SEP 2010
Brownfields

# REPORT OF INDOOR AIR ASSESSMENT

## FORMER UNIVERSAL STAINLESS FACILITY

**10801 Nations Ford Road**
**Charlotte, North Carolina**

**Prepared for:**

## ADH PROPERTIES

**Care of Ms. Amanda Short**
**McGuireWoods, LLP**
**201 North Tryon Street, Ste. 3000**
**Charlotte, North Carolina 28202**

**Prepared By:**

**MACTEC ENGINEERING AND CONSULTING, INC.**
**2801 YORKMONT ROAD, SUITE 100**
**CHARLOTTE, NORTH CAROLINA 28208**

**SEPTEMBER 16, 2010**

**MACTEC PROJECT: 6228-10-5195**

MACTEC

*Printed with Environmentally-Responsible Products*
*Please Recycle!*

MACTEC

engineering and constructing a better tomorrow

September 16, 2010

Ms. Carolyn Minnich, Brownfields, Project Manager
North Carolina Department of Environment and Natural Resources
Division of Waste Management
Brownfields Program
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

**Subject:** **Transmittal Letter**
**Report of Indoor Air Assessment**
**Former Universal Stainless Facility**
**10801 Nations Ford Road**
**Charlotte, North Carolina**
**Brownfields Project Number: 09048-05-60**
**MACTEC Project: 6228-10-5195**

Dear Ms. Minnich:

On behalf of ADH Properties, MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to present this *Report of Indoor Air Assessment* to the North Carolina Department of Environment and Natural Resources (NCDENR) which includes a description of the field activities, the results obtained, and MACTEC's conclusions and recommendations at the Former Universal Stainless Facility located in Charlotte, North Carolina (subject property).

We appreciate your review of this Report. Please contact the undersigned at (704) 357-8600 if you have questions.

Sincerely,

**MACTEC ENGINEERING AND CONSULTING, INC.**

Jacqueline Williams

Andrew J. Frantz, A.E.P.
Staff Environmental Scientist

For Andrew J. Frantz
With Permission

Enclosures

Robert C. Foster

Robert C. Foster, L.G.
Principal Geologist

MACTEC Engineering and Consulting, Inc.
2801 Yorkmont Road, Suite 100 • Charlotte, NC 28208 • Phone: 704.357.8600 • Fax: 704.357.8638
License Number: F-0653

www.mactec.com
Printed with Environmentally-Responsible Products
Please Recycle!

## TABLE OF CONTENTS

1. SITE HISTORY AND CHARACTERIZATION ..... 1
2. HISTORICAL ENVIRONMENTAL ASSESSMENT INFORMATION ..... 3
3. INDOOR AIR SAMPLING AND ANALYSIS ..... 5
4. INDOOR AIR ASSESSMENT RESULTS ..... 7

## LIST OF TABLES

Table 1 – Summary of Indoor Air Analytical Results

Table 2 – Summary of Meteorological Data during Sample Collection

## LIST OF FIGURE

Figure 1 – Site Plan

## LIST OF APPENDICIES

Appendix A – Figures

Appendix B – Tables

Appendix C – Laboratory Analytical Report and Chain-of-Custody Form

## 1. SITE HISTORY AND CHARACTERIZATION

The 8.132-acre subject property (site) is located at 10801 Nations Ford Road in Charlotte, North Carolina and consists of Mecklenburg County Tax Parcel 205-141-09. The subject property contains an approximately 78,612-square foot, one-story building that was constructed in 1969. The warehouse portion of the building encompasses approximately 72,080 square feet with about 6,532 square feet of office space. Remaining portions of the site are asphalt-paved driveway and parking areas and grass covered areas. The site is currently occupied by the Mecklenburg Lumber Company. A site plan is provided as **Figure 1.**

Industrial activities have reportedly occurred at the site since 1969. Former occupants include: Hayes Albion Corporation (textile equipment manufacturing and metal fabrication), Kelwood, Inc. (producer of bed linens), Bonded Fiber Products (batting material manufacturer), Wellman, Inc., and Universal Stainless. Potential on-site environmental concerns include: a "degreaser pit" located on the interior of the building and utilized by former tenants; the former use of vinyl acetate, machine lubricants, and other chemicals at the site; floor drains and sumps which discharged to an underground wastewater vault; and oil staining previously observed at the site.

The subject property is located within the Charlotte Belt of the Piedmont Physiographic Province. Based on a review of the Geologic Map of North Carolina (1985), the site is underlain by granite-mica schist.

The Soil Survey of Mecklenburg County indicates that soils at the subject property are classified as Urban. Urban soils consist of areas where more than 85 percent of the surface area is covered with asphalt, concrete, buildings or other impervious cover.

Based on the USGS topographic map, the elevation of the subject property ranges from approximately 600 to 610 feet above mean sea level. Surface drainage patterns within the Piedmont typically indicate the direction contaminants would be transported by surface water or groundwater. Based on our interpretation of the topographic map and on-site observations, surface water on the property would primarily be expected to flow east-southeast.

The direction and movement of groundwater through soil is dependent on soil type and the presence of relict structures and textures of the underlying rock. Fractures, faults, folds and foliation planes affect the migration of groundwater in rock. Since no significant geologic features were identified on the site, it is reasonable to assume that the direction of groundwater

flow under static conditions (no pumping interference) approximates the surface topography of the site. Groundwater at the property would be expected to flow east-southeast.

## 2. HISTORICAL ENVIRONMENTAL ASSESSMENT INFORMATION

During the Phase II Assessment activities conducted by Buxton Environmental, Inc. in March and April 2005, Total Petroleum Hydrocarbons (TPH), Oil and Grease was detected above North Carolina (NC) General Action Level in soil samples collected along the railroad spur adjacent to the building and near the air compressor area where staining was observed. TPH, Oil and Grease, Tetrachloroethene (PCE), and Trichloroethene (TCE) were detected above action levels in a soil sample collected at the "degreaser pit". Additional Volatile Organic Compounds (VOCs) including chloroform, 1,1,2-TCA, PCE, and TCE were detected above NC Groundwater Quality Standards in groundwater samples collected from three temporary monitoring wells (one located near the wastewater vault and two located along the railroad spur).

In April and May 2007, ERM NC, PC completed a Sensitive Receptor Survey. Their report concluded that ten water supply wells were identified within the study area. Four water supply wells were observed within a one-half mile radius of the subject property, with the nearest supply well located approximately 2,020 feet south-southwest (hydraulically cross-gradient) of the subject property.

In March 2010, MACTEC conducted an environmental assessment at the subject property which included sub-slab soil-gas sampling and groundwater sampling. MACTEC collected five sub-slab soil-gas samples and three groundwater samples from the subject property. The locations of the sub-slab soil-gas samples were as follows: one location was installed in the addition of the on-site building (SG-1), one location was installed near the former floor-drain (SG-2), one location was installed near the air compressors (SG-3), one location was installed near the former degreaser pit (SG-4) and one location was installed near the loading dock (SG-5). The sub-slab soil-gas samples were submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method TO-15. The results of the sub-slab soil-gas analysis identified PCE in soil-gas samples SG-2 and SG-5 at concentrations which exceeded the IHSB Industrial/Commercial Acceptable Soil-Gas Concentration of 210 $\mu g/m^3$.

In March 2010, MACTEC collected groundwater samples from the three existing monitoring wells (TW-1, TW-2 and TW-3) located at the subject property. The groundwater samples were submitted for laboratory analysis of VOCs by EPA Method 8260, SVOCs by EPA Method 8270 and TPH, Oil and Grease by EPA Method 9071. The results of the groundwater analysis identified TCE concentrations in wells TW-2 and TW-3, a PCE concentration in well TW-2, and

cis-1,2-dichloroethene concentration in well TW-2 which increased since the 2005 sampling event. However, the PCE concentration in well TW-3 decreased since the 2005 sampling event.

## 3. INDOOR AIR SAMPLING AND ANALYSIS

The office portion of the existing building encompasses less than 10 percent of the total area and is situated hydraulically upgradient from the affected area of the site. The office space dimensions are approximately 200 feet by 33 feet. The windows in this part of the building are sealed. Four ventilation ports were observed on the roof of the office area. The property owner, Mr. Alan Holcombe, could not provide information relative to the designed exhaust ventilation flow rate for this area. Mr. Holcombe was not aware of a "makeup air" source at the site. The office space is heated by natural gas heaters and cooled by an electric air conditioning system.

The warehouse portion of the existing building is separated from the offices by a wall with two doors. The warehouse space dimensions are approximately 225 feet by 320 feet and encompass more than 90 percent of the total area. The warehouse space is equipped with four garage doors on the eastern wall and two access doors on the western wall. The warehouse space is not heated or cooled. Consequently, during warm weather, the four garage doors are opened and approximately 10 five-foot diameter electric fans are used to facilitate air movement within the warehouse. In addition, nine roof-mounted vents were observed over the warehouse area. According to Mr. Holcombe, these vents are not equipped with mechanical fans. Mr. Holcombe could not provide information relative to the designed exhaust ventilation flow rate for this area.

MACTEC collected four indoor air samples inside the warehouse space, one indoor air sample inside the office space and one outdoor air sample. The sampling scope included the following items:

- MACTEC personnel selected the indoor air sample locations based on accessibility, previous assessment results and known site activities;
- Each sample was collected from the normal breathing level, two to five feet above the floor;
- The samples were collected over an 8-hour time period outside of normal business hours (Saturday, August 7, 2010) to ensure windows and doors at the facility remain closed during sample collection. Furthermore, the mechanical blowers in the warehouse and the air conditioning units in the office area were not operated during the sampling period;
- Each sample was collected into a Summa canister at a flow rate of approximately 12.5 mL/min (8-hour sample time) and submitted to a North Carolina certified laboratory for analysis;

- The outdoor air sample was collected upwind of the on-site building and was used as a background sample.

- The outdoor air sample was collected over the same 8-hour time period into a Summa canister at a flow rate of approximately 12.5 mL/min.

- The Summa canisters were submitted to a laboratory for analysis of VOCs via EPA Method TO-15.

## 4. INDOOR AIR ASSESSMENT RESULTS

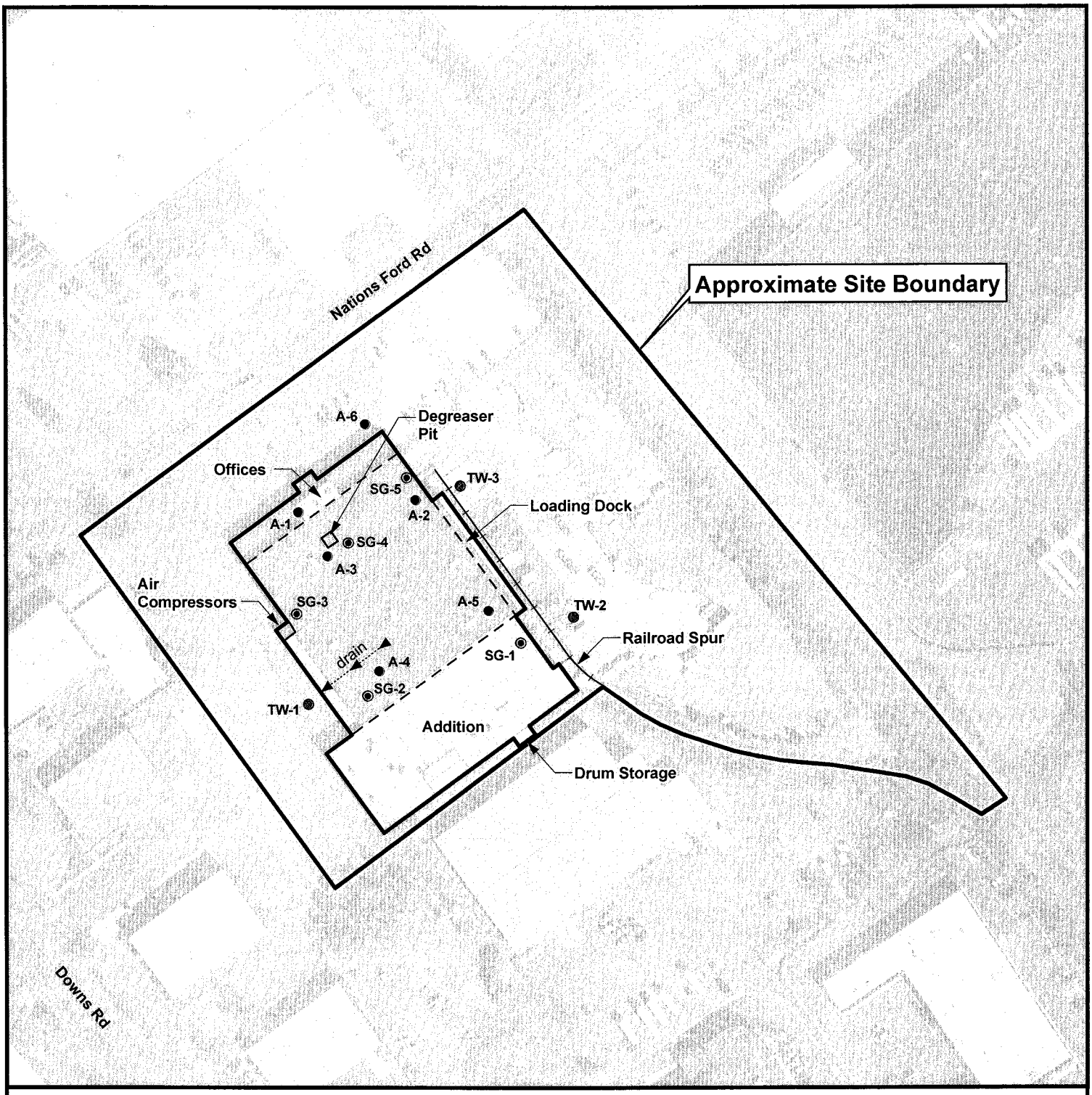
The results of the laboratory analysis identified concentrations of five contaminants (benzene, 1,4-dichlorobenzene, methylene chloride, PCE and 1,2,4,-trichlorobenzene) that exceeded the IHSB Industrial/Commercial Acceptable Indoor Air Concentrations.

- Benzene was identified in samples A-1 (office area), A-4 and A-5 (warehouse area).
- 1,4-Dichlorobenzene was identified in sample A-3 (warehouse area);
- Methylene chloride was identified in samples A-2 and A-5 (warehouse area);
- PCE was identified in samples A-1 (office area) and A-2 (warehouse area);
- 1,2,4-Trichlorobenzene was identified in samples A-1 (office area) and A-4 (warehouse area).

Analysis of the "background" sample (A-6) collected from outside the facility did not identify unacceptable levels of contaminants.

# APPENDIX A

# FIGURE




Source: Aerial Photograph provided by Mecklenburg County GIS, North Carolina, dated 2009.

Approximate Site Boundary
Air Samples
Soil Gas Sample Locations
Monitoring Wells

0 75 150 300 450 600 Feet

N

MACTEC

**SITE PLAN**
**FORMER UNIVERSAL STAINLESS FACILITY**
**10801 NATIONS FORD ROAD**
**CHARLOTTE, NORTH CAROLINA**

| PREPARED BY | DATE | CHECKED BY | DATE | JOB NUMBER | FIGURE |
|---|---|---|---|---|---|
| ROF | 9-2-10 | RVF | 9-15-10 | 6228-10-5195 | 1 |

# APPENDIX B

# TABLES

**Table 1: Summary of Indoor Air Analytical Results**
**Former Universal Stainless**
**10801 Nation Ford Road, Charlotte North Carolina**
**MACTEC Project: 6228-10-5195**

| Constituent | A-1 | A-2 | A-3 | A-4 | A-5 | A-6 | IHSB Industial/Commercial Acceptable Indoor Air Concentrations |
|---|---|---|---|---|---|---|---|
| Acetone | 0.061 | 0.099 | 0.081 | 0.098 | 0.050 | 0.019 | **28** |
| Benzene | **0.003** | <0.003 | <0.003 | **0.003** | **0.003** | <0.003 | **0.0016** |
| 2-Butanone | 0.004 | 0.005 | 0.010 | 0.006 | 0.004 | <0.004 | **4.4** |
| Chloromethane | 0.002 | 0.002 | 0.002 | 0.002 | <0.002 | <0.002 | **0.078** |
| 1,4-Dichlorobenzene | <0.005 | <0.005 | **0.016** | <0.005 | <0.005 | <0.005 | **0.0011** |
| 4-Ethyltoluene | <0.005 | 0.006 | <0.005 | 0.005 | <0.005 | <0.005 | **NSL** |
| n-Hexane | 0.006 | 0.010 | 0.004 | 0.006 | 0.014 | 0.004 | **0.62** |
| Methylene chloride | 0.011 | **0.048** | 0.020 | 0.018 | **0.054** | 0.018 | **0.026** |
| 2-Propanol | <0.003 | <0.003 | 0.029 | <0.003 | <0.003 | <0.003 | **NSL** |
| Propene | 0.005 | 0.007 | 0.003 | 0.005 | 0.003 | <0.002 | **NSL** |
| Tetrachloroethene | **0.009** | **0.009** | <0.009 | <0.009 | <0.009 | <0.009 | **0.0021** |
| Tetrahydrofuran | <0.004 | <0.004 | 0.004 | <0.004 | <0.004 | <0.004 | **NSL** |
| 1,2,4-Trichlorobenzene | **0.006** | <0.005 | <0.005 | **0.005** | <0.005 | <0.005 | **0.00176** |
| Trichlorofluoromethane | 0.019 | 0.021 | 0.029 | 0.022 | 0.011 | <0.007 | **0.62** |
| Toluene | 0.008 | 0.007 | 0.008 | 0.008 | 0.008 | <0.005 | **4.4** |
| Total Light Petroleum Hydrocarbons | <0.92 | 0.95 | <0.92 | <0.92 | <0.92 | <0.92 | **NSL** |

Notes:

1. Concentrations shown in mg/m3 (ppmv)
2. IHSB = Inactive Hazardous Sites Branch
3. NSL = No standard listed
4. Bold values exceed IHSB Industrial/Commercial Acceptable Indoor Air Concentrations
5. A-6 = Outdoor background sample

Prepared By/Date: AJF 9-3-10
Checked By/Date: BCF 9-13-10

**Table 2: Summary Meteorological Data During Sample Collection**
**Former Universal Stainless**
**10801 Nation Ford Road, Charlotte North Carolina**
**MACTEC Project: 6228-10-5195**

| Time | Temperature (°F) | Barometric Pressure (in. Hg) | Wind Speed (mph) | Precipitation (inches) |
|---|---|---|---|---|
| 9:00 | 75.9 | 29.93 | 8.1 | 0.0 |
| 13:00 | 84.9 | 29.96 | 8.1 | 0.0 |
| 17:00 | 89.1 | 29.91 | 3.5 | 0.0 |

Notes:

1. Data collected on August 7, 2010
2. Data obtained from Weather Underground® on-line services at www.wunderground.com

Prepared By/Date: AJF 9-3-10

Checked By/Date: RCF 9-13-10

# APPENDIX C

# LABORATORY ANALYTICAL REPORT AND CHAIN-OF CUSTODY FORM

**Environmental Conservation Laboratories, Inc.**
**4810 Executive Park Court, Suite 211**
**Jacksonville FL, 32216-6069**
**Phone: 904.296.3007 FAX: 904.296.6210**
**www.encolabs.com**

Thursday, August 19, 2010

MACTEC Engineering (MA031)

Attn: Andrew J Frantz

2801 Yorkmont Road #100

Charlotte, NC 28218

Reviewed by RCFoster on August 19, 2010.

**RE: Laboratory Results for**
**Project Number: 6228-10-5195, Project Name/Desc: Former Universal Stainless**
**ENCO Workorder: B003638**

Dear Andrew J Frantz,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Tuesday, August 10, 2010.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Jacksonville. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chris Tompkins

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 22.

www.encolabs.com

**PROJECT NARRATIVE**

Client: MACTEC Engineering (MA031)
Project: Former Universal Stainless
ENCO Project ID: B003638

Overview

All samples submitted were analyzed by Environmental Conservation Laboratories, Inc. in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling and processing will be discussed in the Remarks section below.

Remarks

Analysis: TO-15
Affected Samples: 0H16013-BS1, A-1[B003638-01], A-2[B003638-02], A-3[B003638-03], A-4[B003638-04], A-5[B003638-05], A-6[B003638-06]
Nonconformance: The Laboratory Control Standard was out of control with high bias. Since the analytes in the associated sample(s) were not detected, the impact of this nonconformance on data quality is minimal.

Analysis: TO-15
Affected Samples: 0H16013-BS1, A-2[B003638-02], A-4[B003638-04]
Nonconformance: The laboratory control sample (LCS) exhibited high bias; the associated samples results had positive results and thus the impact of this nonconformance may affect data quality.

Analysis: TO-15
Affected Samples: 0H16013-BLK1, A-1[B003638-01], A-2[B003638-02], A-3[B003638-03], A-4[B003638-04], A-5[B003638-05], A-6[B003638-06]
Nonconformance: The method blank associated to the flagged samples showed a positive result above the MDL, but below the reporting limit. Since the magnitude of the sample result is within a factor of 10 of the associated blank, the result should be considered to be an estimate.

Chris Tompkins
Project Manager

www.encolabs.com

## SAMPLE SUMMARY/LABORATORY CHRONICLE

**Client ID: A-1** | **Lab ID: B003638-01** | **Sampled: 08/07/10 17:00** | **Received: 08/10/10 15:00**

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| TO-15 | 08/21/10 | 08/14/10 19:36 | 8/16/2010 20:53 |

**Client ID: A-2** | **Lab ID: B003638-02** | **Sampled: 08/07/10 17:02** | **Received: 08/10/10 15:00**

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| TO-15 | 08/21/10 | 08/14/10 19:36 | 8/16/2010 21:33 |

**Client ID: A-3** | **Lab ID: B003638-03** | **Sampled: 08/07/10 17:04** | **Received: 08/10/10 15:00**

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| TO-15 | 08/21/10 | 08/14/10 19:36 | 8/16/2010 23:18 |

**Client ID: A-4** | **Lab ID: B003638-04** | **Sampled: 08/07/10 17:06** | **Received: 08/10/10 15:00**

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| TO-15 | 08/21/10 | 08/14/10 19:36 | 8/16/2010 23:51 |

**Client ID: A-5** | **Lab ID: B003638-05** | **Sampled: 08/07/10 17:08** | **Received: 08/10/10 15:00**

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| TO-15 | 08/21/10 | 08/14/10 19:36 | 8/17/2010 00:25 |

**Client ID: A-6** | **Lab ID: B003638-06** | **Sampled: 08/07/10 17:10** | **Received: 08/10/10 15:00**

| Parameter | Hold Date/Time(s) | Prep Date/Time(s) | Analysis Date/Time(s) |
|---|---|---|---|
| TO-15 | 08/21/10 | 08/14/10 19:36 | 8/17/2010 00:59 |

www.encolabs.com

## SAMPLE DETECTION SUMMARY

**Client ID: A-1** **Lab ID: B003638-01**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 0.006 | IV | 0.005 | 0.019 | mg/m³ Air | TO-15 | J-01 |
| 2-Butanone | 0.004 | I | 0.004 | 0.007 | mg/m³ Air | TO-15 | |
| Acetone | 0.061 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | |
| Benzene | 0.003 | I | 0.003 | 0.008 | mg/m³ Air | TO-15 | |
| Chloromethane | 0.002 | I | 0.002 | 0.005 | mg/m³ Air | TO-15 | |
| Methylene chloride | 0.011 | V | 0.003 | 0.009 | mg/m³ Air | TO-15 | J-01 |
| n-Hexane | 0.006 | I | 0.004 | 0.009 | mg/m³ Air | TO-15 | |
| Propene | 0.005 | | 0.002 | 0.004 | mg/m³ Air | TO-15 | |
| Tetrachloroethene | 0.009 | I | 0.009 | 0.017 | mg/m³ Air | TO-15 | |
| Toluene | 0.008 | I | 0.005 | 0.009 | mg/m³ Air | TO-15 | |
| Trichlorofluoromethane | 0.019 | | 0.007 | 0.014 | mg/m³ Air | TO-15 | |

**Client ID: A-2** **Lab ID: B003638-02**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| 2-Butanone | 0.005 | I | 0.004 | 0.007 | mg/m³ Air | TO-15 | |
| 4-Ethyltoluene | 0.006 | I | 0.005 | 0.012 | mg/m³ Air | TO-15 | J-02 |
| Acetone | 0.099 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | |
| Chloromethane | 0.002 | I | 0.002 | 0.005 | mg/m³ Air | TO-15 | |
| Methylene chloride | 0.048 | V | 0.003 | 0.009 | mg/m³ Air | TO-15 | J-01 |
| n-Hexane | 0.010 | | 0.004 | 0.009 | mg/m³ Air | TO-15 | |
| Propene | 0.007 | | 0.002 | 0.004 | mg/m³ Air | TO-15 | |
| Tetrachloroethene | 0.009 | I | 0.009 | 0.017 | mg/m³ Air | TO-15 | |
| Toluene | 0.007 | I | 0.005 | 0.009 | mg/m³ Air | TO-15 | |
| Total Light Petroleum Hydrocarbons | 0.95 | | 0.92 | 0.92 | mg/m³ Air | TO-15 | |
| Trichlorofluoromethane | 0.021 | | 0.007 | 0.014 | mg/m³ Air | TO-15 | |

**Client ID: A-3** **Lab ID: B003638-03**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 0.016 | | 0.005 | 0.015 | mg/m³ Air | TO-15 | |
| 2-Butanone | 0.010 | | 0.004 | 0.007 | mg/m³ Air | TO-15 | |
| 2-Propanol | 0.029 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | J-02 |
| Acetone | 0.081 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | |
| Chloromethane | 0.002 | I | 0.002 | 0.005 | mg/m³ Air | TO-15 | |
| Methylene chloride | 0.020 | V | 0.003 | 0.009 | mg/m³ Air | TO-15 | J-01 |
| n-Hexane | 0.004 | I | 0.004 | 0.009 | mg/m³ Air | TO-15 | |
| Propene | 0.003 | I | 0.002 | 0.004 | mg/m³ Air | TO-15 | |
| Tetrahydrofuran | 0.004 | I | 0.004 | 0.007 | mg/m³ Air | TO-15 | |
| Toluene | 0.008 | I | 0.005 | 0.009 | mg/m³ Air | TO-15 | |
| Trichlorofluoromethane | 0.029 | | 0.007 | 0.014 | mg/m³ Air | TO-15 | |

**Client ID: A-4** **Lab ID: B003638-04**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 0.005 | I | 0.005 | 0.012 | mg/m³ Air | TO-15 | |
| 2-Butanone | 0.006 | I | 0.004 | 0.007 | mg/m³ Air | TO-15 | |
| 4-Ethyltoluene | 0.005 | I | 0.005 | 0.012 | mg/m³ Air | TO-15 | J-02 |
| Acetone | 0.098 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | |
| Benzene | 0.003 | I | 0.003 | 0.008 | mg/m³ Air | TO-15 | |
| Chloromethane | 0.002 | I | 0.002 | 0.005 | mg/m³ Air | TO-15 | |
| Methylene chloride | 0.018 | V | 0.003 | 0.009 | mg/m³ Air | TO-15 | J-01 |

www.encolabs.com

**Client ID: A-4** **Lab ID: B003638-04**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| n-Hexane | 0.006 | I | 0.004 | 0.009 | mg/m³ Air | TO-15 | |
| Propene | 0.005 | | 0.002 | 0.004 | mg/m³ Air | TO-15 | |
| Toluene | 0.008 | I | 0.005 | 0.009 | mg/m³ Air | TO-15 | |
| Trichlorofluoromethane | 0.022 | | 0.007 | 0.014 | mg/m³ Air | TO-15 | |

**Client ID: A-5** **Lab ID: B003638-05**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| 2-Butanone | 0.004 | I | 0.004 | 0.007 | mg/m³ Air | TO-15 | |
| Acetone | 0.050 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | |
| Benzene | 0.003 | I | 0.003 | 0.008 | mg/m³ Air | TO-15 | |
| Methylene chloride | 0.054 | V | 0.003 | 0.009 | mg/m³ Air | TO-15 | J-01 |
| n-Hexane | 0.014 | | 0.004 | 0.009 | mg/m³ Air | TO-15 | |
| Propene | 0.003 | I | 0.002 | 0.004 | mg/m³ Air | TO-15 | |
| Toluene | 0.008 | I | 0.005 | 0.009 | mg/m³ Air | TO-15 | |
| Trichlorofluoromethane | 0.011 | I | 0.007 | 0.014 | mg/m³ Air | TO-15 | |

**Client ID: A-6** **Lab ID: B003638-06**

| Analyte | Results | Flag | MDL | PQL | Units | Method | Notes |
|---|---|---|---|---|---|---|---|
| Acetone | 0.019 | | 0.003 | 0.006 | mg/m³ Air | TO-15 | |
| Methylene chloride | 0.018 | V | 0.003 | 0.009 | mg/m³ Air | TO-15 | J-01 |
| n-Hexane | 0.004 | I | 0.004 | 0.009 | mg/m³ Air | TO-15 | |

www.encolabs.com

## ANALYTICAL RESULTS

**Description:** A-1
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-01
**Sampled:** 08/07/10 17:00
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

### Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane [71-55-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,1,2,2-Tetrachloroethane [79-34-5] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.017 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,1,2-Trichloroethane [79-00-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.014 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,1-Dichloroethane [75-34-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,1-Dichloroethene [75-35-4] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **1,2,4-Trichlorobenzene [120-82-1]** | **0.006** | IV | mg/m³ Air | 1 | 0.005 | 0.019 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | J-01 |
| 1,2,4-Trimethylbenzene [95-63-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,2-Dibromoethane [106-93-4] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.019 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,2-Dichlorobenzene [95-50-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,2-Dichloroethane [107-06-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,2-Dichloropropane [78-87-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,3,5-Trimethylbenzene [108-67-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,3-Butadiene [106-99-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| 1,3-Dichlorobenzene [541-73-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,4-Dichlorobenzene [106-46-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.015 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 1,4-Dioxane [123-91-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| 2,2,4-Trimethylpentane [540-84-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **2-Butanone [78-93-3]** | **0.004** | I | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 2-Hexanone [591-78-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| 2-Propanol [67-63-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| 3-Chloropropene [107-05-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| 4-Ethyltoluene [622-96-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| 4-Methyl-2-pentanone [108-10-1] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| **Acetone [67-64-1]** | **0.061** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Benzene [71-43-2]** | **0.003** | I | mg/m³ Air | 1 | 0.003 | 0.008 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Benzyl chloride [100-44-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.013 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Bromodichloromethane [75-27-4] | 0.010 | U | mg/m³ Air | 1 | 0.010 | 0.017 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| Bromoethene [593-60-2] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.011 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Bromoform [75-25-2] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.026 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Bromomethane [74-83-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Carbon disulfide [75-15-0] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Carbon tetrachloride [56-23-5] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.016 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Chlorobenzene [108-90-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Chloroethane [75-00-3] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.007 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Chloroform [67-66-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Chloromethane [74-87-3]** | **0.002** | I | mg/m³ Air | 1 | 0.002 | 0.005 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| cis-1,2-Dichloroethene [156-59-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| cis-1,3-Dichloropropene [10061-01-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Cyclohexane [110-82-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Dibromochloromethane [124-48-1] | 0.012 | U | mg/m³ Air | 1 | 0.012 | 0.021 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| Dichlorodifluoromethane [75-71-8] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Ethyl Acetate [141-78-6] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Ethylbenzene [100-41-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Freon 113 [76-13-2] | 0.015 | U | mg/m³ Air | 1 | 0.015 | 0.019 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Freon 114 [76-14-2] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.017 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Heptane [142-82-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| Hexachlorobutadiene [87-68-3] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.027 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Methylene chloride [75-09-2]** | **0.011** | V | mg/m³ Air | 1 | 0.003 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | J-01 |

www.encolabs.com

**Description:** A-1
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-01
**Sampled:** 08/07/10 17:00
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl-tert-butyl ether [1634-04-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **n-Hexane [110-54-3]** | **0.006** | I | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Propene [115-07-1]** | **0.005** | | mg/m³ Air | 1 | 0.002 | 0.004 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Styrene [100-42-5] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Tetrachloroethene [127-18-4]** | **0.009** | I | mg/m³ Air | 1 | 0.009 | 0.017 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Tetrahydrofuran [109-99-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Toluene [108-88-3]** | **0.008** | I | mg/m³ Air | 1 | 0.005 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Total Light Petroleum Hydrocarbons [ECL-0163] | 0.92 | U | mg/m³ Air | 1 | 0.92 | 0.92 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| trans-1,2-Dichloroethene [156-60-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| trans-1,3-Dichloropropene [10061-02-6] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| Trichloroethene [79-01-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.013 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| **Trichlorofluoromethane [75-69-4]** | **0.019** | | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Vinyl acetate [108-05-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | QL-02 |
| Vinyl chloride [75-01-4] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |
| Xylenes (Total) [1330-20-7] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.011 | 0H16013 | TO-15 | 08/16/10 20:53 | LTS | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *31* | *1* | *31.2* | *100 %* | *70-130* | *0H16013* | *TO-15* | *08/16/10 20:53* | *LTS* | |

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

**Description:** A-2
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-02
**Sampled:** 08/07/10 17:02
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane [71-55-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,1,2,2-Tetrachloroethane [79-34-5] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.017 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,1,2-Trichloroethane [79-00-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.014 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,1-Dichloroethane [75-34-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,1-Dichloroethene [75-35-4] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,2,4-Trichlorobenzene [120-82-1] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.019 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,2,4-Trimethylbenzene [95-63-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,2-Dibromoethane [106-93-4] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.019 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,2-Dichlorobenzene [95-50-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,2-Dichloroethane [107-06-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,2-Dichloropropane [78-87-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,3,5-Trimethylbenzene [108-67-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,3-Butadiene [106-99-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| 1,3-Dichlorobenzene [541-73-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,4-Dichlorobenzene [106-46-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.015 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 1,4-Dioxane [123-91-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| 2,2,4-Trimethylpentane [540-84-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **2-Butanone [78-93-3]** | **0.005** | I | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| 2-Hexanone [591-78-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| 2-Propanol [67-63-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| 3-Chloropropene [107-05-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **4-Ethyltoluene [622-96-8]** | **0.006** | I | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | J-02 |
| 4-Methyl-2-pentanone [108-10-1] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| **Acetone [67-64-1]** | **0.099** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Benzene [71-43-2] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.008 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Benzyl chloride [100-44-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.013 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Bromodichloromethane [75-27-4] | 0.010 | U | mg/m³ Air | 1 | 0.010 | 0.017 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| Bromoethene [593-60-2] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.011 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Bromoform [75-25-2] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.026 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Bromomethane [74-83-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Carbon disulfide [75-15-0] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Carbon tetrachloride [56-23-5] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.016 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Chlorobenzene [108-90-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Chloroethane [75-00-3] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.007 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Chloroform [67-66-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Chloromethane [74-87-3]** | **0.002** | I | mg/m³ Air | 1 | 0.002 | 0.005 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| cis-1,2-Dichloroethene [156-59-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| cis-1,3-Dichloropropene [10061-01-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Cyclohexane [110-82-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Dibromochloromethane [124-48-1] | 0.012 | U | mg/m³ Air | 1 | 0.012 | 0.021 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| Dichlorodifluoromethane [75-71-8] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Ethyl Acetate [141-78-6] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Ethylbenzene [100-41-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Freon 113 [76-13-2] | 0.015 | U | mg/m³ Air | 1 | 0.015 | 0.019 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Freon 114 [76-14-2] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.017 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Heptane [142-82-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| Hexachlorobutadiene [87-68-3] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.027 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Methylene chloride [75-09-2]** | **0.048** | V | mg/m³ Air | 1 | 0.003 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | J-01 |
| Methyl-tert-butyl ether [1634-04-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **n-Hexane [110-54-3]** | **0.010** | | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Propene [115-07-1]** | **0.007** | | mg/m³ Air | 1 | 0.002 | 0.004 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |

www.encolabs.com

**Description:** A-2
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-02
**Sampled:** 08/07/10 17:02
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | POL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Styrene [100-42-5] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Tetrachloroethene [127-18-4]** | **0.009** | I | mg/m³ Air | 1 | 0.009 | 0.017 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Tetrahydrofuran [109-99-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Toluene [108-88-3]** | **0.007** | I | mg/m³ Air | 1 | 0.005 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Total Light Petroleum Hydrocarbons [ECL-0163]** | **0.95** | | mg/m³ Air | 1 | 0.92 | 0.92 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| trans-1,2-Dichloroethene [156-60-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| trans-1,3-Dichloropropene [10061-02-6] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| Trichloroethene [79-01-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.013 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| **Trichlorofluoromethane [75-69-4]** | **0.021** | | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Vinyl acetate [108-05-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | QL-02 |
| Vinyl chloride [75-01-4] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |
| Xylenes (Total) [1330-20-7] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.011 | 0H16013 | TO-15 | 08/16/10 21:33 | LTS | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *34* | *1* | *31.2* | *110 %* | *70-130* | *0H16013* | *TO-15* | *08/16/10 21:33* | *LTS* | |

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

**Description:** A-3
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-03
**Sampled:** 08/07/10 17:04
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane [71-55-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,1,2,2-Tetrachloroethane [79-34-5] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,1,2-Trichloroethane [79-00-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.014 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,1-Dichloroethane [75-34-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,1-Dichloroethene [75-35-4] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,2,4-Trichlorobenzene [120-82-1] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.019 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,2,4-Trimethylbenzene [95-63-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,2-Dibromoethane [106-93-4] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.019 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,2-Dichlorobenzene [95-50-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,2-Dichloroethane [107-06-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,2-Dichloropropane [78-87-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,3,5-Trimethylbenzene [108-67-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,3-Butadiene [106-99-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| 1,3-Dichlorobenzene [541-73-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **1,4-Dichlorobenzene [106-46-7]** | **0.016** | | mg/m³ Air | 1 | 0.005 | 0.015 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 1,4-Dioxane [123-91-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| 2,2,4-Trimethylpentane [540-84-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **2-Butanone [78-93-3]** | **0.010** | | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 2-Hexanone [591-78-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| **2-Propanol [67-63-0]** | **0.029** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | J-02 |
| 3-Chloropropene [107-05-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| 4-Ethyltoluene [622-96-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| 4-Methyl-2-pentanone [108-10-1] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| **Acetone [67-64-1]** | **0.081** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Benzene [71-43-2] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.008 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Benzyl chloride [100-44-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.013 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Bromodichloromethane [75-27-4] | 0.010 | U | mg/m³ Air | 1 | 0.010 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| Bromoethene [593-60-2] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Bromoform [75-25-2] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.026 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Bromomethane [74-83-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Carbon disulfide [75-15-0] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Carbon tetrachloride [56-23-5] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.016 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Chlorobenzene [108-90-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Chloroethane [75-00-3] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.007 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Chloroform [67-66-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **Chloromethane [74-87-3]** | **0.002** | I | mg/m³ Air | 1 | 0.002 | 0.005 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| cis-1,2-Dichloroethene [156-59-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| cis-1,3-Dichloropropene [10061-01-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Cyclohexane [110-82-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Dibromochloromethane [124-48-1] | 0.012 | U | mg/m³ Air | 1 | 0.012 | 0.021 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| Dichlorodifluoromethane [75-71-8] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Ethyl Acetate [141-78-6] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Ethylbenzene [100-41-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Freon 113 [76-13-2] | 0.015 | U | mg/m³ Air | 1 | 0.015 | 0.019 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Freon 114 [76-14-2] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Heptane [142-82-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| Hexachlorobutadiene [87-68-3] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.027 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **Methylene chloride [75-09-2]** | **0.020** | V | mg/m³ Air | 1 | 0.003 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | J-01 |
| Methyl-tert-butyl ether [1634-04-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **n-Hexane [110-54-3]** | **0.004** | I | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **Propene [115-07-1]** | **0.003** | I | mg/m³ Air | 1 | 0.002 | 0.004 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |

www.encolabs.com

**Description:** A-3
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-03
**Sampled:** 08/07/10 17:04
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | POL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Styrene [100-42-5] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Tetrachloroethene [127-18-4] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **Tetrahydrofuran [109-99-9]** | **0.004** | I | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **Toluene [108-88-3]** | **0.008** | I | mg/m³ Air | 1 | 0.005 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Total Light Petroleum Hydrocarbons [ECL-0163] | 0.92 | U | mg/m³ Air | 1 | 0.92 | 0.92 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| trans-1,2-Dichloroethene [156-60-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| trans-1,3-Dichloropropene [10061-02-6] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| Trichloroethene [79-01-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.013 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| **Trichlorofluoromethane [75-69-4]** | **0.029** | | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Vinyl acetate [108-05-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | QL-02 |
| Vinyl chloride [75-01-4] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |
| Xylenes (Total) [1330-20-7] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:18 | LTS | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *32* | *1* | *31.2* | *104 %* | *70-130* | *0H16013* | *TO-15* | *08/16/10 23:18* | *LTS* | |

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

**Description:** A-4
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-04
**Sampled:** 08/07/10 17:06
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane [71-55-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,1,2,2-Tetrachloroethane [79-34-5] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,1,2-Trichloroethane [79-00-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.014 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,1-Dichloroethane [75-34-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,1-Dichloroethene [75-35-4] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,2,4-Trichlorobenzene [120-82-1] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.019 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **1,2,4-Trimethylbenzene [95-63-6]** | **0.005** | I | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,2-Dibromoethane [106-93-4] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.019 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,2-Dichlorobenzene [95-50-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,2-Dichloroethane [107-06-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,2-Dichloropropane [78-87-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,3,5-Trimethylbenzene [108-67-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,3-Butadiene [106-99-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| 1,3-Dichlorobenzene [541-73-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,4-Dichlorobenzene [106-46-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.015 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 1,4-Dioxane [123-91-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| 2,2,4-Trimethylpentane [540-84-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **2-Butanone [78-93-3]** | **0.006** | I | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| 2-Hexanone [591-78-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| 2-Propanol [67-63-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| 3-Chloropropene [107-05-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **4-Ethyltoluene [622-96-8]** | **0.005** | I | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | J-02 |
| 4-Methyl-2-pentanone [108-10-1] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| **Acetone [67-64-1]** | **0.098** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **Benzene [71-43-2]** | **0.003** | I | mg/m³ Air | 1 | 0.003 | 0.008 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Benzyl chloride [100-44-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.013 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Bromodichloromethane [75-27-4] | 0.010 | U | mg/m³ Air | 1 | 0.010 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| Bromoethene [593-60-2] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Bromoform [75-25-2] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.026 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Bromomethane [74-83-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Carbon disulfide [75-15-0] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Carbon tetrachloride [56-23-5] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.016 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Chlorobenzene [108-90-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Chloroethane [75-00-3] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.007 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Chloroform [67-66-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **Chloromethane [74-87-3]** | **0.002** | I | mg/m³ Air | 1 | 0.002 | 0.005 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| cis-1,2-Dichloroethene [156-59-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| cis-1,3-Dichloropropene [10061-01-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Cyclohexane [110-82-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Dibromochloromethane [124-48-1] | 0.012 | U | mg/m³ Air | 1 | 0.012 | 0.021 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| Dichlorodifluoromethane [75-71-8] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Ethyl Acetate [141-78-6] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Ethylbenzene [100-41-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Freon 113 [76-13-2] | 0.015 | U | mg/m³ Air | 1 | 0.015 | 0.019 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Freon 114 [76-14-2] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Heptane [142-82-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| Hexachlorobutadiene [87-68-3] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.027 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **Methylene chloride [75-09-2]** | **0.018** | V | mg/m³ Air | 1 | 0.003 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | J-01 |
| Methyl-tert-butyl ether [1634-04-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **n-Hexane [110-54-3]** | **0.006** | I | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **Propene [115-07-1]** | **0.005** | | mg/m³ Air | 1 | 0.002 | 0.004 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |

www.encolabs.com

**Description:** A-4 | **Lab Sample ID:** B003638-04 | **Received:** 08/10/10 15:00

**Matrix:** Air | **Sampled:** 08/07/10 17:06 | **Work Order:** B003638

**Project:** Former Universal Stainless | **Sampled By:** Andrew J Frantz | **% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | POL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Styrene [100-42-5] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Tetrachloroethene [127-18-4] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.017 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Tetrahydrofuran [109-99-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **Toluene [108-88-3]** | **0.008** | I | mg/m³ Air | 1 | 0.005 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Total Light Petroleum Hydrocarbons [ECL-0163] | 0.92 | U | mg/m³ Air | 1 | 0.92 | 0.92 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| trans-1,2-Dichloroethene [156-60-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| trans-1,3-Dichloropropene [10061-02-6] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| Trichloroethene [79-01-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.013 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| **Trichlorofluoromethane [75-69-4]** | **0.022** | | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Vinyl acetate [108-05-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | QL-02 |
| Vinyl chloride [75-01-4] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |
| Xylenes (Total) [1330-20-7] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.011 | 0H16013 | TO-15 | 08/16/10 23:51 | LTS | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *33* | *1* | *31.2* | *106 %* | *70-130* | *0H16013* | *TO-15* | *08/16/10 23:51* | *LTS* | |

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

**Description:** A-5 | **Lab Sample ID:** B003638-05 | **Received:** 08/10/10 15:00

**Matrix:** Air | **Sampled:** 08/07/10 17:08 | **Work Order:** B003638

**Project:** Former Universal Stainless | **Sampled By:** Andrew J Frantz | **% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane [71-55-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,1,2,2-Tetrachloroethane [79-34-5] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,1,2-Trichloroethane [79-00-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.014 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,1-Dichloroethane [75-34-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,1-Dichloroethene [75-35-4] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,2,4-Trichlorobenzene [120-82-1] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.019 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,2,4-Trimethylbenzene [95-63-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,2-Dibromoethane [106-93-4] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.019 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,2-Dichlorobenzene [95-50-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,2-Dichloroethane [107-06-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,2-Dichloropropane [78-87-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,3,5-Trimethylbenzene [108-67-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,3-Butadiene [106-99-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| 1,3-Dichlorobenzene [541-73-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,4-Dichlorobenzene [106-46-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.015 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 1,4-Dioxane [123-91-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| 2,2,4-Trimethylpentane [540-84-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **2-Butanone [78-93-3]** | **0.004** | I | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 2-Hexanone [591-78-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| 2-Propanol [67-63-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| 3-Chloropropene [107-05-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| 4-Ethyltoluene [622-96-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| 4-Methyl-2-pentanone [108-10-1] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| **Acetone [67-64-1]** | **0.050** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **Benzene [71-43-2]** | **0.003** | I | mg/m³ Air | 1 | 0.003 | 0.008 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Benzyl chloride [100-44-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.013 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Bromodichloromethane [75-27-4] | 0.010 | U | mg/m³ Air | 1 | 0.010 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| Bromoethene [593-60-2] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Bromoform [75-25-2] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.026 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Bromomethane [74-83-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Carbon disulfide [75-15-0] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Carbon tetrachloride [56-23-5] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.016 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Chlorobenzene [108-90-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Chloroethane [75-00-3] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.007 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Chloroform [67-66-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Chloromethane [74-87-3] | 0.002 | U | mg/m³ Air | 1 | 0.002 | 0.005 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| cis-1,2-Dichloroethene [156-59-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| cis-1,3-Dichloropropene [10061-01-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Cyclohexane [110-82-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Dibromochloromethane [124-48-1] | 0.012 | U | mg/m³ Air | 1 | 0.012 | 0.021 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| Dichlorodifluoromethane [75-71-8] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Ethyl Acetate [141-78-6] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Ethylbenzene [100-41-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Freon 113 [76-13-2] | 0.015 | U | mg/m³ Air | 1 | 0.015 | 0.019 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Freon 114 [76-14-2] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Heptane [142-82-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| Hexachlorobutadiene [87-68-3] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.027 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **Methylene chloride [75-09-2]** | **0.054** | V | mg/m³ Air | 1 | 0.003 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | J-01 |
| Methyl-tert-butyl ether [1634-04-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **n-Hexane [110-54-3]** | **0.014** | | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **Propene [115-07-1]** | **0.003** | I | mg/m³ Air | 1 | 0.002 | 0.004 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |

www.encolabs.com

**Description:** A-5
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-05
**Sampled:** 08/07/10 17:08
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Styrene [100-42-5] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Tetrachloroethene [127-18-4] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Tetrahydrofuran [109-99-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **Toluene [108-88-3]** | **0.008** | I | mg/m³ Air | 1 | 0.005 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Total Light Petroleum Hydrocarbons [ECL-0163] | 0.92 | U | mg/m³ Air | 1 | 0.92 | 0.92 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| trans-1,2-Dichloroethene [156-60-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| trans-1,3-Dichloropropene [10061-02-6] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| Trichloroethene [79-01-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.013 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| **Trichlorofluoromethane [75-69-4]** | **0.011** | I | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Vinyl acetate [108-05-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | QL-02 |
| Vinyl chloride [75-01-4] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |
| Xylenes (Total) [1330-20-7] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:25 | LTS | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *33* | *1* | *31.2* | *106 %* | *70-130* | *0H16013* | *TO-15* | *08/17/10 00:25* | *LTS* | |

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

**Description:** A-6 | **Lab Sample ID:** B003638-06 | **Received:** 08/10/10 15:00

**Matrix:** Air | **Sampled:** 08/07/10 17:10 | **Work Order:** B003638

**Project:** Former Universal Stainless | **Sampled By:** Andrew J Frantz | **% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane [71-55-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,1,2,2-Tetrachloroethane [79-34-5] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,1,2-Trichloroethane [79-00-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.014 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,1-Dichloroethane [75-34-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,1-Dichloroethene [75-35-4] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,2,4-Trichlorobenzene [120-82-1] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.019 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,2,4-Trimethylbenzene [95-63-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,2-Dibromoethane [106-93-4] | 0.008 | U | mg/m³ Air | 1 | 0.008 | 0.019 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,2-Dichlorobenzene [95-50-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,2-Dichloroethane [107-06-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,2-Dichloropropane [78-87-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,3,5-Trimethylbenzene [108-67-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,3-Butadiene [106-99-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| 1,3-Dichlorobenzene [541-73-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.015 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,4-Dichlorobenzene [106-46-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.015 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 1,4-Dioxane [123-91-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| 2,2,4-Trimethylpentane [540-84-1] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 2-Butanone [78-93-3] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 2-Hexanone [591-78-6] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| 2-Propanol [67-63-0] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| 3-Chloropropene [107-05-1] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| 4-Ethyltoluene [622-96-8] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| 4-Methyl-2-pentanone [108-10-1] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| **Acetone [67-64-1]** | **0.019** | | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Benzene [71-43-2] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.008 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Benzyl chloride [100-44-7] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.013 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Bromodichloromethane [75-27-4] | 0.010 | U | mg/m³ Air | 1 | 0.010 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| Bromoethene [593-60-2] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Bromoform [75-25-2] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.026 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Bromomethane [74-83-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Carbon disulfide [75-15-0] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.008 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Carbon tetrachloride [56-23-5] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.016 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Chlorobenzene [108-90-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Chloroethane [75-00-3] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.007 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Chloroform [67-66-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Chloromethane [74-87-3] | 0.002 | U | mg/m³ Air | 1 | 0.002 | 0.005 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| cis-1,2-Dichloroethene [156-59-2] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| cis-1,3-Dichloropropene [10061-01-5] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Cyclohexane [110-82-7] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Dibromochloromethane [124-48-1] | 0.012 | U | mg/m³ Air | 1 | 0.012 | 0.021 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| Dichlorodifluoromethane [75-71-8] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.012 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Ethyl Acetate [141-78-6] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Ethylbenzene [100-41-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Freon 113 [76-13-2] | 0.015 | U | mg/m³ Air | 1 | 0.015 | 0.019 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Freon 114 [76-14-2] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Heptane [142-82-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| Hexachlorobutadiene [87-68-3] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.027 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| **Methylene chloride [75-09-2]** | **0.018** | V | mg/m³ Air | 1 | 0.003 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | J-01 |
| Methyl-tert-butyl ether [1634-04-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| **n-Hexane [110-54-3]** | **0.004** | I | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Propene [115-07-1] | 0.002 | U | mg/m³ Air | 1 | 0.002 | 0.004 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |

www.encolabs.com

**Description:** A-6
**Matrix:** Air
**Project:** Former Universal Stainless

**Lab Sample ID:** B003638-06
**Sampled:** 08/07/10 17:10
**Sampled By:** Andrew J Frantz

**Received:** 08/10/10 15:00
**Work Order:** B003638
**% Solids:**

## Volatile Organic Compounds by GCMS

| Analyte [CAS Number] | Results | Flag | Units | DF | MDL | PQL | Batch | Method | Analyzed | By | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Styrene [100-42-5] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Tetrachloroethene [127-18-4] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.017 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Tetrahydrofuran [109-99-9] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.007 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Toluene [108-88-3] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Total Light Petroleum Hydrocarbons [ECL-0163] | 0.92 | U | mg/m³ Air | 1 | 0.92 | 0.92 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| trans-1,2-Dichloroethene [156-60-5] | 0.005 | U | mg/m³ Air | 1 | 0.005 | 0.010 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| trans-1,3-Dichloropropene [10061-02-6] | 0.006 | U | mg/m³ Air | 1 | 0.006 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| Trichloroethene [79-01-6] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.013 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Trichlorofluoromethane [75-69-4] | 0.007 | U | mg/m³ Air | 1 | 0.007 | 0.014 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Vinyl acetate [108-05-4] | 0.004 | U | mg/m³ Air | 1 | 0.004 | 0.009 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | QL-02 |
| Vinyl chloride [75-01-4] | 0.003 | U | mg/m³ Air | 1 | 0.003 | 0.006 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |
| Xylenes (Total) [1330-20-7] | 0.009 | U | mg/m³ Air | 1 | 0.009 | 0.011 | 0H16013 | TO-15 | 08/17/10 00:59 | LTS | |

| *Surrogates* | *Results* | *DF* | *Spike Lvl* | *% Rec* | *% Rec Limits* | *Batch* | *Method* | *Analyzed* | *By* | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene* | *33* | *1* | *31.2* | *106 %* | *70-130* | *0H16013* | *TO-15* | *08/17/10 00:59* | *LTS* | |

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 0H16013 - Same*

**Blank (0H16013-BLK1)** Prepared: 08/14/2010 19:36 Analyzed: 08/16/2010 17:37

| Analyte | Result | Flag | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.007 | U | 0.014 | mg/m³ Air | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 0.008 | U | 0.017 | mg/m³ Air | | | | | | | |
| 1,1,2-Trichloroethane | 0.006 | U | 0.014 | mg/m³ Air | | | | | | | |
| 1,1-Dichloroethane | 0.004 | U | 0.010 | mg/m³ Air | | | | | | | |
| 1,1-Dichloroethene | 0.005 | U | 0.010 | mg/m³ Air | | | | | | | |
| **1,2,4-Trichlorobenzene** | **0.007** | **I** | 0.019 | mg/m³ Air | | | | | | | |
| 1,2,4-Trimethylbenzene | 0.005 | U | 0.012 | mg/m³ Air | | | | | | | |
| 1,2-Dibromoethane | 0.008 | U | 0.019 | mg/m³ Air | | | | | | | |
| 1,2-Dichlorobenzene | 0.006 | U | 0.015 | mg/m³ Air | | | | | | | |
| 1,2-Dichloroethane | 0.004 | U | 0.010 | mg/m³ Air | | | | | | | |
| 1,2-Dichloropropane | 0.006 | U | 0.012 | mg/m³ Air | | | | | | | |
| 1,3,5-Trimethylbenzene | 0.005 | U | 0.012 | mg/m³ Air | | | | | | | |
| 1,3-Butadiene | 0.003 | U | 0.006 | mg/m³ Air | | | | | | | |
| 1,3-Dichlorobenzene | 0.006 | U | 0.015 | mg/m³ Air | | | | | | | |
| 1,4-Dichlorobenzene | 0.005 | U | 0.015 | mg/m³ Air | | | | | | | |
| 1,4-Dioxane | 0.004 | U | 0.009 | mg/m³ Air | | | | | | | |
| 2,2,4-Trimethylpentane | 0.006 | U | 0.012 | mg/m³ Air | | | | | | | |
| 2-Butanone | 0.004 | U | 0.007 | mg/m³ Air | | | | | | | |
| 2-Hexanone | 0.005 | U | 0.010 | mg/m³ Air | | | | | | | |
| 2-Propanol | 0.003 | U | 0.006 | mg/m³ Air | | | | | | | |
| 3-Chloropropene | 0.004 | U | 0.008 | mg/m³ Air | | | | | | | |
| 4-Ethyltoluene | 0.005 | U | 0.012 | mg/m³ Air | | | | | | | |
| 4-Methyl-2-pentanone | 0.007 | U | 0.010 | mg/m³ Air | | | | | | | |
| Acetone | 0.003 | U | 0.006 | mg/m³ Air | | | | | | | |
| Benzene | 0.003 | U | 0.008 | mg/m³ Air | | | | | | | |
| Benzyl chloride | 0.005 | U | 0.013 | mg/m³ Air | | | | | | | |
| Bromodichloromethane | 0.010 | U | 0.017 | mg/m³ Air | | | | | | | |
| Bromoethene | 0.005 | U | 0.011 | mg/m³ Air | | | | | | | |
| Bromoform | 0.009 | U | 0.026 | mg/m³ Air | | | | | | | |
| Bromomethane | 0.004 | U | 0.010 | mg/m³ Air | | | | | | | |
| **Carbon disulfide** | **0.007** | **I** | 0.008 | mg/m³ Air | | | | | | | |
| Carbon tetrachloride | 0.007 | U | 0.016 | mg/m³ Air | | | | | | | |
| Chlorobenzene | 0.004 | U | 0.012 | mg/m³ Air | | | | | | | |
| Chloroethane | 0.003 | U | 0.007 | mg/m³ Air | | | | | | | |
| Chloroform | 0.005 | U | 0.012 | mg/m³ Air | | | | | | | |
| Chloromethane | 0.002 | U | 0.005 | mg/m³ Air | | | | | | | |
| cis-1,2-Dichloroethene | 0.004 | U | 0.010 | mg/m³ Air | | | | | | | |
| cis-1,3-Dichloropropene | 0.006 | U | 0.011 | mg/m³ Air | | | | | | | |
| Cyclohexane | 0.004 | U | 0.009 | mg/m³ Air | | | | | | | |
| Dibromochloromethane | 0.012 | U | 0.021 | mg/m³ Air | | | | | | | |
| Dichlorodifluoromethane | 0.006 | U | 0.012 | mg/m³ Air | | | | | | | |
| Ethyl Acetate | 0.004 | U | 0.009 | mg/m³ Air | | | | | | | |
| Ethylbenzene | 0.004 | U | 0.011 | mg/m³ Air | | | | | | | |
| Freon 113 | 0.015 | U | 0.019 | mg/m³ Air | | | | | | | |
| Freon 114 | 0.007 | U | 0.017 | mg/m³ Air | | | | | | | |
| Heptane | 0.005 | U | 0.010 | mg/m³ Air | | | | | | | |
| Hexachlorobutadiene | 0.009 | U | 0.027 | mg/m³ Air | | | | | | | |
| **Methylene chloride** | **0.006** | **I** | 0.009 | mg/m³ Air | | | | | | | |
| Methyl-tert-butyl ether | 0.004 | U | 0.009 | mg/m³ Air | | | | | | | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 0H16013 - Same*

**Blank (0H16013-BLK1) Continued** Prepared: 08/14/2010 19:36 Analyzed: 08/16/2010 17:37

| Analyte | Result | Flag | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| n-Hexane | 0.004 | U | 0.009 | mg/m³ Air | | | | | | | |
| Propene | 0.002 | U | 0.004 | mg/m³ Air | | | | | | | |
| Styrene | 0.004 | U | 0.011 | mg/m³ Air | | | | | | | |
| Tetrachloroethene | 0.009 | U | 0.017 | mg/m³ Air | | | | | | | |
| Tetrahydrofuran | 0.004 | U | 0.007 | mg/m³ Air | | | | | | | |
| Toluene | 0.005 | U | 0.009 | mg/m³ Air | | | | | | | |
| Total Light Petroleum Hydrocarbons | 0.92 | U | 0.92 | mg/m³ Air | | | | | | | |
| trans-1,2-Dichloroethene | 0.005 | U | 0.010 | mg/m³ Air | | | | | | | |
| trans-1,3-Dichloropropene | 0.006 | U | 0.011 | mg/m³ Air | | | | | | | |
| Trichloroethene | 0.007 | U | 0.013 | mg/m³ Air | | | | | | | |
| Trichlorofluoromethane | 0.007 | U | 0.014 | mg/m³ Air | | | | | | | |
| Vinyl acetate | 0.004 | U | 0.009 | mg/m³ Air | | | | | | | |
| Vinyl chloride | 0.003 | U | 0.006 | mg/m³ Air | | | | | | | |
| Xylenes (Total) | 0.009 | U | 0.011 | mg/m³ Air | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *31* | | | *ppbv* | *31.2* | | *97.9* | *70-130* | | | |

**LCS (0H16013-BS1)** Prepared: 08/14/2010 19:36 Analyzed: 08/16/2010 20:20

| Analyte | Result | Flag | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 15 | | 2.5 | ppbv | 10.0 | | 150 | 44-153 | | | |
| Benzene | 12 | | 2.5 | ppbv | 10.0 | | 121 | 50-157 | | | |
| Chlorobenzene | 13 | | 2.5 | ppbv | 10.0 | | 127 | 59-130 | | | |
| Toluene | 13 | | 2.5 | ppbv | 10.0 | | 126 | 39-172 | | | |
| Trichloroethene | 12 | | 2.5 | ppbv | 10.0 | | 119 | 52-130 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *31* | | | *ppbv* | *31.2* | | *98.0* | *70-130* | | | |

**Matrix Spike (0H16013-MS1)** Prepared: 08/14/2010 19:36 Analyzed: 08/16/2010 22:08

**Source: B003638-02**

| Analyte | Result | Flag | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 13 | | 2.5 | ppbv | 10.0 | 1.2 U | 135 | 44-153 | | | |
| Benzene | 12 | | 2.5 | ppbv | 10.0 | 0.93 U | 116 | 50-157 | | | |
| Chlorobenzene | 12 | | 2.5 | ppbv | 10.0 | 0.97 U | 117 | 59-130 | | | |
| Toluene | 14 | | 2.5 | ppbv | 10.0 | 1.7 | 123 | 39-172 | | | |
| Trichloroethene | 11 | | 2.5 | ppbv | 10.0 | 1.3 U | 111 | 52-130 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *36* | | | *ppbv* | *31.2* | | *114* | *70-130* | | | |

**Matrix Spike Dup (0H16013-MSD1)** Prepared: 08/14/2010 19:36 Analyzed: 08/16/2010 22:43

**Source: B003638-02**

| Analyte | Result | Flag | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 14 | | 2.5 | ppbv | 10.0 | 1.2 U | 139 | 44-153 | 3.36 | 17 | |
| Benzene | 11 | | 2.5 | ppbv | 10.0 | 0.93 U | 112 | 50-157 | 3.52 | 19 | |
| Chlorobenzene | 10 | | 2.5 | ppbv | 10.0 | 0.97 U | 104 | 59-130 | 12.5 | 15 | |
| Toluene | 12 | | 2.5 | ppbv | 10.0 | 1.7 | 105 | 39-172 | 13.6 | 23 | |
| Trichloroethene | 10 | | 2.5 | ppbv | 10.0 | 1.3 U | 100 | 52-130 | 10.5 | 14 | |

## QUALITY CONTROL

### Volatile Organic Compounds by GCMS - Quality Control

*Batch 0H16013 - Same*

**Matrix Spike Dup (0H16013-MSD1) Continued** Prepared: 08/14/2010 19:36 Analyzed: 08/16/2010 22:43

**Source: B003638-02**

| Analyte | Result | Flag | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 4-Bromofluorobenzene* | *35* | | | *ppbv* | *31.2* | | *112* | *70-130* | | | |

## FLAGS/NOTES AND DEFINITIONS

| | |
|---|---|
| PQL | PQL: Practical Quantitation Limit. |
| B | Results are based upon membrane filter colony counts that are outside the method indicated ideal range. |
| I | The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL). |
| J | Estimated value. The associated sample note or project narrative indicate the causative reason. |
| K | Off-scale low; Actual value is known to be less than the value given. |
| L | Off-scale high; Actual value is known to be greater than value given. |
| M | Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL. |
| N | Presumptive evidence of presence of material. |
| O | Sampled, but analysis lost or not performed. |
| Q | Sample exceeded the accepted holding time. |
| T | Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis. |
| U | Indicates that the compound was analyzed for but not detected. |
| V | Indicates that the analyte was detected in both the sample and the associated method blank. |
| Y | The laboratory analysis was from an improperly preserved sample. The data may not be accurate. |
| Z | Too many colonies were present (TNTC); the numeric value represents the filtration volume. |
| ? | Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data. |
| * | Not reported due to interference. |
| J-01 | Result is estimated due to positive results in the associated method blank. |
| J-02 | Result is estimated due to bias in the associated laboratory control sample (LCS). |
| QL-02 | The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal. |

# ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 211
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

1015 Passport Way
Cary, NC 27513
(919) 677-1669 Fax (919) 677-9846

Page ____ of ____

| | |
|---|---|
| Client Name: MACTEC Engineering (MA031) | Project Number: 6228-10-5195 |
| Address: 2801 Yorkmont Road #100 | Project Name/Desc: Former Universal Stainless |
| City/ST/Zip: Charlotte, NC 28218 | PO # / Billing Info |
| Tel: (704) 357-5618 Fax: | Reporting Contact: Andrew J Frantz |
| Sampler(s) Name, Affiliation (Print): Andrew Frantz / MACTEC | Billing Contact: Andrew J Frantz |
| Sampler(s) Signature: [signature] | Facility # (if required) |

Requested Analyses: TO15 (SUMMA)

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

X Standard

___ Expedited

Due ___/___/___

Lab Workorder: B003638

Preservation (See Codes) (Combine as necessary)

| Item # | Sample ID (Field Identification) | Collection Date | Collection Time | Comp / Grab | Matrix (see codes) | Total # of Containers | TO15 (SUMMA) | Sample Comments |
|---|---|---|---|---|---|---|---|---|
| | A-1 | 8-7-10 | 1700 | Grab | AIR | 1 | X | |
| | A-2 | ↓ | 1702 | ↓ | AIR | 1 | X | |
| | A-3 | | 1704 | | AIR | 1 | X | |
| | A-4 | | 1706 | | AIR | 1 | X | |
| | A-5 | | 1708 | | AIR | 1 | X | |
| | A-6 | ↓ | 1710 | ↓ | AIR | 1 | X | |

<-- Total # of Containers

| | | | |
|---|---|---|---|
| Sample Kit Prepared By: KK | Date/Time: 8/4/10 1531 | Relinquished By: Kristi Kelly | Date/Time: 8/4/10 1531 |
| Comments: | | Relinquished By: [signature] | Date/Time: 8/7/10 |
| | | Relinquished By: | Date/Time: |

| | | | |
|---|---|---|---|
| Received By: Kristi Kelly | Date/Time: 8/10/10 1500 | Cooler #'s & Temps on Receipt: N/A | Condition Upon Receipt: Acceptable / Unacceptable |
| Received By: | Date/Time: | | |
| Received By: | Date/Time: | | |

Matrix : GW-Groundwater SO-Soil SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the same terms and conditions listed on the reverse of this form, unless prior written agreements exist

www.encolabs.com