | | Prepared & Analyzed: 02-May-19 | | | | |
| Bromoform | **19.33** | | ug/l | 1.0 | 20 | BRL | 97 | 71-129 | | 20 |
| *Surrogate: % Bromofluorobenzene* | *32.14* | | ug/l | | *20* | | *107* | *70-130* | | |
| *Surrogate: % 1,2-dichlorobenzene-d4* | *30.10* | | ug/l | | *20* | | *100* | *70-130* | | |
| *Surrogate: % Dibromofluoromethane* | *30.14* | | ug/l | | *20* | | *100* | *70-130* | | |
| *Surrogate: % Toluene-d8* | *30.06* | | ug/l | | *20* | | *100* | *70-130* | | |
| **Matrix Spike Dup (CD05182-MSD)** | | | **Source: SC54606-03** | | | Prepared & Analyzed: 02-May-19 | | | | |
| m&p-Xylene | **39.52** | | ug/l | 1.0 | 40 | BRL | 99 | 70-130 | 2.0 | 30 |
| Ethylbenzene | **19.40** | | ug/l | 1.0 | 20 | BRL | 97 | 59-141 | 3.1 | 20 |
| Dibromochloromethane | **21.23** | | ug/l | 0.50 | 20 | BRL | 106 | 67-133 | 2.9 | 20 |
| cis-1,3-Dichloropropene | **18.81** | | ug/l | 0.40 | 20 | BRL | 94 | 40-160 | 5.5 | 20 |
| cis-1,2-Dichloroethene | **19.55** | | ug/l | 1.0 | 20 | BRL | 98 | 69-131 | 3.1 | 20 |
| Chloroform | **20.65** | | ug/l | 1.0 | 20 | BRL | 103 | 67-133 | 3.0 | 20 |
| Methyl tert-butyl ether (MTBE) | **19.52** | | ug/l | 1.0 | 20 | BRL | 98 | 70-130 | 3.1 | 30 |
| Chloromethane | **18.22** | | ug/l | 1.0 | 20 | BRL | 91 | 40-160 | 16.7 | 20 |
| Methylene chloride | **19.26** | | ug/l | 1.0 | 20 | BRL | 96 | 60-140 | 13.6 | 20 |
| o-Xylene | **20.32** | | ug/l | 1.0 | 20 | BRL | 102 | 70-130 | 4.0 | 30 |
| Tetrachloroethene | **20.19** | | ug/l | 1.0 | 20 | BRL | 101 | 73-127 | 7.2 | 20 |
| Toluene | **19.33** | | ug/l | 1.0 | 20 | BRL | 97 | 74-126 | 3.1 | 20 |
| trans-1,2-Dichloroethene | **20.09** | | ug/l | 1.0 | 20 | BRL | 100 | 69-131 | 5.1 | 20 |
| trans-1,3-Dichloropropene | **17.80** | | ug/l | 0.40 | 20 | BRL | 89 | 50-150 | 2.3 | 20 |
| Trichloroethene | **20.27** | | ug/l | 1.0 | 20 | BRL | 101 | 66-134 | 6.1 | 20 |
| Chloroethane | **21.94** | | ug/l | 1.0 | 20 | BRL | 110 | 40-160 | 9.5 | 20 |
| Vinyl chloride | **20.69** | | ug/l | 1.0 | 20 | BRL | 103 | 40-160 | 18.0 | 20 |
| 1,2-Dichloroethane | **20.64** | | ug/l | 1.0 | 20 | BRL | 103 | 68-132 | 1.0 | 20 |
| Trichlorofluoromethane | **22.73** | | ug/l | 1.0 | 20 | BRL | 114 | 48-152 | 13.1 | 20 |
| 1,1-Dichloroethane | **20.25** | | ug/l | 1.0 | 20 | BRL | 101 | 72-128 | 5.1 | 20 |
| 1,1,1-Trichloroethane | **21.59** | | ug/l | 1.0 | 20 | BRL | 108 | 75-125 | 4.7 | 20 |
| 1,3-Dichlorobenzene | **19.45** | | ug/l | 1.0 | 20 | BRL | 97 | 73-127 | 5.3 | 20 |
| 1,1,2-Trichloroethane | **17.96** | | ug/l | 1.0 | 20 | BRL | 90 | 71-129 | 2.2 | 20 |
| Chlorobenzene | **19.63** | | ug/l | 1.0 | 20 | BRL | 98 | 66-134 | 4.2 | 20 |
| 1,1-Dichloroethene | **20.81** | | ug/l | 1.0 | 20 | BRL | 104 | 50-150 | 11.2 | 20 |
| 1,2-Dichlorobenzene | **19.08** | | ug/l | 1.0 | 20 | BRL | 95 | 63-137 | 2.1 | 20 |
| 1,4-Dichlorobenzene | **19.07** | | ug/l | 1.0 | 20 | BRL | 95 | 63-137 | 4.3 | 20 |
| Benzene | **19.40** | | ug/l | 0.70 | 20 | BRL | 97 | 64-136 | 2.1 | 20 |
| Bromodichloromethane | **20.60** | | ug/l | 0.50 | 20 | BRL | 103 | 65-135 | 0.0 | 20 |
| Bromoform | **19.42** | | ug/l | 1.0 | 20 | BRL | 97 | 71-129 | 0.0 | 20 |
| Bromomethane | **18.27** | r | ug/l | 1.0 | 20 | BRL | 91 | 40-160 | 26.1 | 20 |
| Carbon tetrachloride | **21.37** | | ug/l | 1.0 | 20 | BRL | 107 | 73-127 | 6.8 | 20 |
| 1,2-Dichloropropane | **19.25** | | ug/l | 1.0 | 20 | BRL | 96 | 40-160 | 2.1 | 20 |
| 1,1,2,2-tetrachloroethane | **18.26** | | ug/l | 0.50 | 20 | BRL | 91 | 60-140 | 2.2 | 20 |
| *Surrogate: % Toluene-d8* | *29.68* | | ug/l | | *20* | | *99* | *70-130* | | |
| *Surrogate: % 1,2-dichlorobenzene-d4* | *30.02* | | ug/l | | *20* | | *100* | *70-130* | | |
| *Surrogate: % Dibromofluoromethane* | *31.02* | | ug/l | | *20* | | *103* | *70-130* | | |
| *Surrogate: % Bromofluorobenzene* | *32.02* | | ug/l | | *20* | | *107* | *70-130* | | |
| **SW6010D** | | | | | | | | | | |
| **Batch 477208A - SW3005A/SW3010A** | | | | | | | | | | |
| **Blank (CD04790-BLK)** | | | | | | Prepared: 01-May-19 Analyzed: 02-May-19 | | | | |
| Nickel | < 0.001 | | mg/l | 0.001 | | | BRL | - | | |
| **LCS (CD04790-LCS)** | | | | | | Prepared: 01-May-19 Analyzed: 02-May-19 | | | | |

## Subcontracted Analyses - Quality Control

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| **SW6010D** | | | | | | | | | | |
| **Batch 477208A - SW3005A/SW3010A** | | | | | | | | | | |
| **LCS (CD04790-LCS)** | | | | | Prepared: 01-May-19 Analyzed: 02-May-19 | | | | | |
| Nickel | **1.038** | | mg/l | 0.001 | 1 | | 104 | 75-125 | | 20 |
| **SW7470A** | | | | | | | | | | |
| **Batch 477275A - SW7470A** | | | | | | | | | | |
| **Blank (CD04770-BLK)** | | | | | Prepared: 02-May-19 Analyzed: 03-May-19 | | | | | |
| Mercury | < 0.0002 | | mg/l | 0.0002 | | | BRL | - | | |
| **LCS (CD04770-LCS)** | | | | | Prepared: 02-May-19 Analyzed: 03-May-19 | | | | | |
| Mercury | **0.002417** | | mg/l | 0.0002 | 0.0025 | | 96.7 | 80-120 | | 20 |

## Notes and Definitions

| | |
|---|---|
| J | J=Estimated Below RL |
| r | This parameter is outside laboratory rpd specified recovery limits. |
| dry | Sample results reported on a dry weight basis |
| NR | Not Reported |
| RPD | Relative Percent Difference |

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

FedEx # 8139 4282 5237 · SC54606 PW

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# CHAIN OF CUSTODY RECORD

Page 1 of 1

**Special Handling:**

- [X] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: AECOM
40 British American Blvd.
Latham NY 12110

Telephone #: 518-951-2200
Project Mgr: Lindsay Mitchell

Invoice To: Same

P.O No.: _____ Quote #: _____

Project No: 60284002-1
Site Name: NE Alloy
Location: Utica State: NY
Sampler(s): SRG

F=Field Filtered 1=$Na_2S2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=$H_3PO_4$ 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G= Grab C=Composite

| Lab ID: | Sample ID: | Date: | Time: | Type | Matrix | Containers: # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | Analysis: 624 | Metals | Check if chlorinated |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC54606 -01 | NE-EFF 043019 | 4/30/19 | 1100 | G | GW | 3 | | | 1 | X | X | |
| -02 | NE-INF 043019 | 4/30/19 | 1135 | | | 3 | | | | X | | |
| -03 | TB 043019 | — | — | — | — | 2 | | | | X | | |

List Preservative Code below: 2 4

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? [ ] Yes [ ] No
CT DPH RCP Report? [ ] Yes [ ] No
[ ] Standard [ ] No QC [ ] DQA*
[ ] ASP A* [ ] ASP B*
[ ] NJ Reduced* [ ] NJ Full*
[ ] Tier II* [ ] Tier IV*
[ ] Other: _____
State-specific reporting standards:

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| [signature] | FedEx | 4/30/19 | 1310 |
| FedEx | [signature] | 5/1/19 | 10:30 |
| | | | |
| | | | |

Temp °C: Observed 3.1; Correction Factor 0; Corrected 3.1; IR ID # 1

[ ] EDD format: _____
[ ] E-mail to: _____

Condition upon receipt: Custody Seals: [ ] Present [✓] Intact [ ] Broken
[ ] Ambient [✓] Iced [ ] Refrigerated [ ] DI VOA Frozen [ ] Soil Jar Frozen

FedEx # 8139 4282 5237 SC54606 PN

eurofins | Spectrum Analytical

# CHAIN OF CUSTODY RECORD

Page 1 of 1

**Special Handling:**
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: AECOM
40 British American Blvd.
Latham NY 12110

Telephone #: 518-951-2200
Project Mgr: Lindsay Mitchell

Invoice To: Same

P.O No.: _____ Quote #: _____

Project No: 60284002-1
Site Name: NE Alloy
Location: Utica State: NY
Sampler(s): SRG

F=Field Filtered 1=$Na_2S2O_3$ 2=HCl 3=$H_2SO_4$ 4=$HNO_3$ 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=$H_3PO_4$ 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G= Grab C=Compsite

| Lab ID: | Sample ID: | Date: | Time: | Type | Matrix | Containers: # of VOA Vials | # of Amber Glass | # of Clear Glass | # of Plastic | Analysis: 624 | Metals * | Check if chlorinated |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC54606-01 | NE-EFF 043019 | 4/30/19 | 1100 | G | GW | 3 | | | 1 | X | X | |
| -02 | NE-INF 043019 | 4/30/19 | 1135 | | | 3 | | | | X | | |
| -03 | TB 043019 | — | — | — | — | 2 | | | | X | | |

List Preservative Code below: 2 4

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? [ ] Yes [ ] No
CT DPH RCP Report? [ ] Yes [ ] No
[ ] Standard [ ] No QC [ ] DQA*
[ ] ASP A* [ ] ASP B*
[ ] NJ Reduced* [ ] NJ Full*
[ ] Tier II* [ ] Tier IV*
[ ] Other: _____
State-specific reporting standards:

* NJ and Mg per client
Dm 5/6

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| [signature] | FedEx | 4/30/19 | 1310 |
| FedEx | [signature] | 5/1/19 | 10:30 |
| | | | |
| | | | |

Temp °C: Observed 3.1; Correction Factor 0; Corrected 3.1; IR ID # 1

[ ] EDD format: _____
[ ] E-mail to: _____

Condition upon receipt: Custody Seals: [ ] Present [x] Intact [ ] Broken
[ ] Ambient [x] Iced [ ] Refrigerated [ ] DI VOA Frozen [ ] Soil Jar Frozen

FedEx Express Package US Airbill

FedEx Tracking Number 8139 4282 5237

Form ID No. 0215

Recipient's Copy

**1 From**

Phone 518 951-2200

AECOM TECHNICAL SERVICES

Address 40 BRITISH AMERICAN BLVD

Dept./Floor/Suite/Room

City LATHAM State NY ZIP 12110-1421

**2 Your Internal Billing Reference**

**3 To**

Recipient's Name Attn: Sample Receipt Phone 413 789-9018

Company Eurofins Spectrum Analytical

Address 11 Algren Dr.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Agawam State MA ZIP 01001

Hold Weekday — FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

Hold Saturday — FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

0132325350

8139 4282 5237

**4 Express Package Service** * To most locations.

***Packages up to 150 lbs.***
*For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

**Next Business Day**

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

**2 or 3 Business Days**

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

**6 Special Handling and Delivery Signature Options** Fees may apply. See the FedEx Service Guide.

☐ Saturday Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.
☐ Direct Signature — Someone at recipient's address may sign for delivery.
☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only.

**Does this shipment contain dangerous goods?**

One box must be checked.

☒ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Restrictions apply for dangerous goods — see the current FedEx Service Guide. ☐ Cargo Aircraft Only

**7 Payment** *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☒ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages ____ Total Weight ____ lbs. Credit Card Auth. ____

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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# Batch Summary

**477208A**

*Subcontracted Analyses*

CD04790-BLK
CD04790-LCS
SC54606-01 (NE-EFF 043019)

**477275A**

*Subcontracted Analyses*

CD04770-BLK
CD04770-LCS
SC54606-01 (NE-EFF 043019)

**477498A**

*Subcontracted Analyses*

CD05182-BLK
CD05182-LCS
CD05182-LCSD
CD05182-MS
CD05182-MSD
SC54606-01 (NE-EFF 043019)
SC54606-02 (NE-INF 043019)
SC54606-03 (TB 043019)